Gender-Based Violence in Schools and Girls' Education: Experimental Evidence from Mozambique *

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Abstract

Gender-based violence at schools is a pervasive problem that affects millions of adolescent girls worldwide. To examine its effects on girls' education, in partnership with the Ministry of Education in Mozambique, we developed an intervention to increase the capacity of key school personnel to address gender violence and to improve students' awareness by encouraging proactive behaviors regarding gender violence. To understand its effectiveness, we randomized not only exposure to the intervention but also whether the student component was targeted to girls only, boys only, or both. Our findings indicate a substantial 75% reduction in sexual violence by teachers and school staff against girls, regardless of the targeted gender group, providing evidence of the role of improving the capacity of key school personnel to deter perpetrators. Using administrative records, we also find that in schools where the intervention encouraged proactive behavior by girls, there was an increase in their school enrollment, largely due to an increased propensity for gender-based violence reporting by victims. Our findings suggest that effectively mitigating violence to improve girls' schooling requires a dual approach: deterring potential perpetrators and fostering a proactive stance among victims, such as increased reporting of gender-based violence incidents.

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1 Introduction

> *"Education has a unique potential to generate an environment where attitudes condoning violence can be changed and non-violent behavior can be learned. From children's early years, schools are well placed to break patterns of violence and provide skills to communicate, to negotiate and support peaceful solutions to conflicts. For many children, however, the school environment represents a very different universe, where they may be exposed to violence and may also be taught violence."*
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> *—Marta Santos Pais*
> *Former UN Secretary General on Violence against Children*

Gender-based violence (GBV) toward adolescents is a pervasive and multifaceted issue , potentially contributing to pronounced gender gaps in educational attainment (World Bank, 2018). This phenomenon involves a range of perpetrators, including not only peers, but also community leaders, teachers, and school staff (ActionAid, 2013; LFC, 2017). Particularly concerning is the vulnerability of young girls, who may lack the cognitive and emotional maturity to recognize and address violence, thus perpetuating a cycle of victimization. Compounding this issue are the societal normalization of GBV and the lack of accountability of potential perpetrators. Despite the pervasive nature of GBV and its implications for economic development, there is no causal evidence of its effects on education and effective strategies to address such violence within educational settings remain under explored.

In this paper, we examine how creating awareness and strengthening support systems for GBV in schools affects the educational outcomes of adolescent girls. Our study is set in Mozambique, where GBV in schools is alarmingly prevalent. By 2018, about 70% of students believed that girls were exposed to sexual violence by teachers, yet only 20% of students knew how to report it (UNICEF, 2018). To address this issue, in partnership with the Ministry of Education and UNICEF in Mozambique, we designed an intervention aimed at increasing awareness and improving responses to GBV among school personnel and students. The intervention comprised

two components. The first component, 'GFP graining', trains teachers previously appointed by the Ministry of Education to address GBV in schools. Known as Gender Focal Points (GFPs), these teachers receive comprehensive training aimed at enhancing their ability to provide an effective response to cases of GBV within their schools. The second component, 'student training', provides GBV training to students in the last two years of primary school (i.e., grades 6 or 7), who are typically 13 or 14 years old. The student training involves four guided discussion sessions with short videos and activities that deliver a GBV curriculum. Sessions are facilitated by the GFPs and provide information about the types of actions that constitute violence, the reasons why violence is not acceptable, how to seek support, and examples of proactive behaviors.

We evaluate the intervention with a clustered-randomized controlled trial involving 326 primary schools in the Sofala Province. Following a baseline survey of students in each school, we randomly selected 239 schools to receive the GFP training and 88 schools to remain as controls. To shed light on the mechanisms by which the intervention could reduce GBV, we cross-randomize among the treatment group, the targeting of the student training across schools. In particular, by training only girls or boys, we explore whether changes in the proactive behaviors of potential victims (girls) or changes in the behavior of bystanders and/or potential perpetrators (boys) contribute to reducing GBV. Specifically, among the treated schools, in 76 schools, only girls receive training (treatment 1), in 83 schools, only boys are trained (treatment 2), and in 80 schools, both girls and boys are trained (treatment 3).

