# Violence at School*

Josefa Aguirre Fernanda Ramirez-Espinoza Román Andrés Zárate

August 12th, 2024

**Abstract**

This paper estimates the impact of violence perpetrated by students and school staff on victims and their peers. Using unique administrative data from Chile that links reports of student mistreatment to educational records, we overcome previous data constraints that have limited evidence on this phenomenon. Through a matched difference-in-differences design with individual fixed effects, we find that experiencing violence leads to persistent negative effects: increased absenteeism, higher dropout rates, and greater grade retention, alongside decreased academic performance. These effects persist up to four years after the incident, with victims more likely to transfer to lower-quality schools. In the long term, victims are less likely to graduate from high school or enroll in university programs, with adult abuse victims showing stronger and more persistent negative outcomes than victims of abuse by their peers. Notably, these patterns hold regardless of the victim's gender. We also document significant effects on classmates: victims' peers show decreased attendance and academic performance and increased grade repetition following the report of violent incidents.

*We thank the Superintendencia de Educación for providing access to administrative data. All remaining errors are our own.

# 1 Introduction

School violence can take many forms, ranging from conflicts between students to assaults by school staff against students. It includes physical violence (such as student fights or corporal punishment by staff), psychological violence, cyberbullying, and sexual harassment. These behaviors may occur as isolated incidents or as part of systematic bullying. Regrettably, children encounter high levels of violence in schools, with girls facing a higher vulnerability to sexual violence and boys to physical violence by peers and corporal punishment by teachers. Survey data highlights the prevalence of school violence globally: nearly one in three students (32%) report being bullied by their peers at school at least once in the last month, more than one in three students (36%) have been involved in physical altercations with other students, and almost one in three (32.4%) have suffered physical attacks at least once in the past year (UNESCO, 2019).[1]

Despite its relevance, there is limited evidence on the effects of school violence. While studies suggest that victims of school violence tend to have worse learning outcomes[2], labor market outcomes, mental health, and higher crime rates[3], these studies largely rely on survey data comparing victims with non-victims, which poses challenges in establishing causal effects. Determining the causal impact of school violence is difficult for two key reasons. First, identifying students who experience high levels of violence is inherently challenging, as most measurements depend on self-reported data. These self-reports may vary considerably depending on students' prior experiences and perceptions of what constitutes violence. Second, preexisting differences between victims and non-victims complicate causal identification as it is challenging to disentangle whether observed differences in outcomes result directly from exposure to violence or from underlying characteristics that may predispose certain students to victimization.

In this study, we use comprehensive administrative data from Chile to study the impact of reported violent incidents perpetrated by students or school staff on victims and their peers. Since 2012, the Superintendencia de Educación, a centralized government agency, has established a formal system that allows students and parents to report incidents of school violence. This centralized system provides a unique research opportunity, as few countries maintain comparable nationwide databases of student abuse reports. Our analysis leverages this novel, individual-level data by linking reported incidents to detailed educational records, including information on school enrollment, attendance, academic performance, graduation rates, and higher education enrollment. While we recognize that the reported incidents likely under-represent the true prevalence of school violence–as many less-severe cases may go unreported–this dataset represents a

[1]The statistics on school violence are drawn from UNESCO's 2019 report analyzing data from the Global School-based Student Health Survey (GSHS) and Health Behaviour in School-aged Children (HBSC) study, covering 144 countries. The data represent students primarily aged 13-15 years surveyed between 2003-2017,

[2]See Naz et al. (2011); Maiti (2021); Kumar et al. (2022) for the effects of corporal punishment on educational outcomes, Delprato et al. (2017); Eriksen et al. (2014); Ammermueller (2012); Murillo and Román (2011); Brown and Taylor (2008) for the effects of bullying on academic achievement and Baker-Henningham et al. (2009) for the effect of other types of violence on academic achievement.

[3]See Hasnat and Fakir (2023); Brimblecombe et al. (2018); Wolke et al. (2013); Brown and Taylor (2008) for long-term impact of school violence.

critical step toward understanding the phenomenon of school violence and its broader implications.

We employ a matched difference-in-differences (DiD) design with individual fixed effects to estimate causal effects. This approach compares the trajectory of academic outcomes for students affected by the reported school violence incidents before and after the incident to students exhibiting similar outcome trends before the report. By leveraging the high-frequency nature of the administrative data, we provide a robust framework for estimating the causal impact of violence on victims' educational outcomes. Furthermore, this dataset enables us to explore long-term effects on victims' outcomes and investigate the potential spillover effects on their peers, offering a more comprehensive understanding of the broader implications of school violence.

Our findings reveal that, while prior to reporting the incident, victims of school violence exhibit academic trajectories comparable to the control group, their performance deteriorates significantly following the incident filed in the report. Absenteeism begins to increase approximately three months before reporting the incident, spiking by 10 percentage points (p.p.) for adult abuse victims and 15 p.p. for student abuse victims during the month of the incident.

These impacts persist over time. During the year of the incident, victims experience higher annual absenteeism (4 p.p.), dropout rates (2 p.p.), grade retention (4 p.p.), and school transfers (30 p.p.), often to lower-performing schools, with all the effects statistically significant. These effects remain over the four-year observation period, with adult abuse victims showing stronger and more persistent negative outcomes across all measures. Notably, these findings are similar for boys and girls, with little evidence of heterogeneity by gender.

The long-term effects of experiencing school violence are substantial. Using a matching approach rather than matched difference-in-differences (as these outcomes can only be observed once, requiring stronger identifying assumptions), we find that being a victim of adult or student abuse in a reported incident reduces the probability of on-time high school graduation by 11 p.p. and 9 p.p., respectively, and decreases overall completion rates by 8 p.p. and 6 p.p. It also reduces participation in university admission testing and lowers test performance. Both groups are less likely to attend university and to enroll in programs with above-average selectivity, indicating that school violence causes lasting adverse effects on educational achievement.

We also analyze nationwide annual survey data from specific grades to explore the relationship between filing a report and perceived school violence, as well as students' well-being. Although this survey data is not available for all students every year, we employ an alternative difference-in-differences strategy, comparing survey outcomes of victims to their controls relative to the year of the reported incident.

Estimates from this strategy provide critical insights into the actual patterns of violence experienced by victims. The data reveals a clear temporal trajectory: victims of student abuse report slightly elevated expo-

sure to physical, verbal, social, and virtual violence for up to four years before filing a report, followed by a sharp spike (0.65–0.95 standard deviations higher than controls) during the year of the reported incident. While these survey questions primarily focus on peer-perpetrated violence rather than adult-perpetrated violence, they help us understand the dynamics of reported incidents. This substantial increase confirms that reports coincide with periods of intensified victimization, validating our identification strategy. Importantly, exposure levels decline significantly afterward—likely reflecting the effectiveness of school transfers or institutional interventions implemented following the report. Despite this reduction in victimization, our findings reveal that the negative effects on academic performance persist over time, suggesting that even temporary exposure to severe violence can have lasting educational consequences.

Finally, we examine spillover effects on victims' classmates, finding statistically significant but substantially lower impacts than the direct effects on victims. During the year of the incident, classmates experience a 0.4 p.p increase in the absenteeism rate—approximately one-tenth of the impact observed for victims—which persists for two years. Grade retention among classmates rises by 0.5 p.p., persisting for two years, while GPA declines, with effects extending up to four years. These findings suggest that school violence has broader consequences beyond direct victims, potentially through spillover effects from affected students or classmates' exposure to aggressors.

This study makes several contributions to the literature on school violence, with its primary contribution being the study of the causal effects of violence reports on victims' educational outcomes at the individual level. Previous studies have investigated the effects of violence at the community level, including drug battles (Monteiro and Rocha, 2017) and police killings (Ang, 2020) or extreme events at the school, such as shootings (Beland and Kim, 2016; Cabral et al., 2021) on student outcomes. Other studies focus on violence in the school but mainly examine the impact of school-level interventions aiming to reduce peer violence (Karmaliani et al., 2020; Paluck et al., 2016), staff violence (Devries et al., 2015), or promote violence reporting (Gutierrez et al., 2024; Smarrelli, 2023). Overall, despite significant policy and research attention, evidence of the direct effects of peer-to-peer or staff-to-student violence at school on victims' educational outcomes remains scarce. Existing studies on this question often rely on self-reported survey data, which poses challenges for victim identification, and use identification strategies with stronger assumptions, such as IV approaches that leverage classroom-level variation in peer characteristics, like the proportion of peers from troubled homes (Eriksen et al., 2014).

Our study contributes to this literature by providing direct causal evidence on the consequences of school violence for individual victims. The lack of evidence on violence consequences for victims likely stems from the challenges of identifying victims in available data or the lack of high-frequency data that permit causal identification. Our study addresses this by leveraging rich administrative data to identify victims of extreme violent incidents and employing a matching difference-in-differences strategy to estimate causal effects similar to Adams-Prassl et al. (2024) analysis of work-related violence on victims' and

perpetrators' labor market outcomes. The identification of victims in the data and the high frequency of the administrative educational records allow us to explore the impact of reporting an incident on victims' short- and long-term educational outcomes.

In addition to this main contribution, the study also makes several secondary contributions. First, we estimate the long-term effects of violence on educational attainment, including high school completion and tertiary education trajectories. Second, we differentiate the impacts of violence perpetrated by students versus school staff, finding that violence by staff is especially detrimental to student outcomes. Third, we consider gender heterogeneity, demonstrating that while the types of violence experienced differ systematically by gender, the negative educational impacts are similarly persistent for both male and female victims. Importantly, we find that these adverse effects endure even when exposure to violence diminishes after reporting, suggesting that current interventions may be insufficient to prevent long-term harm.

Finally, we expand our analysis by examining how violence affects all students, not just victims. Prior studies have shown that disruptive students negatively affect classroom peers' well-being, behavior, and academic achievement (Figlio, 2007; Carrell and Hoekstra, 2010; Lavy and Schlosser, 2011; Kristoffersen et al., 2015). Our study broadens this analysis by examining how various forms of school violence, beyond just disruptive behavior, can affect classroom peers' educational outcomes.

# 2 School Violence Reports in Chile

## 2.1 The Process of Reporting School Violence

The Chilean education system provides a unique setting for studying school violence. Since 2012, when the government established the Superintendency of Education, all incidents of school violence can be formally reported to a centralized agency. The creation of the Superintendency was part of a broader reform aimed at introducing accountability into Chile's voucher system, which had operated with limited oversight since 1981. This institution serves two key functions: ensuring schools' compliance with educational regulations and proper use of public resources, while also providing a channel for students, parents, and school staff to report irregularities, including incidents of violence.

Our analysis draws on administrative data comprising all reports filed with the Superintendency of Education between 2014 and 2019. During this period, the Superintendency received 73,424 reports, with 73% relating to school climate issues. Within these climate-related complaints, we focus specifically on student mistreatment reports, which represent 59% of school climate cases. These mistreatment reports include incidents of physical and psychological violence perpetrated by both students and school staff against students.

Figure 1 illustrates the reporting process, which begins when a complaint is filed either online (42%) or in person (58%) at the Superintendency of Education. For in-person reporting, the Superintendency maintains 16 regional offices across the country, with one office located in each of Chile's administrative regions. Most reports (83%) are submitted by students' guardians, while students themselves file 8%, and the remainder come from teachers or other school staff.

Once filed, the Superintendency contacts both the school principal and may reach out to the victim for additional information. When schools are contacted, they must undertake the task of preparing a report demonstrating the existence of appropriate educational protocols and documenting all actions taken to comply with these protocols. The Superintendency then determines whether the incident potentially violates educational regulations, with 79% of cases being dismissed at this stage. Of the remaining 21% that proceed to formal investigation, cases deemed less severe are granted a remediation period, while more serious violations are referred to the legal department for potential sanctions. Ultimately, only 7% of all reports result in formal sanctions, which take the form of either a warning (41%) or a monetary fine (59%) to the school.

The Superintendency's primary role is to verify that schools have established protocols for managing school climate issues and that these protocols are properly followed when incidents occur. Therefore, a lack of sanctions does not necessarily indicate an absence of violence—rather, it may simply reflect that the school followed their established protocols appropriately. In fact, even in 79% of cases that are dismissed early in the process, the dismissal indicates compliance with the protocol rather than the absence of a violent incident. Consequently, in this study, we analyze all reports regardless of whether they resulted in sanctions, as all cases represent situations where students or their guardians felt compelled to formally report violence, even if the Superintendency determines that school's response met regulatory requirements.

## 2.2 Nature of Reported School Violence

In this section, we present the results of a qualitative and descriptive analysis of school violence reports. While our main quantitative analysis focuses on reports filed between 2014 and 2019, here we examine a subset of more recent complaints submitted online between 2021 and 2023. Unlike earlier reports, these online complaints are systematically classified by the person filing the complaint, who specifies the type of violence (physical, psychological, or both), frequency of incidents (isolated or recurrent), and whether they involved cyberbullying. Although this timeframe differs from our main causal analysis, this dataset provides valuable insights into the patterns and characteristics of reported school violence.

Table 1 reveals notable differences in the nature of violence depending on the perpetrator. Physical violence appears far less frequently in reports of adult-perpetrated abuse, with fewer than 30% of these cases involving physical aggression. Among students who report adult-perpetrated abuse, boys are more

likely than girls to describe experiences of physical violence. In contrast, student-perpetrated abuse is more often physical, with 83% of boys and 65% of girls reporting physical aggression.