To analyze the role of the school program, we administer endline surveys to the students, GFPs, and teachers in each school one year after the intervention. In particular, we collect information not only about adolescents' experiences related to GBV but also about their classmates' experiences. In addition, to understand the effects on reporting, we survey GFPs. Finally, to shed light on whether GFPs were able to deter violence committed by teachers, we also surveyed teachers about their knowledge of GBV laws.

We find that improving the capacity of key school personnel to deal with GBV reduces the prevalence of violence perpetrated by teachers and school staff in all treated schools. We find that a year after the intervention ended, girls in all treated schools were 75% less likely to report having experienced violence by teachers/school

staff in the last month. In particular, we observe a reduction in sexual violence. The fact that we observe a reduction in violence by school staff in all treatment arms, regardless of the targeting of the student training, suggests that the training of GFPs (which was implemented similarly in all treated schools) played a key role. In particular, several pieces of evidence show that GFPs proactively deterred GBV in all treated schools. We find that GFPs were more engaged in discussing GBV with students (of both genders) and teachers and were more diligent in reporting incidents to school authorities. These results highlight the importance of training key school actors to deter GBV in schools.

While the intervention also targeted dating violence, we find no effects on violence perpetrated by boys. To understand this result, we look at whether the training component toward boys changed GBV attitudes or whether students were better able to identify violence. While we find that the intervention improved students' identification of dating violence, it did not change their attitudes. We interpret these results as indicative evidence that since GFPs did not have legal tools to address dating violence at young ages (as they have to address school sexual violence via reporting teachers to authorities or community leaders), they were not able to deter this type of violence.

We then ask whether the reduction in GBV by teachers/school staff translates into better schooling outcomes for girls. Using administrative records, we find that girls in schools where girls were trained are 10% more likely to be enrolled in school relative to the control group at the endline. We do not find any significant effect on girls' enrollment in schools where only boys were trained. Additionally, we examine effects on learning outcomes, measured through standardized tests conducted during the endline survey, to measure girls' math and reading skills. We do not find any significant effects on girls' test scores.

To understand why reductions in GBV lead to higher school enrollment rates when the intervention targets girls, we explore how the effectiveness of GFP training interacts with the gender focus of the student training. Notably, in schools where the intervention targeted only girls, we find that students were more likely to approach the GFP to report violence. Moreover, GFPs' awareness and use of the helpline—where children can report GBV cases—was significantly higher in these schools. Since a child victim's presence on the call is required to lodge a formal com-

plaint against a perpetrator, we interpret this finding as an indication of proactive behavior among girls in schools where they received training. Supporting this interpretation, we find that in these schools where girls were treated, GFPs were more likely to report GBV cases to the school council, which involves parents, community leaders, and principals. While we do not have data on teachers' actual punishment, we analyze teachers' perceptions of GBV's penalties using teachers' endline survey. Consistent with the results, we find that school personnel in treated schools, particularly in those where girls were trained, were more likely to associate stricter penalties for GBV cases. Finally, consistent with the training towards girls being important to improve their environment, we find some evidence that girls are less likely to feel unsafe at school due to the intervention.

In light of our findings, we posit that reductions in GBV within contexts marked by asymmetrical power dynamics, such as schools, can lead to improved schooling outcomes if both perpetrator deterrence and victim proactivity are present. Specifically, in the context of teacher-perpetrated sexual violence against female students, the proactive measures taken by GFPs in addressing GBV serve as a deterrent to potential offenders, helping to reduce incidents of violence. However, for this deterrence effect to positively impact girls' educational attainment, it is crucial that girls themselves engage in proactive behaviors, such as formal reporting involving the whole community. This allows school authorities to take necessary actions against perpetrators and rebalance the teacher-student dynamic.

We conduct several checks to rule out that these results are driven by a change in reporting or social desirability bias. First, we use an indirect measure of violence where students were asked if they witnessed or heard of any violence toward girls in their school, finding a similar effect. Second, to test if social desirability bias is driving the results, we estimate the heterogeneity of the treatment effects with respect to respondents' social desirability at baseline. We find no significant heterogeneity along this dimension, suggesting that the results are not driven by social desirability bias.