Recurrent violence is a common theme across reports. Among cases involving adult-perpetrated abuse, half of the reports describe incidents occurring more than once a week. Student-perpetrated abuse appears even more persistent, with over 70% of cases involving repeated incidents at least weekly. The presence of cyberbullying also varies considerably. In cases of adult-perpetrated abuse, cyberbullying is mentioned in fewer than 10% of reports. However, it is far more prevalent in student-perpetrated abuse, particularly among girls. While 24% of boys who report student-perpetrated abuse mention cyberbullying, this figure rises to 41% among girls.

Beyond this descriptive analysis, we conducted a qualitative review of 120 complaints from 2021 to 2023 to gain a deeper understanding of the nature of school violence reports. We structured the sample to include equal representation of student-perpetrated and adult-perpetrated abuse, with 60 cases in each category. Within each category, we ensured a balanced distribution of violence types, selecting 20 cases of physical violence, 20 of psychological violence, and 20 involving both. A key insight from this analysis is that physical violence almost always includes psychological elements, making strict categorical distinctions less meaningful in practice. To explore these cases in greater depth, we carefully analyzed the full text of each complaint, identifying common themes, contextual factors, and institutional responses. The findings of this qualitative review are detailed in the following subsections.

#### *2.2.1 Abuse by Adult*

In our analysis of adult-to-student violence cases, physical violence incidents were predominantly characterized by discrete occurrences, whereas psychological violence manifested in recurring patterns. A significant finding across the complaint dataset was the consistent indication of insufficient or absent institutional intervention and support mechanisms.

Teachers were the most frequently reported perpetrators, followed by school inspectors and administrators. These incidents primarily occurred in classrooms, and recreational areas.

The reported incidents varied in severity. Lower-severity cases included isolated negative comments toward students, such as a teacher telling a student to "shut up, you blockhead." Medium-severity incidents involved repeated shouting or sustained derogatory remarks, exemplified by reports of teachers who "shout, treat students badly, belittle them, making them feel worthless." High-severity cases included physical aggression by adults toward students or sustained verbal abuse, such as instances where teachers physically restrained students by the neck or pushed them.

The most commonly reported form of abuse involved sustained verbal aggression by teachers toward students, often related to academic performance or behavior, including shouting or derogatory comments.

Physical aggression typically involved palm and fist strikes, physical struggles, pushing, and forceful restraint.

Notably, several cases involved adults using aggression as a means of "regulating" student behavior during emotional outbursts. These situations disproportionately affected students with Special Educational Needs (SEN). In some extreme cases, multiple staff members were involved in physically restraining students, as illustrated by the report "six staff members grabbed my child."

### *2.2.2 Abuse by Student*

In our analysis of student-to-student violence cases, most incidents occurred repeatedly, particularly in cases of psychological violence or combined violence that constituted bullying. For instance, some reports described situations where students faced "constant verbal aggression and theft of belongings, even experiencing verbal abuse on public transportation." In contrast, physical violence incidents were typically reported as isolated events.

These incidents predominantly occurred in schoolyards. In terms of severity, approximately half of the reported cases were classified as high-severity incidents, characterized by physical aggression resulting in injury, serious threats generating considerable fear, or frequent and intense patterns of abuse. Medium-severity cases were less common and included repeated instances of humiliating comments or moderate physical contact without serious injury. The least frequent type were low-severity incidents, which involved isolated cases of mild verbal or physical abuse, such as occasional teasing or minor pushing without intent to harm.

The complaints frequently highlighted discriminatory elements in the abuse. Some cases involved gender-based and sexual orientation-based harassment, with victims being subjected to derogatory terms and slurs[4]. Students with special educational needs were also targeted, often facing repeated aggression aimed at destabilizing them. Physical appearance-based discrimination was another significant factor. Cyberbullying, though less frequent, was also reported, primarily occurring through WhatsApp and Instagram.

Similar to adult-to-student violence, most complaints indicated a lack of institutional action or support. Many reports indicated that schools either failed to properly implement protocols or ignored reported incidents entirely, as exemplified by statements such as "the school has done nothing."

[4]Original quote in Spanish: "hay compañeros de curso que la insultan a diario a mi hija llamándola: Perra, Puta, Maraca" and "al pasar le gritan 'gay' 'hueco"'. In English: "there are classmates who insult my daughter daily calling her: Bitch, Whore, Slut" and "as he passes by they yell 'gay' 'faggot' at him".

# 3 Data and Descriptive Statistics

## 3.1 Data

This study combines administrative records on violence reports with comprehensive educational outcomes data. We focus on student mistreatment reports filed with the Superintendency of Education from 2014 to 2019, before the COVID-19 pandemic—a period chosen due to the significant disruption to reporting and schooling during pandemic-related closures. Our dataset on reported incidents includes detailed information such as incident type, date, victim characteristics, resolution status, and the complete text of each report. Crucially, these reports contain unique national identification numbers for victims, enabling us to link them to extensive educational records.

These linked educational records provide a rich dataset encompassing school enrollment, institutional characteristics, monthly attendance, academic performance, high school graduation rates, standardized test participation and scores for university admission, and higher education enrollment. This comprehensive data allows us to construct detailed academic trajectories for victims both before and after reported incidents. The enrollment records also detail school and grade-level information, allowing us to identify classmates and analyze peer effects.

We further enhance our analysis with data from the *Sistema de Medición de la Calidad de la Educación* (SIMCE) survey from 2014 to 2018. This comprehensive assessment evaluates Chile's school curriculum through standardized tests administered to students in grades 2, 4, 6, 8, and 10. Beyond measuring quantitative and verbal reasoning skills, SIMCE collects valuable data on well-being and school climate. Although not universally administered, approximately 75% of victims in our sample participated in SIMCE testing and completed accompanying questionnaires at least once during their educational trajectory. These questionnaires serve two analytical purposes. First, they provide crucial socioeconomic and school experience data, enabling us to track how violence exposure evolved throughout victims' educational pathways. Second, the questionnaires' psychosocial measures—including sense of belonging, self-esteem, self-efficacy, motivation, and behavioral indicators—allow us to explore potential mechanisms underlying the persistent negative effects we observe.

## 3.2 Descriptive Statistics

Our study analyzes 17,757 reports of student mistreatment, comprising 7,040 incidents perpetrated by adults and 10,717 by fellow students. The reports span from 2014 to 2019 and include students from 3rd grade through the final year of high school. We exclude reports from students below 3rd grade as they lack the required academic performance variables to implement our matching difference-in-differences strategy.

The number of reported mistreatment cases has shown an upward trend since 2014, regardless of perpetrator type (as shown in Appendix Figure A.1). The gender composition of reports varies by perpetrator category: student-perpetrated incidents are more frequently reported by female students (56%) than male students (44%), while adult-perpetrated incidents show the opposite pattern, with male students accounting for 56% of reports and female students 44%. Despite these differences, the overall gender distribution remains relatively balanced.

The grade level at which students report mistreatment reveals distinct gender patterns. Male students report incidents most frequently during elementary school (grades 3–5), with a progressive decline through middle school (grades 6–8) and high school. In contrast, female students exhibit a different pattern, with peak reporting occurring during middle school and lower rates in both elementary school and high school (Appendix Figure A.2).

### *3.2.1 Characteristics of Schools with Violence Reports*

Between 2014 and 2019, 46% of schools had no reports of violence, while 40% had at least one report of adult-perpetrated incidents and 43% had at least one report of student-perpetrated incidents. The frequency of reports within individual schools was generally low. Among schools with reports of adult-perpetrated violence, the average number of reports was 2. Reports of student-perpetrated violence were slightly more common, with an average of 2.7 reports per school among those with at least one incident reported. Appendix Figure A.3 presents the distribution of reports across schools during this period using separate histograms for adult- and student-perpetrated incidents.

Table 2 compares school characteristics over three categories: schools with no reports of violence, schools with at least one report of adult-perpetrated violence, and schools with at least one report of student-perpetrated violence. All figures are weighted by school size to account for differences in student population. Several notable patterns emerge from this comparison. Schools with and without reports show similar characteristics in terms of student gender composition, attendance rates, grade point averages (GPAs), grade retention rates, and annual student mobility. However, significant differences appear across other dimensions. Schools with reports tend to have larger class sizes, which may reflect the higher probability of observing incidents in larger student populations.

The institutional and geographical distribution of reports reveals additional patterns. Schools with reports are more likely to be voucher schools and less likely to be public or private institutions. These schools are also more concentrated in the capital region and less frequently located in rural areas. Academic performance metrics from the SIMCE tests in 4th grade and second year of high school indicate that schools with reports generally achieve higher scores in both mathematics and language. These schools also have higher average levels of parental education and income.

These patterns suggest reporting behavior may be influenced by socioeconomic factors. While the presence of a report indicates an incident of violence, it also requires parental action to file the report. The higher prevalence of reports in schools with more educated and affluent parent populations is consistent with the hypothesis that these parents may be more likely to formally report incidents of violence.

### *3.2.2 Characteristics of Students Who Report Violence*

Table 3 presents summary statistics comparing the characteristics of violence victims to the general student population. We analyze four victim groups separately: males and females who reported adult-perpetrated violence, and males and females who reported student-perpetrated violence.

Academic indicators reveal that students who report violence show modestly lower academic performance in the year preceding the incident compared to their peers. These students demonstrate lower attendance rates, decreased GPAs, and higher rates of grade retention and school transfers during the year before filing their report. The academic challenges are particularly pronounced among male students reporting adult-perpetrated violence, who exhibit lower GPAs and higher grade retention rates compared to other reporting groups.

Socioeconomic indicators show that students who report violence tend to come from households with higher parental education levels and higher household incomes compared to the general population. This aligns with our previous finding that more educated parents are more likely to file formal reports of violence.

An interesting pattern emerges in the prevalence of special educational needs (SEN) among students who report violence. Male students who report adult-perpetrated violence have a SEN rate of 27%, while those reporting student-perpetrated violence have a rate of 31% - both substantially higher than the 15% observed in the general population. Among female students who report violence, the SEN rate is 18%. Importantly, the majority of these cases involve specific learning disabilities.

Using SIMCE questionnaire data, we analyze violence exposure among reporting students and compare them to their peers (defined as students in the same school and grade). Since SIMCE data is not collected for all students every year, we focus on students who completed the questionnaire in the same year they reported a violence incident. Our analysis covers four types of measures of student-perpetrated violence exposure: physical (being hit or having belongings damaged), verbal (insults, mockery, threats), social (isolation, gossip, public humiliation), and virtual (threats or mockery through digital platforms like Facebook, WhatsApp, or Instagram). Appendix X details how we constructed these measures. Because the questionnaire structure varies slightly across years, we standardized all variables by year and grade. This standardization allows us to interpret the resulting coefficients as standard deviations from the population mean.

As shown in the data, students who report violence are significantly more likely to indicate exposure to physical, verbal, social, and virtual violence. This pattern is particularly pronounced among those reporting student-perpetrated incidents, which aligns with the questionnaire's focus on peer-based violence. Notably, the peers of reporting students also show slightly higher-than-average reports of violence exposure,[5] suggesting that students who report violence (whether perpetrated by adults or fellow students) attend classes where violence, as reported by the student body, is more prevalent than average.

In sum, our analysis indicates that reporters tend to be higher socioeconomic status students attending classes with above-average violence rates, and where the reporting students themselves experience substantially more violence than both their immediate peers and the average student across all schools. These reporting students exhibit slightly lower educational outcomes compared to the average student. Additionally, male students who report violence are substantially more likely to be classified as having special educational needs (SEN), with rates approximately twice that of the general student population.

#### *3.2.3 Educational Outcomes Prior to Violence*

Individuals who report violence may have experienced victimization for an extended period before filing a report, potentially affecting their educational trajectories over time. To examine this possibility, Figure 2 compares the educational trajectories of victims to those of the general student population, with the latter re-weighted to match victims' grade distribution.

The figure confirms the differences we observed in Table 3, showing that students who report violence consistently perform below their peers. They have lower attendance rates (approximately 3 p.p), lower GPAs (about 0.1 points), and higher rates of grade retention and school changes (approximately 5 p.p). Their high enrollment rates reflect that school enrollment is necessary for reporting.

Despite these differences in levels, we find no evidence of a differentiated trend prior to the reported incident. The academic performance gap remains stable up to four years before the event, suggesting these students consistently perform below their peers rather than experiencing a progressive decline.

### 3.3 Empirical Strategy

#### *3.3.1 Effects on Educational Performance*

Estimating the causal effect of violence on student outcomes presents two key methodological challenges. First, accurately identifying which students have experienced high levels of school violence can be difficult. Second, students who experience violence likely differ systematically from those who do not, making it

[5] We explicitly exclude the reporting student when calculating average violence exposure among peers.

problematic to attribute observed differences in academic performance directly to violence exposure.

In this paper, we analyze formal reports of school violence, which provide a more reliable measure of experienced violence than simple self-reported statements. Filing these reports involves a formal process that requires time and engagement with administrative procedures, suggesting that incidents that result in formal reports represent significant experiences of violence. To address the selection bias concern and estimate causal effects, we implement a matched difference-in-differences design, comparing victims who report school violence to matched control observations (following Adams-Prassl et al., 2024). This approach allows us to compare the evolution of outcomes before and after the incident for treatment and control observations with similar characteristics. By employing a stacked difference-in-differences design that compares never-treated to treated individuals, we address recent concerns in the difference-in-differences literature (Cengiz et al., 2019). Similarly, to estimate the effect of violence on victims' peers, we compare the evolution of treated peers to that of matched control observations.

To estimate causal effects, we use a matched difference-in-differences design, comparing victims who report high levels of school violence to matched control observations (following Adams-Prassl et al., 2024). This approach allows us to compare the evolution of outcomes before and after the incident for treatment and control observations with similar characteristics. By employing a stacked difference-in-differences design that compares never-treated to treated individuals, we address recent concerns in the difference-in-differences literature (Cengiz et al., 2019). Similarly, to estimate the effect of violence on victims' peers, we compare the evolution of treated peers to that of matched control observations.

Formally, we identify a victim's three nearest-neighbor matches based on academic history.[6] We exclude victims' peers during the year of the incident as controls because of potential spillover effects. While we exclude peers of victims as potential controls during the year of the incident, we include them as potential controls for cases reported in other years.[7] This process leaves us with three matches for each victim. With matched control and treatment observations in hand, we estimate the following regression model:

$$Y_{isgt} = \sum_{j=-11, j\neq -1}^{5} \delta_{sj} D_{isb,t-j} + \alpha_i + \gamma_{st} + \omega_{sgj} + \epsilon_{isgt} \tag{1}$$

where $Y_{isgt}$ represents the outcome of interest for victim $i$ of gender $s$ in base-grade $g$ at time $t$. $g$ is the grade in which the violent incident occurs. $D_{ig,t-j}$ is an indicator variable for the treatment (school violence) for each year $j$ since the event. The coefficients $\delta_{sj}$ identify the effects of the violent incident on victims of gender $s$ relative to the matched counterfactual. We omit the year prior to the event ($j = -1$), meaning all estimates

[6] Our matching includes several school and individual characteristics measured between zero and four years before the reported incident. School-level variables comprise school fees, performance on standardized mathematics and language tests, and school type (private/public or voucher). Individual-level variables, measured one to four years pre-incident, include enrollment status, school transitions, attendance rates, grade retention, and GPA.

[7] While peers cannot serve as controls for victims who reported violence in the same year they were treated as peers, they may serve as controls for cases occurring in different years.

of $\delta_{sj}$ are relative to the year before the incident. We also include individual fixed effects $\alpha_i$, year fixed effects $\gamma_{st}$, and base-grade-time-since-incident fixed effects $\omega_{sgj}$. Standard errors are clustered at the individual level. We report the separate yearly effects $\delta_{sj}$ for the four years after the incident. Comparisons always occur between treated and never-treated individuals to address concerns of bias in event study estimates (Goodman-Bacon, 2021; Sun and Abraham, 2021), that is, this is a stacked DiD exercise as in Cengiz et al., 2019. A key assumption for a causal interpretation of these results is that the academic trajectories of the victims would have evolved along common trends with their matched controls in the absence of the violent incident.

### 3.3.2 *Effects on Long-term Educational Outcomes*

For long-term outcomes such as higher education completion and college enrollment, we observe individuals only once rather than in a panel. To estimate these effects, we estimate:

$$Y_{im} = \beta T + X_i\phi + \eta_m + \nu_{im} \tag{2}$$

where $Y_{im}$ represents the outcome of interest for individual $i$ in match $m$, $T$ equals one if the individual reported a violent event, $X_i$ controls for individual characteristics including parental education and household income, and $\eta_m$ represents match fixed effects. This specification requires a stronger identifying assumption: treated individuals would have achieved the same long-term outcomes as their matched controls who had similar educational trajectories prior to the event, conditional on socioeconomic characteristics. While this assumption is more demanding than in our main analysis, these estimates provide valuable insight into how short-term effects translate into longer-term outcomes.

### 3.3.3 *Effects on Violence Exposure*

To measure variables related to school climate, including perceived exposure to violence, and sense of belonging, we use data from the (SIMCE) survey. Appendix X provides a detailed description of the variables and specific questions used in this analysis. T

Finally, the last set of variables relates to the sense of belonging. While the specific questions may vary, we include six types of questions in a belonging index. These questions assess whether the student likes their school, speaks positively about it to others, would recommend a friend to transfer there, feels happy to belong to the school, and whether teachers and the principal make them feel like an important part of the school. Our index variable is constructed as the standardized sum of these questions, and our results remain consistent when using alternative methods to construct the index, such as principal component analysis.

Since the SIMCE survey measures these variables only for specific grades or years, we cannot track all individuals longitudinally. In fact, among students in the SIMCE surveys, 54.2% appear only once, 36.2% appear twice, and 9.3% appear a maximum of three times. Because this data is not collected for all students, we cannot estimate equation **??** for these variables. To address this, we implement a modified difference-in-differences strategy, comparing the outcomes of students and their matched counterparts based on the number of years relative to the year of the report. Specifically, we estimate the following equation:

$$Y_{imgt} = \sum_{j=-4}^{4} \delta_j D_{im} + \gamma_{mgt} + \varepsilon_{imgt} \tag{3}$$

where $Y_{igmt}$ represents the outcome for student $i$ in grade $g$ at time $t$, with $m$ indicating the student's match. The variable $D_{im}$ is a binary indicator of whether student $i$ in match $m$ submitted a violence complaint. All estimations control for grade-by-match-by-year fixed effects ($\gamma_{gmtj}$), and $\varepsilon_{imgt}$ represents the error term. Standard errors are clustered at the school level. The parameters of interest in equation 3 are the vector $\delta_j$ for $j \in \{-4, \ldots, 4\}$, which represent the average difference in the SIMCE variables between the treated student and their respective matches in year $j$, relative to the year of the report ($j = 0$).

# 4 Results

## 4.1 Effects on Educational Performance

We first report the short-term effects on victims' school attendance, finding that school violence increases the absenteeism rate during the academic year of the incident. Figure 4 plots the monthly absenteeism rates before and after the incident reports for male (Panel A) and female (Panel B) victims of adult (column 1) and student (column 2) violence.

While absenteeism rates are comparable between victims and their controls up to four months before the report, they begin to rise for affected students three months before filing a complaint, with a sharp increase the month of the incident that persists throughout the academic year. Figure 5 shows that these differences are statistically significant by reporting the event-study coefficients from equation 2. For this figure, we use four months before the report instead of the month of the incident as the baseline period, as absenteeism begins to increase three months before filing the complaint. This increase in absenteeism in the months before reporting the case suggests that victims started experiencing higher levels of violence during this prior period. The estimates show absenteeism increases by approximately 10 p.p. for victims of adult violence and 15 p.p. for victims of student violence in the incident month, with elevated rates persisting through the remainder of the academic year.

The short-term effects of violence on absenteeism persist over time, affecting medium-term outcomes

through lower attendance years after the incident and higher dropout rates. Moreover, victims of violence experience lower academic performance and higher grade retention after the incident, and are more likely to transfer to schools with lower-quality metrics. While both student and adult violence negatively affect outcomes, the impacts are stronger and more persistent for victims of adult abuse across all measures. These patterns are similar for male and female victims, with no major gender differences in the impacts of either type of violence. We discuss these results in detail below.

Figure 6 plots the event-study estimates for school attendance outcomes: absenteeism and dropout rates. Panel A reveals that students who report adult violence exhibit persistently higher absenteeism rates—approximately 4.5 p.p.—up to four years after the initial report. These effects are similar across male and female victims. Similarly, victims of student violence face elevated absenteeism rates by around 6.3 p.p. in the incident year, which, while decreasing over time, remains significant four years after the case. Notably, the long-term impact is more pronounced among female than male victims of student violence two to four years after reporting.

Panel B of Figure 6 highlights that victims of violence are also at an increased risk of dropping out of school. Three to four years after reporting adult violence, both male and female victims are approximately 2.3 percentage points more likely to have left school. Similarly, victims of student violence show a higher likelihood of dropping out three years after the incident of around 1.5 percentage points. All of these effects are statistically significant.

Victims of school violence also experience lower academic performance following the incident. Panels A and B of Figure 7 report the event-study estimates on grade retention and GPA. Grade retention, defined as failing to advance to the next grade level, increases by approximately 4 p.p for victims of adult violence and 3 p.p for victims of student violence. These effects persist in subsequent years, indicating victims face higher retention risks not only in the incident year but also one to two years afterward, with effects diminishing over time but remaining statistically significant. In terms of GPA, Panel B shows more persistent effects for victims of adult violence, who experience a GPA decline of 0.05 to 0.1 points, persisting over time. For victims of student violence, GPA decreases during the year of the incident, but while this effect persists for female victims, it is not statistically significant for male victims after a years.

Victims of school violence are also more likely to transfer to schools with lower-quality metrics. Figure 8 presents event-study estimates on the likelihood of transferring schools and three indicators of school quality: copay (a proxy for price) and average math and reading scores. Panel A shows that victims are 30 p.p. more likely to transfer schools compared to their matched controls, with this impact being around 5 p.p. in later years. Both victims of student and adult violence transfer to lower quality schools, as reflected in Panels B-D, where the estimates indicate that these students attend schools with lower copays, as well as lower average math and reading scores. However, the decline in school quality is more pronounced for victims of adult abuse, who transfer to schools with lower performance metrics.

Table 4 examines the long-term impacts of school violence on educational outcomes. Using a matching strategy that controls for educational trajectories pre-incident and socioeconomic status, we analyze students who could have graduated by 2022 based on their grade level at the time of the incident. Results reveal strong negative effects of being a victim of violence, with impacts being more pronounced for victims of adult abuse.

School violence has substantial impacts on educational attainment and post-secondary trajectories. Among matched controls, 77% graduate high school on time, while victims of adult and student abuse show decreased graduation rates by 11 p.p. and 9 p.p., respectively. Overall high school completion rates (85% for controls) decrease by 8 p.p. for victims of adult abuse and 6 p.p. for victims of student violence.

In Chile, a standardized test is required for most university admissions and access to financial aid. While 69% of control students take this test, participation rates drop by 5 p.p. for victims of adult abuse and 3 p.p. for student abuse victims. Control students perform at the 30th percentile on average, with both types of victims scoring significantly lower, particularly those who experienced adult abuse.

Regarding tertiary education, 67% of control students enroll in post-secondary programs. Adult abuse victims show a 3 p.p. decrease in overall enrollment. While student abuse victims maintain similar enrollment rates, they are more likely to choose vocational programs over university education. Both groups of victims are less likely to enroll in above-average programs (those whose students score above the mean). All these estimates suggest lasting impacts on educational trajectories.

## 4.2 Effects on Violence Exposure

To analyze exposure to violence, we run the model described in Section 3.3. We are able to observe 13,739 victims (77% of total victims) in the same year and grade as at least one of their matched controls. Of these 13,739 victims, we observe 39% just once in time, and we are able to observe 61% more than once with a corresponding control.

Results in Figure 9 indicate that victims of adult violence report similar levels of physical, verbal, social and virtual violence perpetrated by students as their matched controls. This makes sense since these students report being victims of adult-perpetrated violence, not student-perpetrated violence, although there might be some correlation between both. Exposure to student-perpetrated violence tends to increase slightly the year they report an incident, but the increase is modest.

When examining students who report being victims of student violence, we find they are slightly more likely than controls to report exposure to various forms of violence up to 4 years prior. Importantly, this exposure clearly peaks in the year of the reported incident, with victims 0.65-0.95 standard deviations higher in violence exposure. After the incident, their reported exposure decreases, potentially due to school

changes or responses from the schools that they reported.

Figure 10 shows victims had similar school belonging 3 years prior, but this starts to decrease closer to the incident and really peaks the year of the incident, with a 0.5 SD drop for adult violence victims and 0.45 SD drop for student violence victims. School belonging then improves in subsequent years. However, importantly, although both students' exposure to violence and sense of belonging seem to recover to their levels before the incident, we find that the effect on educational outcomes persists over time.

### 4.3 Effects on Victims' Classmates

We also examine the effects of school violence on the classmates of students who report experiencing it. While we are unable to separately identify other victims or perpetrators within these peer groups, we estimate the average impact on all students in the same school and grade following a reported incident of severe violence. To establish causality, we employ the identification strategy detailed in Section 3.3.

Figure 11 presents the event-study estimates for classmates' school attendance outcomes. The results indicate significant effects of approximately 0.4 p.p. on classmates' attendance, about 7-10% of the impact observed for victims in Figure 6. These effects persist for two years following the reported incident before dissipating.

The estimates also reveal a negative and persistent effect on the academic performance of victims' classmates. Figure 12 presents the event study estimates for classmates' grade retention (Panel A) and GPA (Panel B). Classmates of victims are approximately 0.5 p.p. more likely to repeat a grade the year of the incident, with similar impacts for both adult and student violence—about 12.5% of the effect size seen for victims in Figure 7. These effects diminish over time, but remain statistically significant up to two years after the event. The results for GPA also show a decline, with an average decrease of around 0.02 points in the year of the incident. While classmates of victims of adult violence recover relatively faster, those affected by student violence continue to experience lower GPA scores in subsequent years.