Our study makes several contributions to the literature. First, we contribute to a growing literature on school-based violence and education. Several studies have explored the causal effects of school-based violence on schooling outcomes (Devries et al., 2015; Karmaliani et al., 2020; Gutierrez et al., 2018; Romero et al., 2020; Romero

and Sandefur, 2021; Smarelli, 2023). However, evidence on the impact of GBV on education is more limited. Recent research shows that direct and indirect exposure to domestic violence decreases grades (Carrell and Hoekstra, 2010), and interventions preventing GBV among mothers can improve schooling outcomes (Sviatschi and Trako, 2023). We contribute by highlighting the need to tackle GBV of adolescents at schools, combining a top-down approach involving school authorities and a horizontal approach involving students. We also document that the gender-specific targeting of the horizontal component affects the effectiveness of the top-down approach on schooling outcomes since proactive behaviors such as victim reporting may be needed to punish perpetrators.

Second, we complement recent literature studying how GBV at the workplace or while commuting can affect women's socioeconomic outcomes (Folke and Rickne, 2020; Amaral et al., 2023; Adams-Prassl et al., 2023). We add to this literature by showing how school-based GBV during adolescence can lead to increased school dropout rates among girls. Additionally, we offer insights into effective strategies for addressing GBV in schools, such as raising awareness about GBV and equipping school personnel with the necessary training to address and manage GBV issues effectively within the school environment.

Third, we contribute to recent studies that have evaluated the effectiveness of interventions aimed at empowering girls and women, specifically examining the impact of targeting girls versus boys in different interventions aimed toward empowering girls/women (e.g., Andrew et al., 2022; Cassidy et al., 2023; Seager et al., 2022). Our research adds to this body of work by showing that in situations of GBV occurring within asymmetrical power dynamics, such as teacher-student interactions, reducing violence and achieving positive economic outcomes requires more than just the deterrence of perpetrators by school personnel. It also requires proactive actions from victims, enabling the school authorities to take punitive measures against the perpetrators. Understanding these dynamics is paramount for determining the most cost-effective strategies for implementing policies that mitigate GBV.

The rest of the paper is organized as follows. In Section 2 we describe our study's context and provide details on the intervention along with our evaluation strategy, Section 3 describes the data, and Section 4 presents the empirical findings. Section 5 concludes.

2 Intervention

2.1 Motivation

Mozambique has made considerable progress in improving primary school enrollment rates and narrowing the gender gap, with net enrollment for both boys and girls in primary education surpassing 90% in 2018. Despite these achievements, the country, like other low-income nations, faces a steep decline in secondary level enrollment rates. In 2019, gross secondary-school enrolment rate was 32% (World Bank Development Indicators, 2024).

Gender-based violence (GBV) has been identified as one of the main risk factors leading to school dropouts for girls by Mozambican institutions and NGOs. According to a recent Violence Against Children survey in Mozambique, 64.5 and 59.5% of male and female secondary students, respectively, reported being aware of sexual violence in their schools. Moreover, 52% of students pointed to teachers as the perpetrators of sexual abuse and violence, and 12% of students reported knowing other students who dropped out due to sexual abuse and harassment. However, a very small share of students were aware of the formal mechanisms to report GBV at school (UNICEF, 2018).

With this concern in mind, we partnered with the Ministry of Education and UNICEF in Mozambique to design and implement a curriculum aimed at specifically addressing GBV in schools: *Está na Hora de Agir* (It's Time to Act).

2.2 The Curriculum: *Está na Hora de Agir*

The intervention *Está na Hora de Agir* consists of two components. The first component involves a top-down approach providing GBV training to teachers appointed by the Ministry of Education to address gender-related issues within the school. These teachers are known as Gender Focal Points (GFPs) and were already appointed prior to the intervention. The second component of *Está na Hora de Agir* consists of a student training. It follows a curriculum designed to improve students' knowledge about GBV and encourage proactive responses. Henceforth, we refer to these components as the *'GFP training'* and the *'student training'*.