Lastly, we explore whether victims' classmates are more likely to change schools after an incident, as shown in Figure 13. The results indicate a slight but significant increase in the likelihood of school transfer—by almost 1 percentage point for classmates of adult violence victims and no effect for classmates of student violence victims.

### 4.4 Eliminating Other Possible Explanations

Several aspects of our results strongly suggest a causal relationship between violent incidents and educational outcomes. We observe sudden and substantial shifts in academic performance precisely when violence occurs, and these effects are evident both when comparing victims to themselves before the in-

cident and when comparing them to matched controls. Furthermore, the negative impact on educational outcomes continues for a minimum of four years following the violent event. Importantly, we find no evidence of declining performance prior to incidents, which helps eliminate numerous competing explanations for the patterns we observe in the data.

To rule out additional alternative explanations, we conduct several robustness checks detailed in Appendix B. First, we implement a fuzzier matching approach to address potential over-fitting concerns. One might worry that our primary matching strategy creates artificially similar pre-trends between victims and controls. To test this, we employ a fuzzy matching strategy that relies only on educational outcomes from the year before the incident and characteristics of schools attended by students in the year before and year of the incident. This alternative approach yields flat pre-trends and results very similar to our main specification, strengthening confidence in our findings.

# 5 Conclusion

This study provides compelling causal evidence that school violence has substantial and persistent negative effects on victims. Using unique administrative data from Chile linking violence reports to educational records, we document several key findings. First, experiencing violence leads to immediate deterioration in academic performance, with absenteeism spiking significantly the month a report is filed. Second, these negative effects persist over time, with victims showing elevated dropout rates, increased grade retention, and higher likelihood of transferring to lower-quality schools up to four years after the incident. Third, the impacts are particularly severe for victims of adult-perpetrated violence, who experience stronger and more persistent negative outcomes across all measures.

The long-term educational consequences are substantial. Being a victim of school violence significantly reduces the probability of on-time high school graduation, decreases overall completion rates, and alters post-secondary trajectories - with adult abuse victims showing decreased enrollment rates and student abuse victims shifting from university to vocational programs. Importantly, these negative effects persist even after exposure to violence diminishes, suggesting that current intervention strategies may be insufficient to prevent long-term educational harm.

Our findings also reveal significant effects on victims' classmates, who experience decreased attendance, lower academic performance, and increased grade retention, though at smaller magnitudes than direct victims. These peer effects, persisting up to two years after reported incidents, highlight how school violence can disrupt the broader educational environment.

These results have important policy implications. While schools are meant to foster human capital development, exposure to violence - whether from peers or adults - can fundamentally derail educational

trajectories. The persistent nature of these effects, even after violence exposure ends, suggests the need for more comprehensive support systems and interventions. Our findings provide crucial evidence for quantifying the full costs of school violence and underscore the importance of developing more effective prevention and response strategies to protect students' educational opportunities.

## References


Adams-Prassl, A., Huttunen, K., Nix, E., and Zhang, N. (2024). Violence against women at work. *The Quarterly Journal of Economics*, 139(2):937–991.

Ammermueller, A. (2012). Violence in european schools: A widespread phenomenon that matters for educational production. *Labour Economics*, 19(6):908–922.

Ang, D. (2020). The Effects of Police Violence on Inner-City Students. *The Quarterly Journal of Economics*, 136(1):115–168.

Baker-Henningham, H., Meeks-Gardner, J., Chang, S., and Walker, S. (2009). Experiences of violence and deficits in academic achievement among urban primary school children in jamaica. *Child abuse & neglect*, 33(5):296–306.

Beland, L.-P. and Kim, D. (2016). The Effect of High School Shootings on Schools and Student Performance. *Educational Evaluation and Policy Analysis*, 38(1):113–126.

Brimblecombe, N., Evans-Lacko, S., Knapp, M., King, D., Takizawa, R., Maughan, B., and Arseneault, L. (2018). Long term economic impact associated with childhood bullying victimisation. *Social Science & Medicine*, 208:134–141.

Brown, S. and Taylor, K. (2008). Bullying, education and earnings: evidence from the national child development study. *Economics of Education Review*, 27(4):387–401.

Cabral, M., Kim, B., Rossin-Slater, M., Schnell, M., and Schwandt, H. (2021). Trauma at School: The Impacts of Shootings on Students' Human Capital and Economic Outcomes. *SSRN Electronic Journal*.

Carrell, S. E. and Hoekstra, M. L. (2010). Externalities in the classroom: How children exposed to domestic violence affect everyone's kids. *American Economic Journal: Applied Economics*, 2(1):211–228.

Cengiz, D., Dube, A., Lindner, A., and Zipperer, B. (2019). The effect of minimum wages on low-wage jobs. *The Quarterly Journal of Economics*, 134(3):1405–1454.

Delprato, M., Akyeampong, K., and Dunne, M. (2017). The impact of bullying on students' learning in latin america: A matching approach for 15 countries. *International journal of educational development*, 52:37–57.

Devries, K. M., Knight, L., Child, J. C., Mirembe, A., Nakuti, J., Jones, R., Sturgess, J., Allen, E., Kyegombe, N., Parkes, J., et al. (2015). The good school toolkit for reducing physical violence from school staff to primary school students: a cluster-randomised controlled trial in uganda. *The Lancet Global Health*, 3(7):e378–e386.

Eriksen, T. L. M., Nielsen, H. S., and Simonsen, M. (2014). Bullying in elementary school. *Journal of Human Resources*, 49(4):839–871.

Figlio, D. N. (2007). Boys named sue: Disruptive children and their peers. *Education finance and policy*, 2(4):376–394.

Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of econometrics*, 225(2):254–277.

Gutierrez, I., Molina, O., Ñopo, H., and Sviatschi, M. (2024). Can Attitudinal Changes Toward Reporting Curb Violence? AnExperimental School Intervention in Peru.

Hasnat, I. I. and Fakir, A. M. (2023). Condemned in childhood: bully victimization and labour market outcomes. *Applied Economics Letters*, 30(1):51–55.

Karmaliani, R., McFarlane, J., Khuwaja, H. M. A., Somani, Y., Bhamani, S. S., Saeed Ali, T., Asad, N., Chirwa, E. D., and Jewkes, R. (2020). Right to play's intervention to reduce peer violence among children in public schools in pakistan: a cluster-randomized controlled trial. *Global health action*, 13(1):1836604.

Kristoffersen, J. H. G., Krægpøth, M. V., Nielsen, H. S., and Simonsen, M. (2015). Disruptive school peers and student outcomes. *Economics of Education Review*, 45:1–13.

Kumar, D., Padhi, D., Pratap, B., and Aggarwal, A. (2022). Corporal punishment and praise in indian schools: Caste-based heterogeneity on children's cognitive skills. *International Journal of Educational Development*, 89:102554.

Lavy, V. and Schlosser, A. (2011). Mechanisms and impacts of gender peer effects at school. *American Economic Journal: Applied Economics*, 3(2):1–33.

Maiti, A. (2021). Effect of corporal punishment on young children's educational outcomes. *Education Economics*, 29(4):411–423.

Monteiro, J. and Rocha, R. (2017). Drug Battles and School Achievement: Evidence from Rio de Janeiro's Favelas. *The Review of Economics and Statistics*, 99(2):213–228.

Murillo, J. and Román, M. (2011). Latin america: School bullying and academic achievement.

Naz, A., Khan, W., Daraz, U., Hussain, M., and Khan, Q. (2011). The impacts of corporal punishment on students' academic performance/career and personality development up-to secondary level education in khyber pakhtunkhwa pakistan. *International Journal of Business and Social Science*, 2(12).

Paluck, E. L., Shepherd, H., and Aronow, P. M. (2016). Changing climates of conflict: A social network experiment in 56 schools. *Proceedings of the National Academy of Sciences*, 113(3):566–571.

Smarrelli, G. (2023). Improving school management of violence: Evidence from a nationwide policy in peru. Technical report, Center for Global Development.

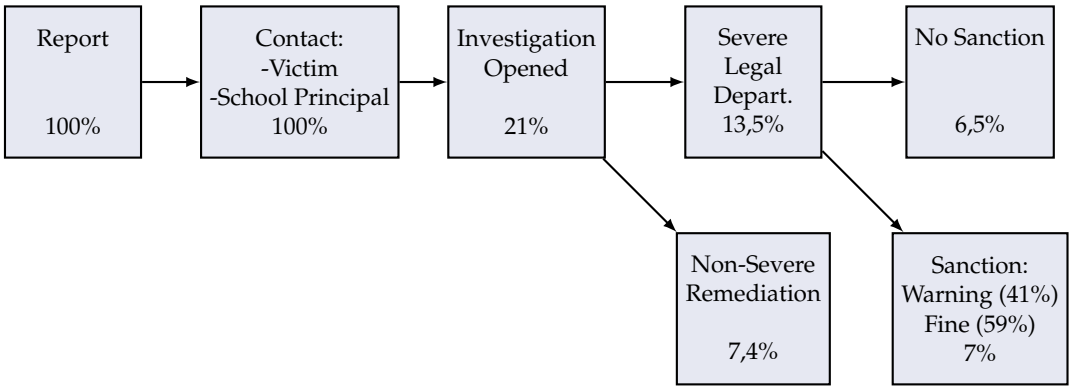
Sun, L. and Abraham, S. (2021). Estimating dynamic treatment effects in event studies with heterogeneous treatment effects. *Journal of econometrics*, 225(2):175–199.

UNESCO, I. (2019). Behind the numbers: Ending school violence and bullying. *UNESCO Digital Library*.

Wolke, D., Copeland, W. E., Angold, A., and Costello, E. J. (2013). Impact of bullying in childhood on adult health, wealth, crime, and social outcomes. *Psychological science*, 24(10):1958–1970.

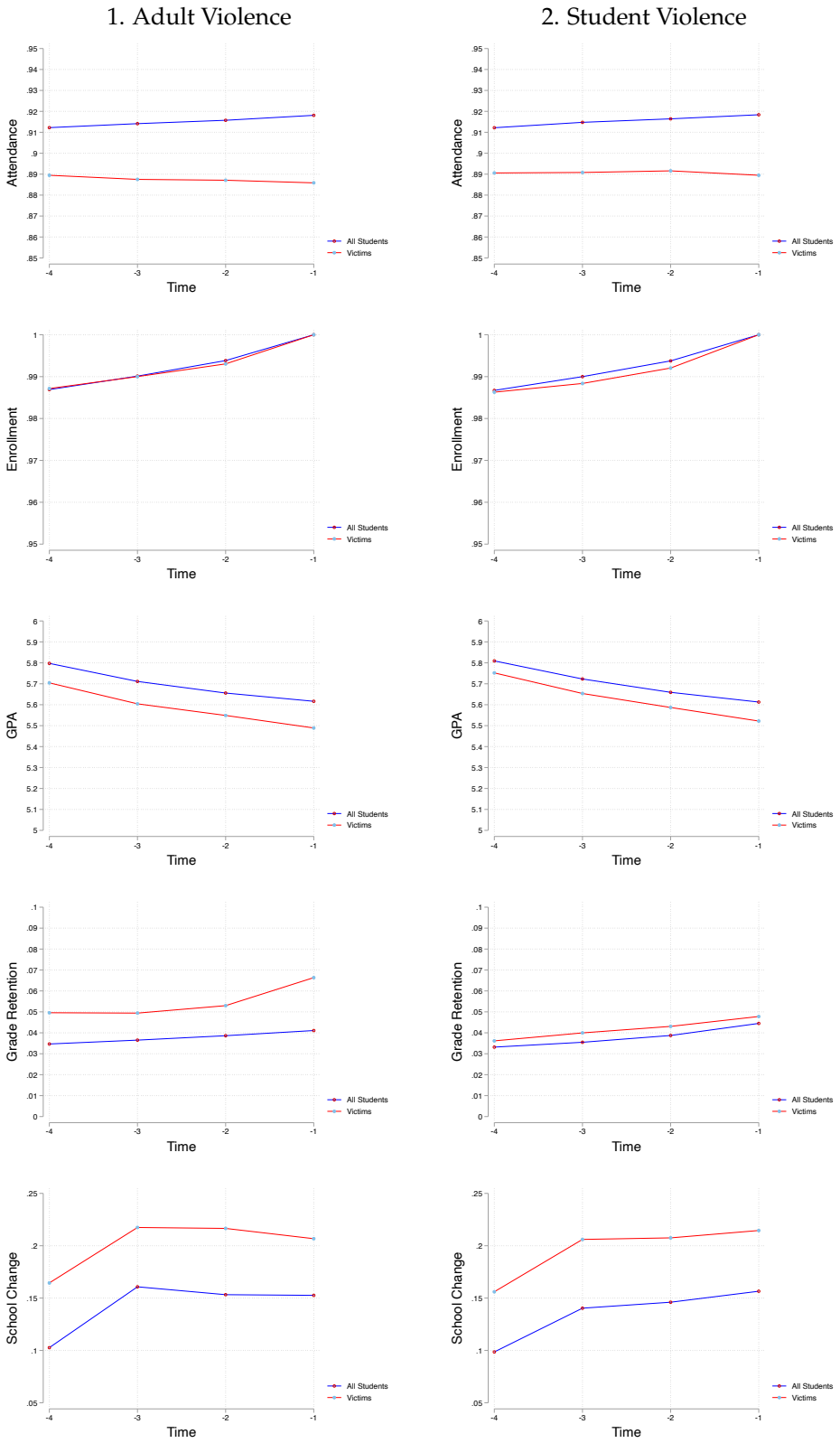
# 6 Figures and Tables

**Figure 1:** Reporting Process




**Notes:** This figure describes the stages of the reporting process for school violence cases.

**Figure 2:** Educational Outcomes of Victims of Violence in the Four Years Before the Violent Incident Compared to All Students




**Notes:** This figure plots trends on outcomes for victims vs. all students. Column 1 show the trends for victims of adult violence and column 2 for victims of student violence, with each panel showing the trend for different outcomes.

**Figure 3:** Availability of School Climate Measures by Grade and Year

**Panel A: Physical Violence**

| Grade | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|
| 4B | . | . | . | x | x | x | . |
| 6B | . | . | . | x | . | x | . |
| 8B | x | x | x | . | x | . | x |
| 2M | . | . | x | . | x | x | . |

**Panel B: Verbal Violence**

| Grade | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|
| 4B | . | x | x | x | x | x | . |
| 6B | x | x | x | x | . | x | . |
| 8B | x | x | x | . | x | . | x |
| 2M | . | . | x | . | x | x | . |

**Panel C: Social Violence**

| Grade | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|
| 4B | . | . | . | . | . | . | . |
| 6B | x | . | . | . | . | . | . |
| 8B | x | x | x | . | x | . | x |
| 2M | . | . | x | . | x | x | . |

**Panel D: Virtual Violence**

| Grade | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|
| 4B | . | . | . | . | . | . | . |
| 6B | . | . | . | . | . | . | . |
| 8B | x | x | x | . | x | . | x |
| 2M | . | . | . | . | . | . | . |

**Panel E: Discrimination Index**

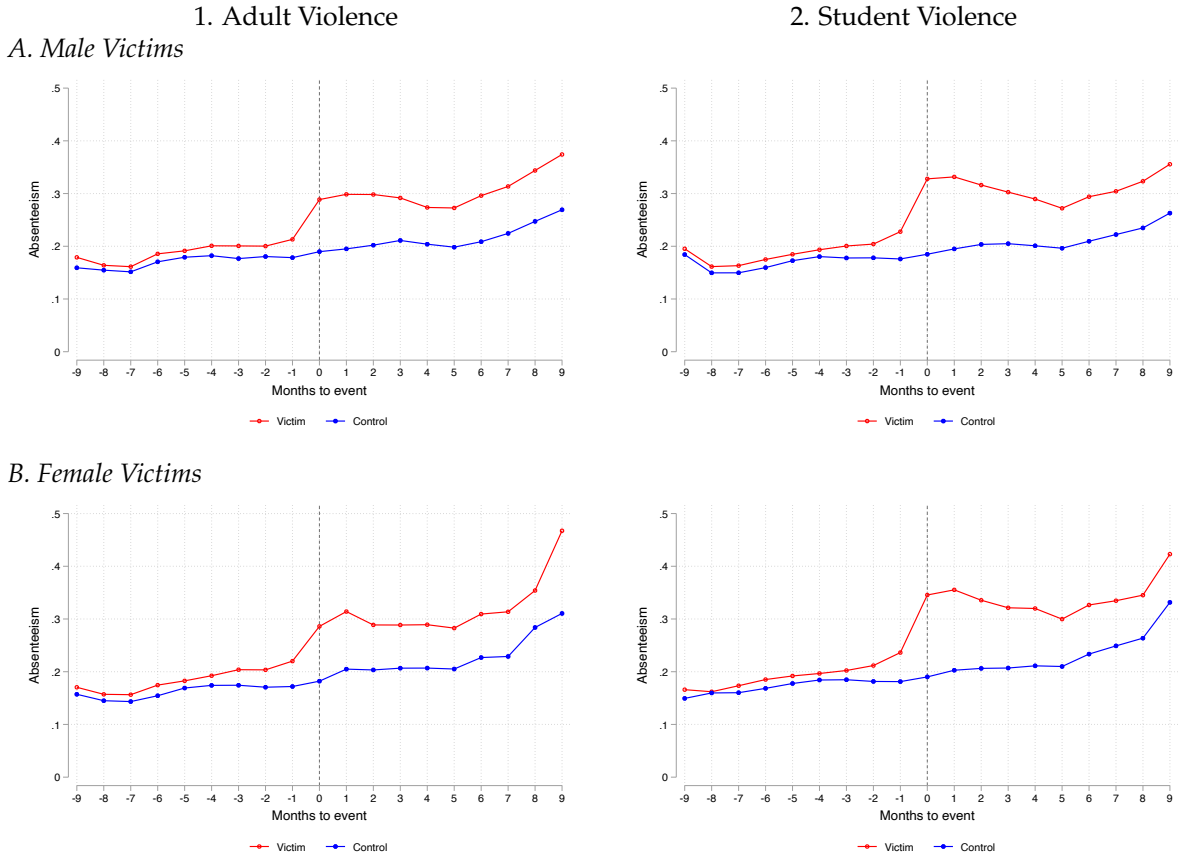
| Grade | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|
| 4B | . | . | . | . | x | . | . |
| 6B | . | . | . | . | . | x | . |
| 8B | x | x | x | . | x | . | x |
| 2M | . | . | x | . | x | x | . |

**Panel F: Belonging Index**

| Grade | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|
| 4B | x | x | x | x | x | x | . |
| 6B | x | x | x | x | . | x | . |
| 8B | x | x | x | . | x | . | x |
| 2M | . | . | x | . | x | x | . |

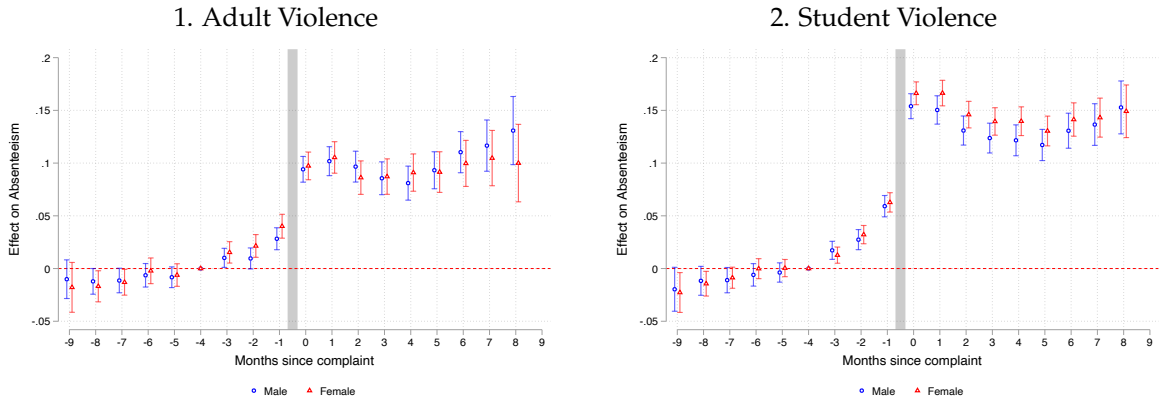
Notes: x indicates availability of the measure for that grade-year combination. 4B, 6B, and 8B refer to 4th, 6th, and 8th grade respectively. 2M refers to second year of high school.

**Figure 4:** Trends on Monthly Absenteeism During the Year of the Incident



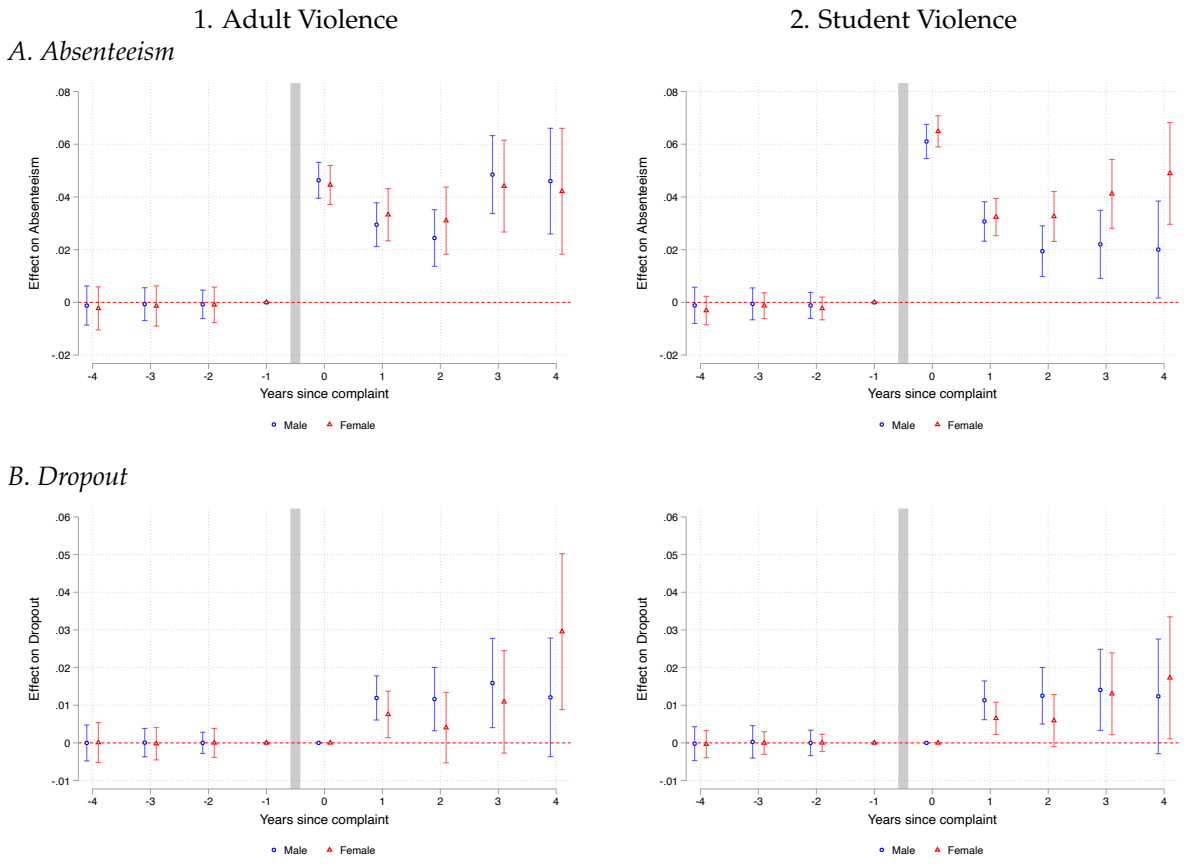

**Notes:** This figure plots trends on monthly absenteeism of victims and control matches during the year of the incident. Column 1 show the trends for victims of adult violence and column 2 for victims of student violence. Panel A depicts the trends for male victims and panel B for female victims.

**Figure 5:** Event-Study Effects on Monthly Absenteeism During the Year of the Incident



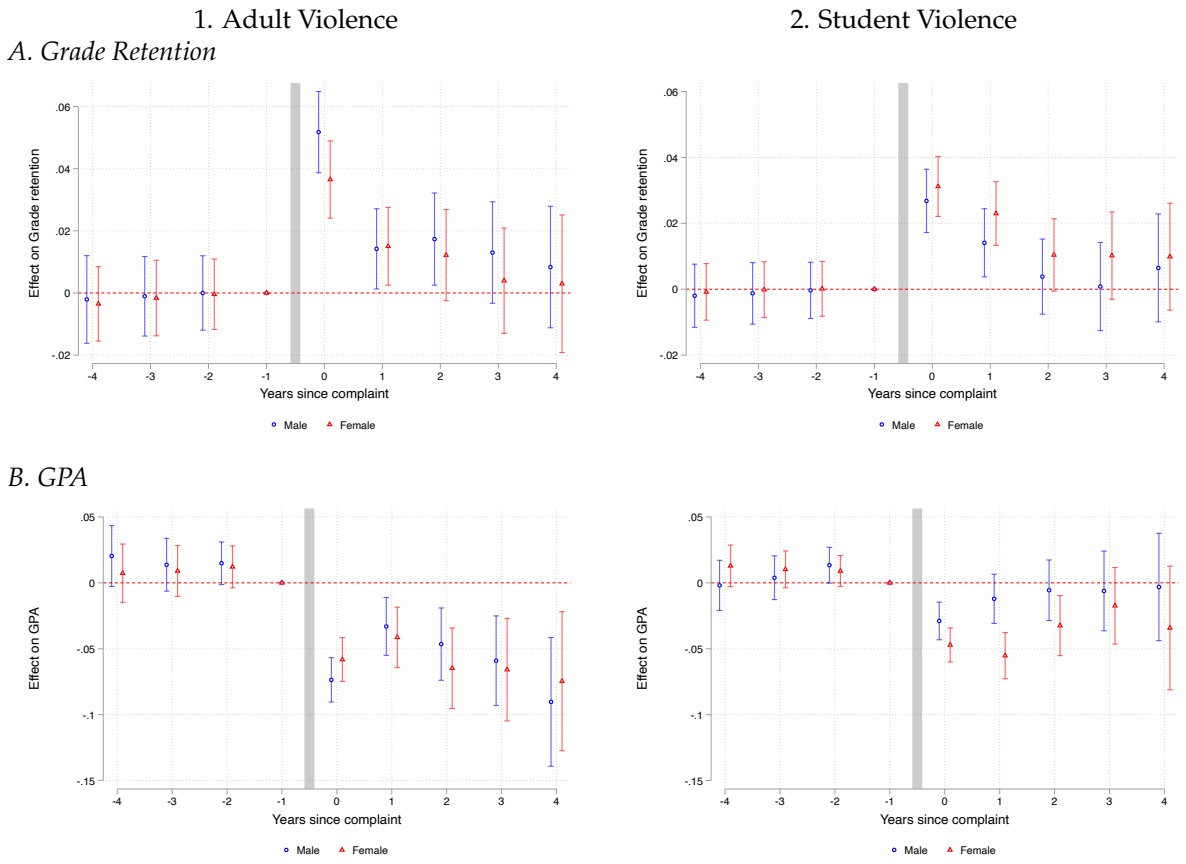

**Notes:** This figure presents event-study estimates on monthly school attendance for victims of adult violence (column 1) and student violence (column 2). All estimations control for individual fixed effects, year fixed effects, and the combination of grade and months since the complaint fixed effects. The lines represent 95% confidence intervals with standard errors clustered at the student level.