Both trainings approached gender-based violence (GBV) by examining it through

the perspectives of three distinct actors: victims, bystanders, and perpetrators. The overarching objective was to cultivate an understanding that individuals can take proactive steps against GBV, irrespective of their role in a given situation. Participants were exposed to these concepts through interactive and engaging activities, including games, dances, songs, videos, and group work, aimed at facilitating comprehension and retention of the material. The intervention was implemented by the local NGO Girl Child Rights (GCR), in collaboration with the Ministry of Education and UNICEF in Mozambique.[1] We also took advantage of the fact that GCR manages the national children's toll-free helpline for children – Linha Fala Criança (116) – to seek help and report incidents of violence.

GFP Training: The GFP training aimed at improving GFPs' awareness about GBV and enhancing their capacity to address and manage GBV incidents within their schools. It encompassed a range of activities, including group exercises focused on the difference between sex and gender, the concept of GBV as opposed to any form of violence, different forms in which GBV can occur, victim's support mechanism (Figure A.1), and GFPs' role in the intervention (Figure A.2). Given the limited resources available in the local context, particular emphasis was given to how to report violence. Specifically, it was emphasized that GFPs should initiate a reporting of GBV cases through the 116 helpline. In general, anyone can report a GBV case to the *Linha Fala Criança*. Upon receiving a report, the helpline conducts a preliminary investigation to gather enough evidence before referring to formal institutions (e.g., police, social services). For the report to move to the formal referral stage, the victim's consent is required (except in cases of rape).[2]

GFPs were also trained to deliver the student training component and received a detailed instruction manual to conduct the discussion sessions. The GFP training was delivered in two days, complemented with one-to-one review sessions and GCR's on-site support when delivering the student training. The implementing organizations covered the costs of participating in the training (including transport, accommodation, and per diem subsistence costs). The training was well attended.

[1]GCR is a leading Mozambican NGO working on youth and female empowerment and child rights. Operating since 2008, it has extensive expertise working with communities and children to generate awareness around GBV, violence toward children, and children's rights. For more information see `https://gcr.org.mz`

[2]For a detailed description of the GBV referral and response protocol, see Appendix Section A.1.

236 GFPs from the 239 treatment schools attended the training, corresponding to a 98.9% attendance rate.

Student training: The student training consisted of four sessions of one to two hours each, taking place during the school day and on the school's premises. During the meetings, the GFPs showed short videos, played introspection and reflection games, and led a discussion among the participating students.

Two animated videos were specifically developed for the intervention.[3] The first covered sexual harassment, depicting situations of male students harassing a female student, followed by a male teacher inappropriately touching and harassing a female student. The video then showed the victim seeking support from her friends, family, and, ultimately, the GFP. It concluded with details on how students can seek help. Figure A.3 provides sample screenshots from this video. The second video covered physical and emotional violence. It first depicted a situation in which a male student gets frustrated after losing a football game in school and pushes his girlfriend. This was followed by another situation in which another male student gets angry and shouts at a female student. Figure A.4 provides sample screenshots from this video.

The videos were followed by discussions moderated by the GFP, covering the following topics: the type of actions constituting violence, consequences of violence, why violence is not acceptable, how to seek support, and proactive behaviors for victims, survivors, and bystanders. After each session, the GFP assigned a game or activity for students to prepare for the next session.

2.3 Experimental design

In order to evaluate the intervention, we implemented a cluster randomized controlled trial in the province of Sofala. The study was conducted in 7 (out of 13) districts of Sofala: Beira, Dondo, Buzi, Nhamatanda, Chibabava, Cheringoma, and Maringue. These districts were selected based on considerations of accessibility and security, prioritizing areas free from armed conflict. We aimed to include the universe of primary schools within these 7 districts in the study. However, due to the

[3]The inclusion of animated videos was motivated by recent evidence that video-based edutainment interventions can effectively instigate social change, including on behaviors around fertility, domestic violence or early marriage (La Ferrara et al., 2012; Banerjee et al., 2019a,b; Green et al., 2020; Cassidy et al., 2023). Furthermore, the videos ensure consistency in the curriculum delivered during the student training.

remote nature of the context and susceptibility to climatic disruptions such as cyclones and floods, 326 out of the 340 schools could be included in the project. This corresponds to 96% of the primary schools in the area.