**Figure 6:** Event-Study Effects on Victims' School Attendance



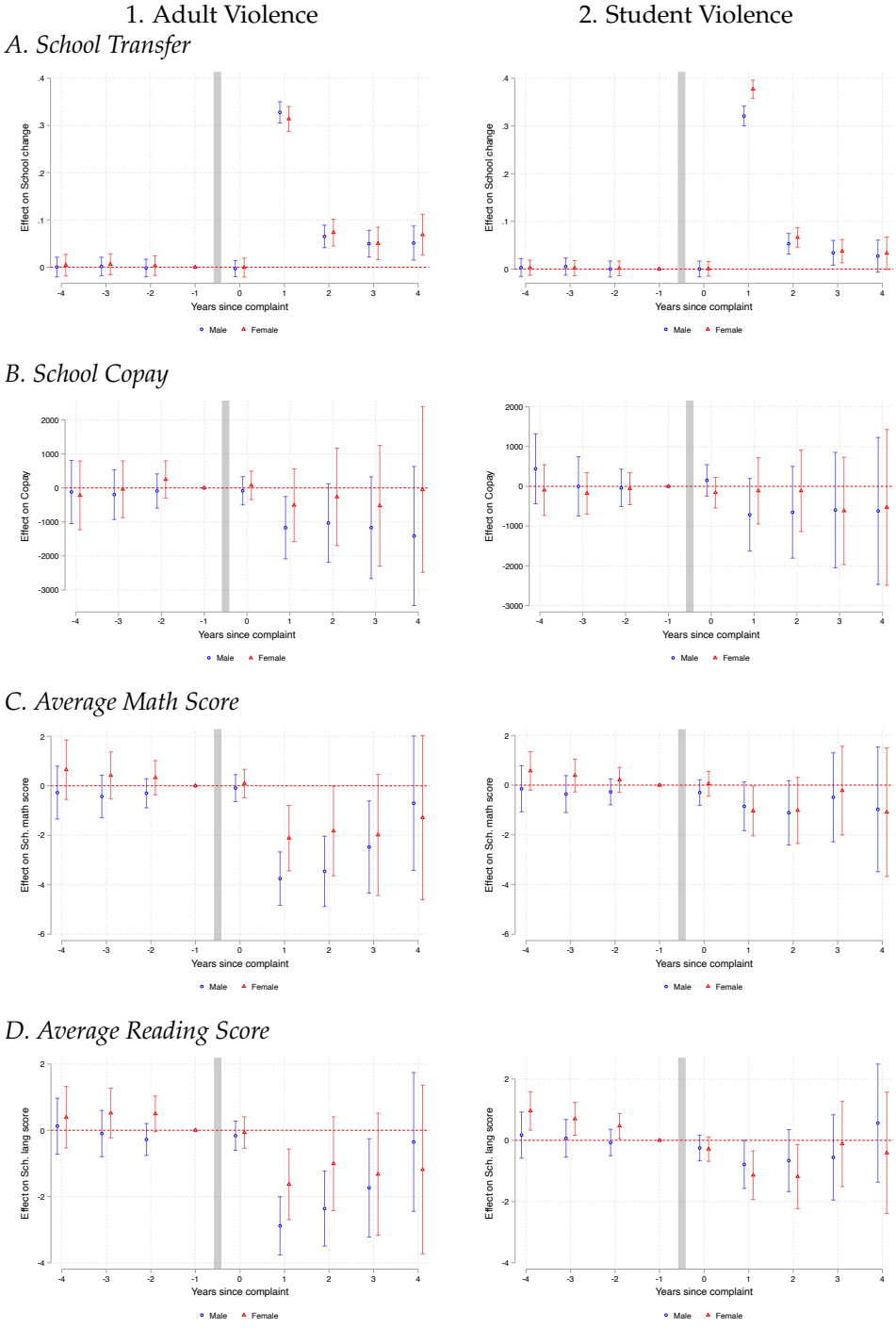

**Notes:** This figure presents event-study estimates on school attendance outcomes for victims of adult violence in column 1 and of student violence in column 2. All estimations control for individual fixed effects, year fixed effects, and the combination of grade and years since the complaint fixed effects. The lines represent 95% confidence intervals with standard errors clustered at the student level.

**Figure 7:** Event-Study Effects on Victims' Academic Performance



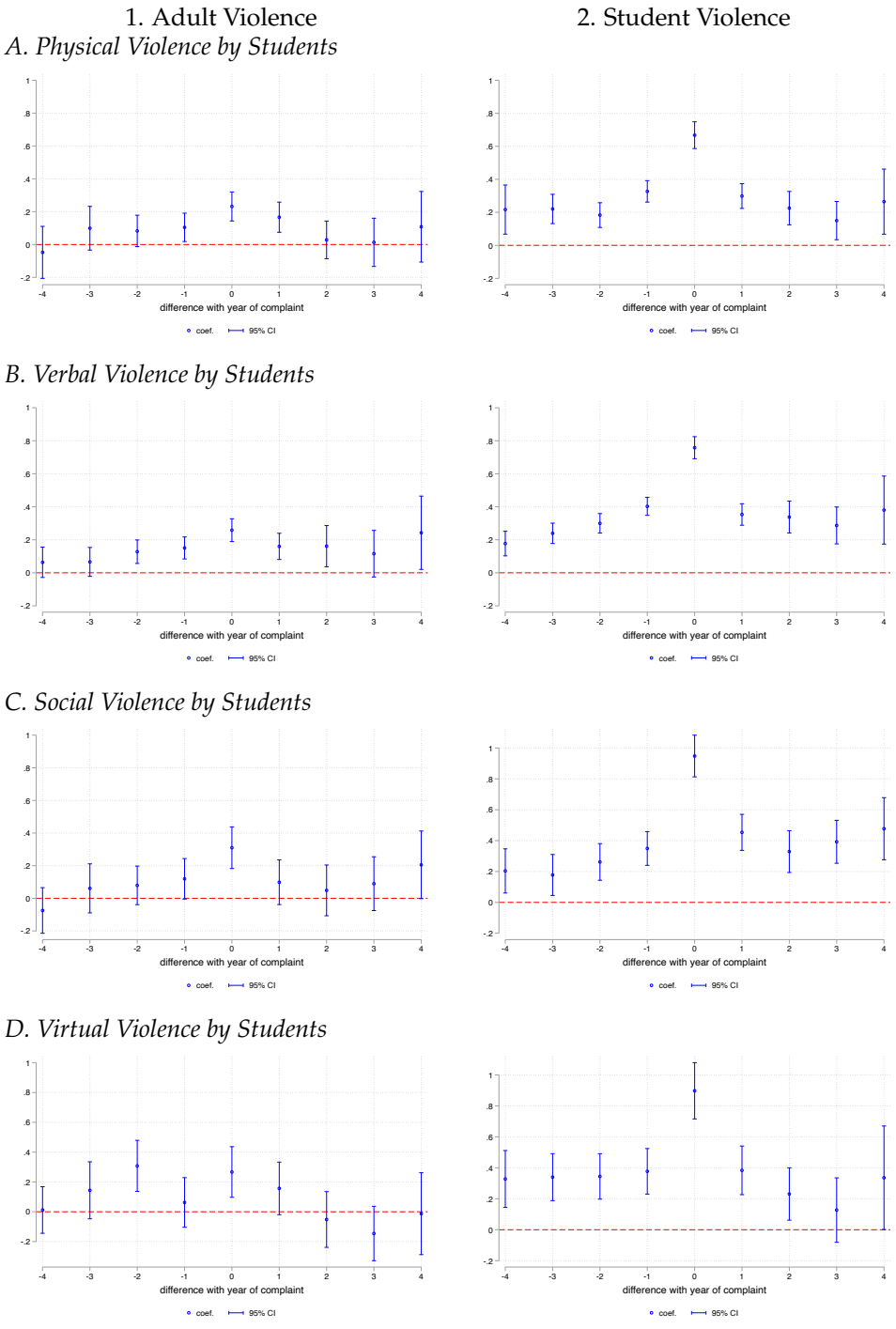

**Notes:** This figure presents event-study estimates on academic performance outcomes for victims of adult violence (column 1) and student violence (column 2). All estimations control for individual fixed effects, year fixed effects, and the combination of grade and years since the complaint fixed effects. The lines represent 95% confidence intervals with standard errors clustered at the student level.

**Figure 8:** Event-Study Effects on Victims' Schools Characteristics



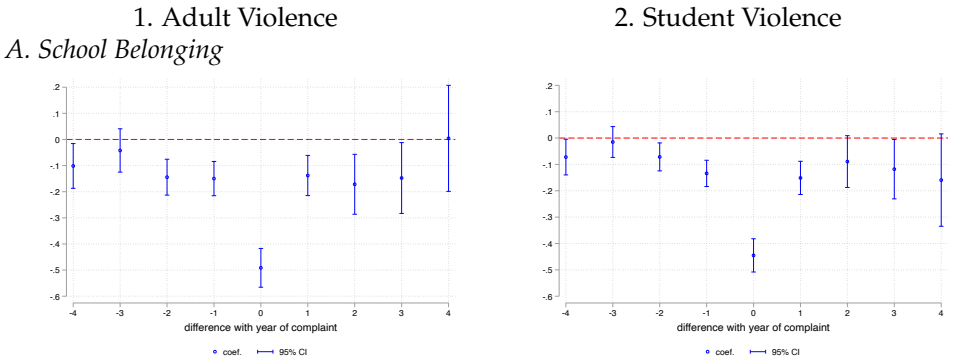

**Notes:** This figure presents event-study estimates on school transfers and school characteristics for victims of adult violence (column 1) and student violence (column 2). All estimations control for individual fixed effects, year fixed effects, and the combination of grade and years since the complaint fixed effects. The lines represent 95% confidence intervals with standard errors clustered at the student level.

**Figure 9:** Impact of Violence Reports on Survey-Based Measures of Student Victimization



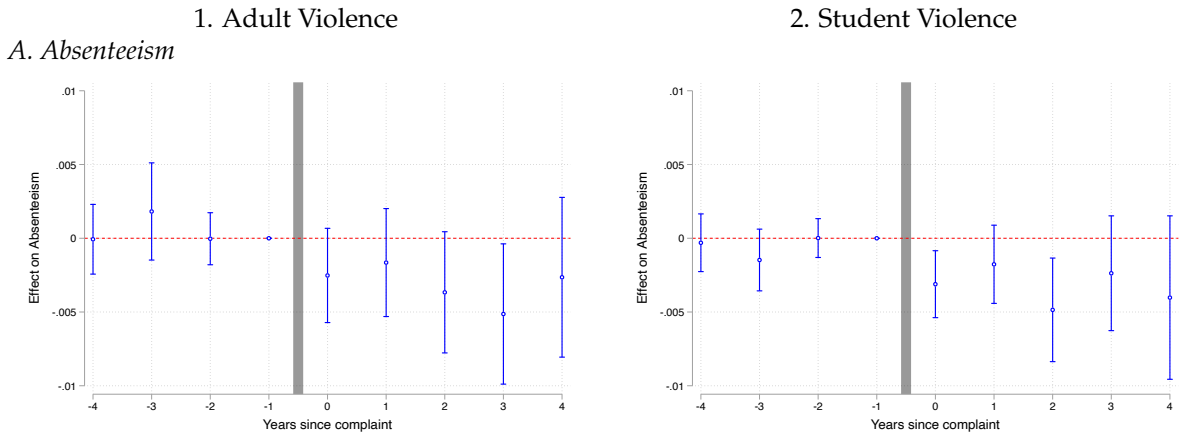

**Notes:** This figure presents event-study estimates on survey-based measures of violence of victims of adult violence (column 1) and student violence (column 2). All estimations control for match fixed effects, and the combination of grade and years since the complaint fixed effects. The lines represent 95% confidence intervals with standard errors clustered at the school level.