The randomization was stratified by district and baseline prevalence of GBV. For the latter, we used baseline information on the school-level prevalence of GBV in the past month. For each district, we classified schools as high GBV whenever the school GBV level was equal to or greater than the district median. Within each stratum, we randomly allocated eligible schools to one of four groups: treatment 1 (T1), treatment 2 (T2), treatment 3 (T3), or control. The GFP training was implemented in all treatment schools, while the targeting of the student training was randomized across the various treatment arms. In the T1 group (76 schools), only girls were included in the student training. In T2 (83 schools) , only boys received the student training. In T3 (80 schools), both boys and girls participated in the student training. In the control group (87 schools), no GFP training occurred and no students received the training.

The group size for the student training varied, depending on the school type. In T1 and T2 schools, the target group size was 14 girls or boys, respectively. In T3 schools, where the training included both genders, typically 14 girls and 14 boys participated. All selected students were identified at baseline as eligible for the intervention, specifically being 6th or 7th graders who were attending the school. Figure 1 summarizes the experimental design, while Figure 2 shows the location of the schools included in the study, with their treatment assignments.

To ensure the experimental design was followed, we implemented a thorough monitoring system. First, we provided color-coded T-shirts for each GFP in the treated schools, which they were instructed to wear during the student training sessions.[4] Second, we asked the GFPs and GCR staff to take a photo in front of the school on the day of the discussion session. If the session included any videos, the video projector that was provided for the purposes of the intervention should have been visible in the photo. We also asked GFPs and GCR staff to take pictures of the discussion board at the end of the session. All of the photos were required to display the date and the time.

[4]In particular, GFPs in T1 schools were given an orange T-shirt, those in T2 a black T-shirt, and GFPs in T3 a white T-shirt.

The project received ethical clearance for the project from the National Bioethics Committee of Mozambique, Princeton University, and Trinity College, Dublin. The project received extensive guidance from UNICEF and its GBV experts. All enumerator teams received a week long training on GBV and gender norms prior to collecting baseline and endline data. All implementing teams received the same training.

3 Data

We collected baseline and endline survey data from adolescents who were eligible to participate in the student training, as well as administrative data on their school records. Our sample consists of a representative sample of boys and girls who were attending grade 6 or 7 at the time of the intervention. The baseline sample consisted of 9,107 pupils: 4,605 boys and 4,502 girls.

The baseline survey was conducted between May and September 2021, wherein face-to-face interviews were carried out at the school premises during regular school hours, with prior consent obtained from the school, parents, and children. Interviews were conducted in complete privacy, and data collection was refrained from in instances where privacy could not be ensured. Enumerators of the same sex as the respondent conducted the interviews. Prior to fieldwork, all enumerators and the field staff underwent training in conducting interviews on sensitive topics like GBV, as well as on crisis response management and stress situations, following World Health Organization (WHO) guidelines (World Health Organization, 2001, 2016). Irrespective of the disclosure of violence, all children were informed about the existence of the national toll-free helpline for child abuse, the Linha Fala Criança (116). In cases where violence was disclosed, students were provided with the contact details of the GFP at their respective school.

The endline survey was conducted in two waves. In the first phase, we tried to reach and survey the students in schools. In the second phase, we tried reaching students who could not be reached in the first wave. The interviews in this second phase were conducted in adolescents' households. The first wave of the endline survey was conducted from June to November 2022, 8–12 months after the intervention. This survey was conducted in all primary schools from the baseline sample, as

well as in 71 secondary schools located within the study districts to accommodate students who may have transitioned to secondary education during the study period. In this first wave, we reached 6,401 (70%) of the 9,107 students in the baseline sample. The second wave of the endline survey was conducted between September and October 2023. By the end of the second phase, we were able to track 83% of the baseline sample. The tracking rate was 82% among girls and 84% among boys, and was not differential by treatment status (see Table A.1 in the Online Appendix). Figure 3 provides a visual summary of the project's timeline.

The interviews with adolescents lasted for about 60 minutes. After obtaining informed consent from the respondents, the surveyors proceeded to a set of introductory questions on the socio-demographic characteristics of the respondent and their household. Next, they inquired about the respondents' perceptions of the prevalence and frequency of different forms of abuse toward their classmates, followed by a battery of questions about respondents' own experiences of GBV and whether they witnessed episodes of violence experienced by other girls in their class. The questionnaire also included questions about the acceptability of violence and attitudes toward it.

In order to measure the prevalence of GBV, the adolescent survey included a module based on WHO's Violence Against Women instrument (Ellsberg et al., 2005), adapted to the Mozambican school context. Rather than a revival of violence from a given perpetrator, we designed the questions as a behavioral characterization of violence episodes from a range of potential perpetrators (e.g., the intimate partner, her classmates, the teacher, other school authorities), offering the students multiple opportunities to disclose their experiences (see Appendix Section B.1 for details on this survey module). Whenever the respondent reported having experienced a form of violence, we inquired whether it took place in the last month or in the previous year.

We also collected information on adolescents' experiences of sexual abuse by teachers and other school staff. This aspect of the survey was motivated by the importance of the issue in the local context and its salience in the intervention.[5]

Given the sensitive nature of the outcomes we measure, reporting bias was an important consideration. To address this, we adopted several approaches. First,

[5]See Appendix for details about the survey module on sexual violence by teachers/school staff.

in addition to the direct survey questions, we asked all respondents in our sample about their perceptions of violence experienced by girls in their class (*turma* in portuguese). While respondents may find it difficult to disclose their own experiences of violence, they may find it easier to report it indirectly when asked about other girls in their class. Such third-party reporting (TPR) methods are widely used in the reporting of sensitive issues such as abortion (see Giorgio et al. (2021); Owolabi et al. (2023) for the conventional TPR methods). Our measure is similar to anonymous third-party reporting (ATPR), with the advantage that we delimit the denominator among a well-defined network. Second, following Dhar et al. (2022), we collected information on respondents' social desirability based on the module of Crowne and Marlowe (1960). We use this module to identify respondents with higher social desirability at baseline and test if the treatment effects differ for individuals particularly inclined to please others.

Table 1 reports descriptive statistics for girls in our sample at baseline by treatment group. On average, 34% of the girls in our sample reported having ever experienced violence by another student, while 11% reported having experienced violence by school staff. In terms of the type of violence, 44% reported having ever experienced emotional violence, 34% reported physical and 23% reported having experienced sexual violence. These numbers demonstrate the high levels of violence against girls in our context. Comparing baseline descriptives across the various treatment and control groups we find that, while there are some statistically significant differences, overall, the number of hypotheses tests where we reject the null of equal differences is less than 10%. This implies that any differences could be driven by chance. As such, we conclude that the randomization was successful in achieving baseline balance.[6]

To better understand whether our intervention induced changes in GFPs' behaviors and to detect changes in students' reporting of GBV, we conducted an endline survey with the GFPs. The survey included questions about their activities in the school and whether they reported GBV cases to authorities, and occurred between July and October of 2023.[7] Finally, to understand whether teachers increased their

[6]Table A.2 reports corresponding summary statistics and balance checks for the boys' sample. Similar to the girls' sample, we find significant differences in fewer than 10% of the pairwise comparisons of the various treatment arms.

[7]We were not able to collect baseline information on the GFPs. In Table A.3, we use GFPs' pre-

knowledge of penalties related to GBV, we conducted a short survey with teachers between June and September of 2022, during wave 1 of the endline survey.