**Figure 10:** Impact of Violence Reports on Survey-Based Measures of Sense of School Belonging



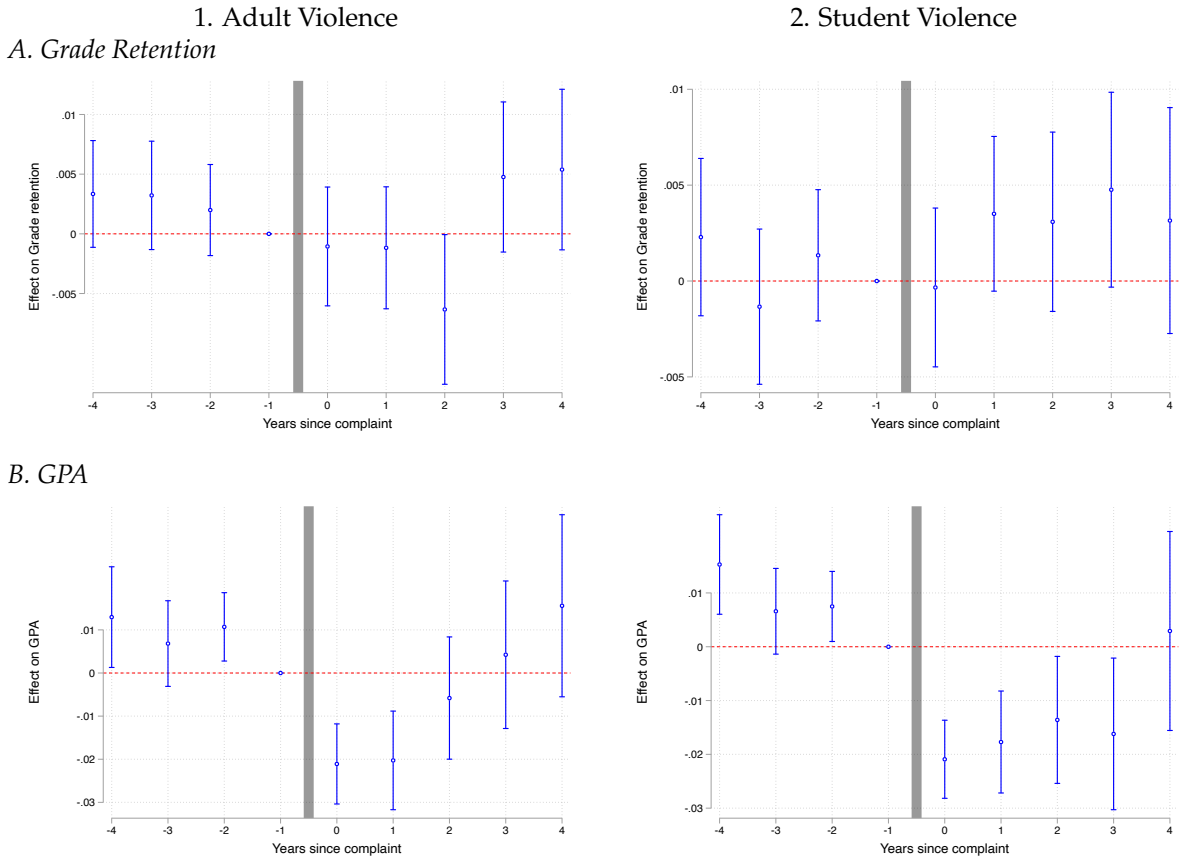

**Notes:** This figure presents event-study estimates on survey-based measures of belonging of victims of adult violence (column 1) and student violence (column 2). All estimations control for match fixed effects, and the combination of grade and years since the complaint fixed effects. The lines represent 95% confidence intervals with standard errors clustered at the school level.

**Figure 11:** Event-Study Effects on Classmates School Attendance



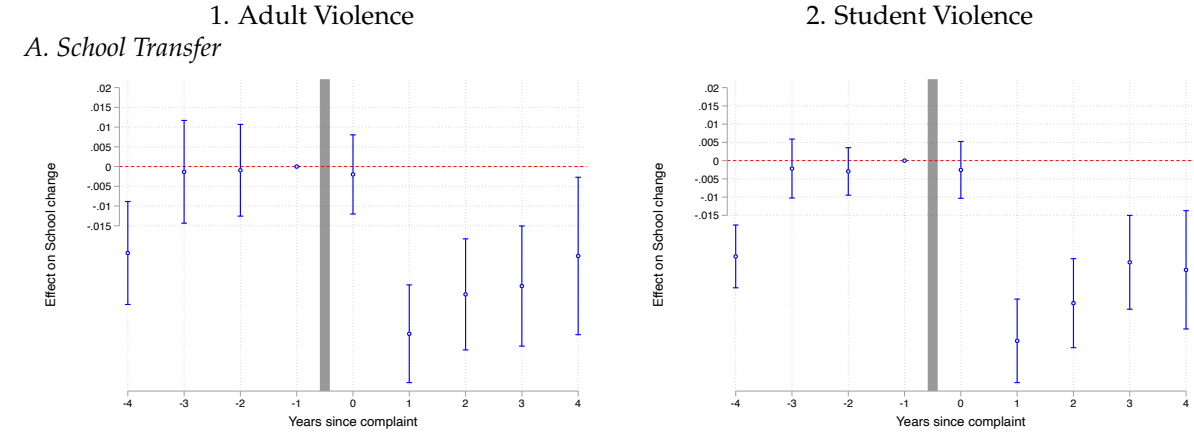

**Notes:** This figure presents event-study estimates on school attendance outcomes for the classmates of adult violence victims (column 1) and student violence victims (column 2). All estimations control for individual fixed effects, year fixed effects, and the combination of grade and years since the complaint fixed effects. The lines represent 95% confidence intervals with standard errors clustered at the student level.

**Figure 12:** Event-Study Effects on Classmates Academic Performance




**Notes:** This figure presents event-study estimates on academic performance outcomes for the classmates of adult violence victims (column 1) and student violence victims (column 2). All estimations control for individual fixed effects, year fixed effects, and the combination of grade and years since the complaint fixed effects. The lines represent 95% confidence intervals with standard errors clustered at the student level.

**Figure 13:** Event-Study Effects on Classmates Schools Characteristics




**Notes:** This figure presents event-study estimates on school transfers and school characteristics for the classmates of adult violence victims (column 1) and student violence victims (column 2). All estimations control for individual fixed effects, year fixed effects, and the combination of grade and years since the complaint fixed effects. The lines represent 95% confidence intervals with standard errors clustered at the student level.

**Table 1:** Violence

| | Abuse by Adult | | Abuse by Student | |
|---|---|---|---|---|
| | Men | Women | Men | Women |
| Psychological violence | 0.71 | 0.75 | 0.17 | 0.35 |
| | ( 0.45) | ( 0.43) | ( 0.38) | ( 0.48) |
| Psychological and physical violence | 0.29 | 0.25 | 0.83 | 0.65 |
| | ( 0.45) | ( 0.43) | ( 0.38) | ( 0.48) |
| Frequency: Once monthly | 0.25 | 0.24 | 0.11 | 0.08 |
| | ( 0.44) | ( 0.43) | ( 0.31) | ( 0.27) |
| Frequency: Multiple times monthly | 0.24 | 0.25 | 0.17 | 0.15 |
| | ( 0.43) | ( 0.43) | ( 0.37) | ( 0.36) |
| Frequency: More than weekly | 0.50 | 0.51 | 0.71 | 0.76 |
| | ( 0.50) | ( 0.50) | ( 0.45) | ( 0.43) |
| Cyberbullying | 0.09 | 0.08 | 0.24 | 0.41 |
| | ( 0.28) | ( 0.27) | ( 0.43) | ( 0.49) |
| Observations | 716 | 664 | 1,415 | 1,776 |

Notes:

**Table 2:** Characteristics of Schools with Violence Reports

| | No Report | Abuse by adult | Abuse by student |
|---|---|---|---|
| % Female | 0.47 | 0.49 | 0.50 |
| | (0.12) | (0.15) | (0.15) |
| Attendance | 0.91 | 0.90 | 0.90 |
| | (0.06) | (0.04) | (0.04) |
| GPA | 5.80 | 5.75 | 5.75 |
| | (0.29) | (0.25) | (0.26) |
| Grade retention | 0.04 | 0.04 | 0.04 |
| | (0.04) | (0.03) | (0.03) |
| School change | 0.14 | 0.13 | 0.14 |
| | (0.10) | (0.09) | (0.09) |
| Class size | 24.73 | 34.08 | 34.01 |
| | (9.85) | (6.12) | (5.96) |
| Public school | 0.53 | 0.33 | 0.35 |
| | (0.50) | (0.47) | (0.48) |
| Voucher school | 0.35 | 0.58 | 0.56 |
| | (0.48) | (0.49) | (0.50) |
| Private school | 0.12 | 0.08 | 0.09 |
| | (0.33) | (0.28) | (0.28) |
| Capital | 0.23 | 0.43 | 0.43 |
| | (0.42) | (0.50) | (0.50) |
| Rural school | 0.28 | 0.04 | 0.03 |
| | (0.45) | (0.20) | (0.18) |
| Math score 4b | 249.09 | 261.23 | 260.89 |
| | (28.35) | (23.22) | (23.70) |
| Math score 2m | 267.80 | 274.46 | 274.04 |
| | (53.76) | (40.73) | (41.65) |
| Language score 4b | 260.30 | 268.88 | 268.50 |
| | (23.32) | (19.96) | (20.44) |
| Language score 2m | 256.87 | 259.32 | 259.13 |
| | (31.91) | (25.34) | (25.87) |
| Father's schooling | 10.60 | 12.14 | 12.13 |
| | (2.86) | (2.19) | (2.22) |
| Mother's schooling | 10.70 | 12.17 | 12.15 |
| | (2.68) | (2.07) | (2.09) |
| Household income (USD) | 736.58 | 834.59 | 839.66 |
| | (922.12) | (678.25) | (690.14) |
| Observations | 4,320 | 3,509 | 3,925 |

**Notes:** This table summarizes school characteristics based on reports of school violence. Column 1 presents average statistics for schools with no reported cases, while columns 2 and 3 focus on schools with reported cases of violence perpetrated by adults and students, respectively.