4 Results

4.1 Estimation

To assess the effects of the intervention, we estimate:

$$Y_{icd} = \alpha + \sum_{k=1}^{3} \beta_k T_{cd}^k + Y_{icd}^0 + \theta_d + \gamma X_{icd} + \epsilon_{icd}, \quad (1)$$

where Y_{icd} is the outcome of interest at endline for respondent i who was attending school c in strata d at baseline, T_{cd}^k is a an indicator equal to 1 if school c was assigned to treatment group k (where $k = 1, 2, 3$) and 0 otherwise, θ_d are randomization strata fixed effects (i.e., district $\times$ high-GBV dummies), Y_{icd}^0 is the baseline level of the outcome variable. Whenever the outcome variable is self-reported (as opposed to outcomes based on administrative records data or test scores), we control for X_{icd} – respondent's social desirability score as measured at the baseline survey. Since the randomization was conducted at the school level, we cluster the standard errors at the level of the school. Under the identifying assumption that the control group forms a valid counterfactual for the treatment groups, β_k provides the causal effect of the intervention when only girls ($k = 1$), only boys ($k = 2$), or both genders ($k = 3$) were included in the student training.

4.2 Violence against girls

We begin our analysis by examining the impact of the intervention on the prevalence of violence experienced by adolescent girls in the school environment. In Table 2 we focus on episodes of violence occurring in the month preceding the endline survey, a year after the intervention started. We distinguish between incidents perpetrated by fellow students, presented in the odd columns, and those by teachers and school

determined characteristics that should not have been affected by the intervention such (e.g. age, gender, place of birth, schooling level) to test for balance in covariates. Once again, we find that fewer than 10% of the differences are significant. As such, we can conclude that the GFPs in control schools constitute a valid counterfactual for those from the treatment schools.

staff, shown in the even columns. Recognizing the sensitive nature of the topic, our analysis encompasses both self-reported incidents by girls (columns 1 and 2), and reports from bystanders (columns 3 and 4), the latter asking all respondents about their perceptions of violence toward other girls in their class. This approach helps mitigate the potential reporting bias inherent in self-reported data, offering a broader perspective on the actual prevalence of violence.

Column 1 shows that the intervention does not significantly impact violence experienced by girls from other students but does reduce violence perpetrated by teachers or school staff (column 2). Girls in T1 schools are 0.9 percentage points (pps) less likely to report having experienced violence from teachers or other school staff in the last month. Compared to the control, where 1.2% of the girls report having experienced such violence, this corresponds to a 75% reduction in the prevalence of violence perpetrated by teachers/school staff.

The point estimate for the treatment effects in T2 schools is also negative but less precisely estimated. The treatment effect in T3 schools is almost identical to that in T1 schools, with girls in T3 being 0.8 pps less likely to report having experienced any violence from teachers/staff, estimated at the 90% confidence level.

Overall, the findings in columns 1 and 2 suggest that the intervention reduced violence perpetrated by teachers/staff toward girls while not affecting violence inflicted by other students. The results for bystander reporting measures in columns 3 and 4 closely mirror those observed in columns 1 and 2. Column 3 shows no significant impact of the intervention on violence from other students toward girls. Conversely, column 4 indicates a statistically and economically significant reduction in violence from teachers/staff toward girls. Respondents were 0.8–0.9 pps less likely to report that girls in their class were subjected to violence from teachers/staff during the last month, a large effect compared to the control mean of 1.7%. Reassuringly, these results suggest that our findings are unlikely to be driven by reporting bias.[8]

As another robustness check for reporting bias, we assess the sensitivity of our estimates with respect to respondents' social desirability at baseline. Following Dhar

[8]We also examine the responses of boys about violence against girls, finding that in T1 schools, they report less violence by teachers. This result is especially reassuring given that boys did not receive the informational treatment in these schools, and thus, experimenter demand effects are less likely to occur.

et al. (2022), at baseline, we collect information on respondents' social desirability. Based on a survey module used in the psychology literature (Crowne and Marlowe, 1960), we identify respondents with higher social desirability at baseline, allowing us to test for whether treatment effects differ for individuals particularly inclined to please others. Appendix Table A.5 reports the heterogeneity of the treatment effects on violence against girls, analyzed by respondents' social desirability at baseline. Overall, our analysis does not indicate that the results are driven by respondents with higher social desirability. The interaction terms suggest that the differential effect of T1, T2, or T3 schools with respect to respondents' social desirability is statistically insignificant. Finally, it is important to note that collecting our endline data a year after the intervention helps minimize experimenter demand effects.