**Table 3:** Characteristics of Students Who Report Violence

| | No Report | Abuse by Adult | | Abuse by Student | |
|---|---|---|---|---|---|
| | All | Men | Women | Men | Women |
| **Educational outcomes the year before the incident** | | | | | |
| Attendance | 0.92 | 0.89 | 0.88 | 0.89 | 0.89 |
| | ( 0.10) | ( 0.12) | ( 0.13) | ( 0.12) | ( 0.12) |
| | [ 21,065,352] | [ 3,935] | [ 3,105] | [ 4,740] | [ 5,989] |
| GPA | 5.69 | 5.52 | 5.67 | 5.61 | 5.61 |
| | ( 0.62) | ( 0.65) | ( 0.62) | ( 0.60) | ( 0.61) |
| | [ 20,925,588] | [ 3,906] | [ 3,076] | [ 4,703] | [ 5,932] |
| Grade retention | 0.04 | 0.07 | 0.04 | 0.04 | 0.05 |
| | ( 0.20) | ( 0.25) | ( 0.20) | ( 0.19) | ( 0.21) |
| | [ 21,065,352] | [ 3,935] | [ 3,105] | [ 4,740] | [ 5,989] |
| School Change | 0.15 | 0.20 | 0.21 | 0.20 | 0.21 |
| | ( 0.36) | ( 0.40) | ( 0.41) | ( 0.40) | ( 0.41) |
| | [ 21,065,352] | [ 3,935] | [ 3,105] | [ 4,740] | [ 5,989] |
| **Socioeconomic characteristics** | | | | | |
| Mother's schooling | 11.80 | 12.66 | 12.67 | 12.87 | 12.47 |
| | ( 3.50) | ( 3.28) | ( 3.26) | ( 3.23) | ( 3.22) |
| | [ 19,330,205] | [ 3,207] | [ 2,678] | [ 3,817] | [ 5,324] |
| Father's schooling | 11.77 | 12.51 | 12.51 | 12.77 | 12.34 |
| | ( 3.63) | ( 3.49) | ( 3.36) | ( 3.34) | ( 3.36) |
| | [ 19,018,671] | [ 3,139] | [ 2,622] | [ 3,716] | [ 5,184] |
| Household income (USD) | 797.38 | 888.33 | 804.42 | 911.66 | 817.59 |
| | ( 871.49) | ( 872.11) | ( 776.26) | ( 858.73) | ( 797.43) |
| | [ 19,351,041] | [ 3,215] | [ 2,678] | [ 3,821] | [ 5,329] |
| **Disability** | | | | | |
| Student with special needs | 0.15 | 0.27 | 0.18 | 0.31 | 0.18 |
| | ( 0.35) | ( 0.44) | ( 0.38) | ( 0.46) | ( 0.38) |
| | [ 21,065,352] | [ 3,935] | [ 3,105] | [ 4,740] | [ 5,989] |
| Specific learning disabilities | 0.10 | 0.19 | 0.12 | 0.20 | 0.12 |
| | ( 0.30) | ( 0.39) | ( 0.32) | ( 0.40) | ( 0.33) |
| | [ 21,065,352] | [ 3,935] | [ 3,105] | [ 4,740] | [ 5,989] |
| Autism spectrum disorder | 0.00 | 0.02 | 0.01 | 0.04 | 0.00 |
| | ( 0.06) | ( 0.15) | ( 0.07) | ( 0.20) | ( 0.07) |
| | [ 21,065,352] | [ 3,935] | [ 3,105] | [ 4,740] | [ 5,989] |
| **Violence Exposure of students and their peers the year of the incident** | | | | | |
| Exposure to Physical Violence | -0.00 | 0.34 | 0.07 | 0.79 | 0.55 |
| | ( 0.99) | ( 1.31) | ( 1.15) | ( 1.45) | ( 1.47) |
| | [ 2,597,841] | [ 547] | [ 443] | [ 615] | [ 768] |
| Exposure to Verbal Violence | -0.00 | 0.26 | 0.22 | 0.68 | 0.86 |
| | ( 1.00) | ( 1.12) | ( 1.14) | ( 1.25) | ( 1.35) |
| | [ 3,617,350] | [ 776] | [ 574] | [ 836] | [ 962] |
| Exposure to Social Violence | -0.00 | 0.08 | 0.51 | 0.59 | 1.16 |
| | ( 0.99) | ( 1.11) | ( 1.40) | ( 1.54) | ( 1.70) |
| | [ 1,848,112] | [ 228] | [ 232] | [ 222] | [ 448] |
| Exposure to Virtual Violence | -0.00 | 0.11 | 0.41 | 0.48 | 1.15 |
| | ( 0.99) | ( 1.19) | ( 1.43) | ( 1.63) | ( 1.98) |
| | [ 927,917] | [ 142] | [ 151] | [ 158] | [ 290] |
| School Belonging | 0.00 | -0.54 | -0.59 | -0.46 | -0.53 |
| | ( 1.00) | ( 1.22) | ( 1.26) | ( 1.21) | ( 1.17) |
| | [ 4,216,034] | [ 814] | [ 588] | [ 870] | [ 1,005] |
| Peers' Exposure to Physical Violence | 0.00 | 0.03 | 0.03 | 0.08 | 0.01 |
| | ( 0.25) | ( 0.27) | ( 0.30) | ( 0.29) | ( 0.24) |
| | [ 2,853,110] | [ 667] | [ 534] | [ 773] | [ 998] |
| Peers' Exposure to Verbal Violence | 0.00 | 0.05 | 0.02 | 0.06 | 0.02 |
| | ( 0.27) | ( 0.28) | ( 0.27) | ( 0.29) | ( 0.25) |
| | [ 3,987,043] | [ 935] | [ 693] | [ 1,055] | [ 1,236] |
| Peers' Exposure to Social Violence | -0.00 | 0.04 | 0.02 | 0.04 | 0.04 |
| | ( 0.21) | ( 0.23) | ( 0.25) | ( 0.21) | ( 0.22) |
| | [ 2,077,295] | [ 283] | [ 285] | [ 280] | [ 584] |
| Peers' Exposure to Virtual Violence | -0.00 | 0.02 | 0.08 | 0.06 | 0.06 |
| | ( 0.23) | ( 0.28) | ( 0.33) | ( 0.25) | ( 0.24) |
| | [ 954,438] | [ 148] | [ 153] | [ 161] | [ 297] |

**Notes:** This table summarizes student characteristics by reports of school violence. Column 1 presents average statistics for non-victims, while columns 2 and 3 report averages for victims of adult violence differentiated by gender. Columns 4 and 5 present averages for victims of student violence, also differentiated by gender.

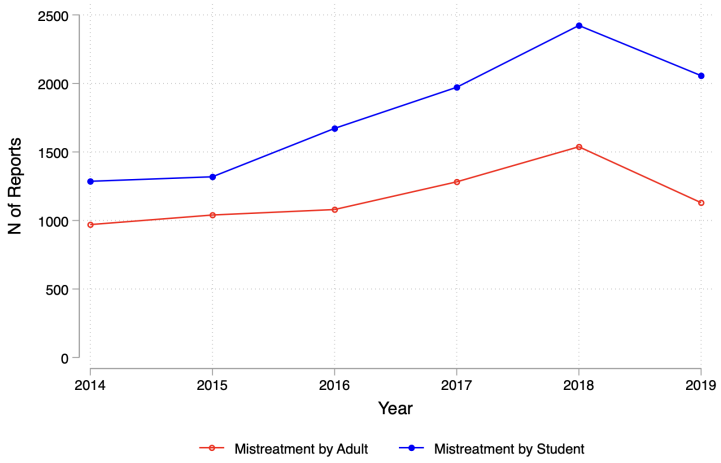
**Table 4:** Effect of Violence on Long Term Outcomes

| | By Adult | | | By Student | | |
|---|---|---|---|---|---|---|
| | Mean | Est. | N | Mean | Est. | N |
| High School On Time | 0.76 | $-0.12^{***}$ | 13939 | 0.77 | $-0.09^{***}$ | 21320 |
| | | ( 0.01) | | | ( 0.01) | |
| High School | 0.84 | $-0.09^{***}$ | 13939 | 0.85 | $-0.06^{***}$ | 21320 |
| | | ( 0.01) | | | ( 0.01) | |
| Takes Std. Test | 0.68 | $-0.05^{***}$ | 13939 | 0.68 | $-0.03^{***}$ | 21320 |
| | | ( 0.01) | | | ( 0.01) | |
| Math Score | 32.09 | $-4.19^{***}$ | 13939 | 30.30 | $-3.00^{***}$ | 21320 |
| | | ( 0.48) | | | ( 0.38) | |
| Lang. Score | 31.83 | $-2.52^{***}$ | 13939 | 30.82 | $-2.63^{***}$ | 21320 |
| | | ( 0.48) | | | ( 0.37) | |
| Post-secondary Enrollment | 0.66 | $-0.04^{***}$ | 13939 | 0.66 | 0.00 | 21320 |
| | | ( 0.01) | | | ( 0.01) | |
| University | 0.38 | $-0.03^{***}$ | 13939 | 0.37 | $-0.01^{*}$ | 21320 |
| | | ( 0.01) | | | ( 0.01) | |
| Vocational | 0.31 | $-0.00$ | 13939 | 0.32 | $0.02^{***}$ | 21320 |
| | | ( 0.01) | | | ( 0.01) | |
| Above Mean-Score Program | 0.20 | $-0.02^{**}$ | 13939 | 0.18 | $-0.02^{***}$ | 21320 |
| | | ( 0.01) | | | ( 0.01) | |

Notes: This table reports long-term effects of school violence. Robust standard errors are reported in parentheses.

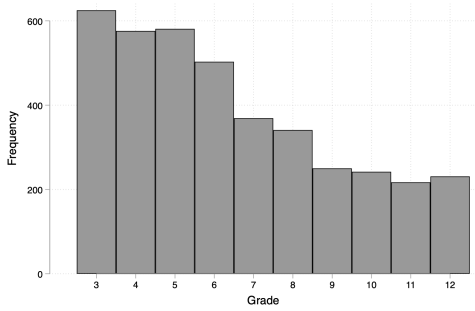
# A Appendix Figures and Tables

**Figure A.1:** Number of reports by year

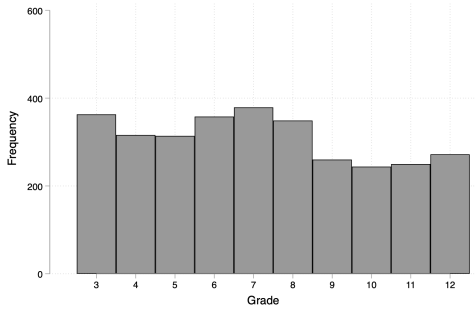



Notes: Figure

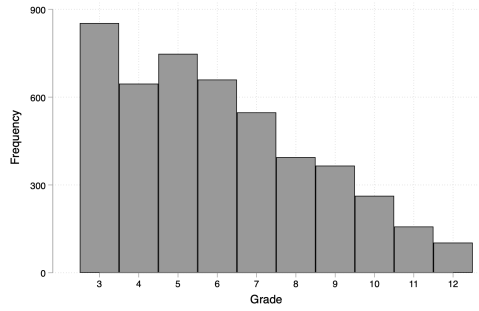
**Figure A.2:** Victims by Grade



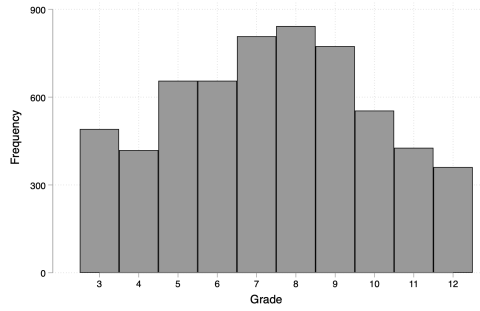

**(a)** Men Victim/Adult Violence




**(b)** Women Victim/Adult Violence



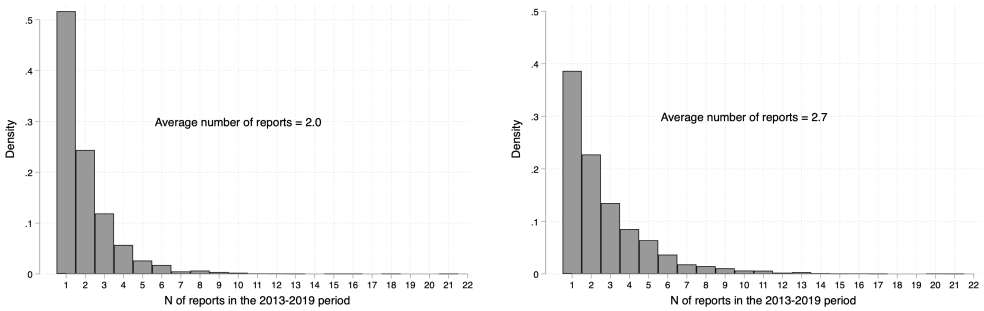

**(c)** Men Victim/Student Violence




**(d)** WomenVictim/Student Violence

Notes: Figure

**Figure A.3:** Number of reports in each school during 2013-2019 for schools with at least one report




**(a)** Adult Violence **(b)** Student Violence

Notes: Figure

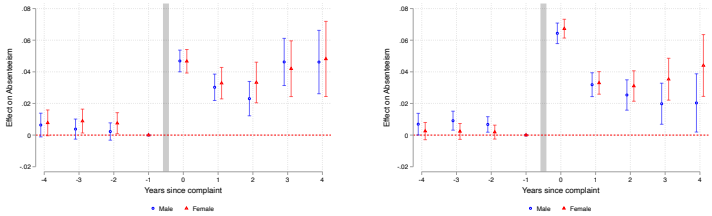
# B Robustness Tests

A potential concern is that our primary matching approach might overfit pre-trends, creating an artificial similarity between victims and matched controls that could bias our results. To test the robustness of our findings against this concern, we implement a fuzzy matching strategy with fewer matching variables, including only year of birth, educational outcomes from the year before the incident, and school characteristics from the year before and the year of the event. Results presented in Figure B.1 demonstrate that our findings remain unchanged under this alternative specification. Pre-trends are generally statistically insignificant, and even when statistical significance appears—which can occur with large samples producing highly precise estimates—these differences are small in magnitude and the pre-trends remain visually flat. This provides additional confidence that our results are not artifacts of the matching procedure.

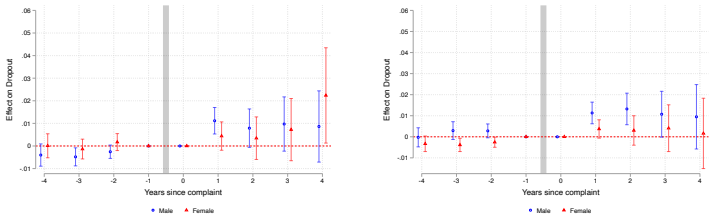
**Figure B.1:** Robustness of Results to Fuzzier Matching

1. Adult Violence | 2. Student Violence

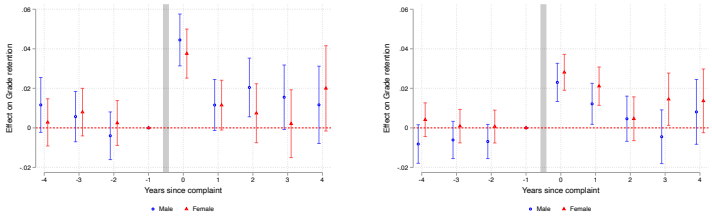
*A. Absenteeism*



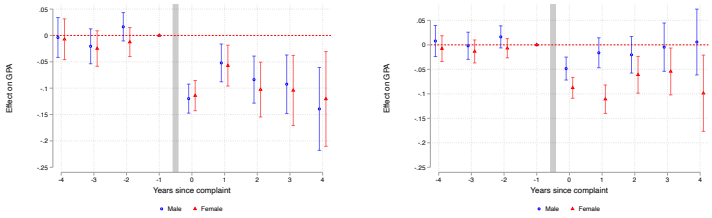

*B. Dropout*




*C. Grade Retention*




*D. GPA*




*E. School Transfer*