In the Appendix, we also analyze if the intervention affected adolescents' experiences of sexual abuse by teachers and other school staff. Table A.6 shows a reduction in forced sexual violence in all treated schools. The magnitude of the reduction mirrors the previous results and is consistent with qualitative evidence and previous surveys highlighting that teachers are more likely to commit sexual violence toward girls.

To summarize, we find that in all treatment schools, violence perpetrated by teachers/staff toward girls declined by 75%. In particular, in treated schools, girls report being less likely to be forced to perform sexual acts by teachers.

4.2.1 Potential Mechanisms

GFP engagement to prevent violence against girls — Given the similar effect found in all treatment arms, these results point to GFP training as a key factor in deterring violent behaviors toward girls from teachers and school staff. Using the GFPs surveys, in Table 3, we assess whether GFPs approached students and reported potential GBV cases to the Ministry of Education, as outlined during their training (see Figure A.2). Column 1 shows that GFPs in all treatment arms were significantly more likely to talk about GBV-related topics to both male and female students in their schools. In column 2, we see that GFPs in all treatment groups were significantly more likely to report cases to the school authorities, with an increase of 9–12 pp across the treatment arms. This is a substantial rise compared to the control group, where only 8% of GFPs said they reported any cases. We also find that GFPs

were more likely to know about *Linha Fala Criança* (LFC) helpline (116) in all treated schools.

Girls' proactive behavior and GFP responses— We also explore whether the training of girls led to an increase in reporting to GFPs and, as a result, better management of violence cases given their testimony. In Column 3, we find that a larger share of students report GBV to GFPs, especially in schools where girls received the training. We then explore if, by increasing the direct report of violence cases by victims, GFPs can solve cases faster by involving parents and the community and potentially punishing teachers. To do so, we analyze whether GFPs took steps to support victims of violence upon receiving reports. In columns 4 and 5 of Table 3, the outcome variables are dummy variables equal to 1 if the GFP knew how to contact the helpline and provided the correct number for the *Linha Fala Criança* (LFC) helpline (116). In the control schools, only 15% of GFPs knew the correct number, highlighting a significant gap in essential knowledge among GFPs not exposed to the intervention. Relative to the control group, GFPs in T1 schools were 22 pp more likely to know the correct number, corresponding to a 146% increase relative to the control group. The GFPs in T2 and T3 schools were also more likely to know the helpline number, but the effects are smaller (11 pp and 9 pp for T2 and T3, respectively) and less precisely estimated. Given that one of the key responsibilities of the GFPs was to guide victims of violence to the helpline, the results in column 1 indicate that the intervention successfully improved the GFPs' ability to support victims. This improvement was especially significant in cases where the student training was exclusively provided to girls (T1).[9]

Consistent with these results, column 4 of Table 3 shows that the GFPs in T1 schools were 15 pp more likely to have talked to or shared GBV material with teachers, which includes information about GBV and the associated penalties. Moreover, we find that when girls received the training, GFPs were also more likely to have talked about GBV cases to the school council, which includes the parents and community leaders. The treatment effects in column 5 correspond to a 16 pp increase relative to the control group, where only 38% of the GFPs declare talking to the

[9]Even in T1 schools, less than half of the GFPs could provide the correct number for the helpline. One reason for this might be the brief duration of the GFP training (only two days) and because it occurred nearly one year before the endline survey.

school council.[10] In line with such results, our teacher survey shows that teachers in treated schools, particularly in those where girls were trained, were more likely to associate stricter penalties with GBV incidents (see Appendix Table A.4).

Identification of GBV and attitudes towards it— To understand the lack of effects on dating violence, using the students' survey, we look at whether attitudes and identification of violence changed due to the specific training component toward students. While we find that students improved their identification of violence due to the workshops, we find no evidence of their attitudes towards dating violence changing (see Tables 4 and 5).

Overall, our findings suggest that the GFP training component successfully improved GFPs' capacity to address GBV in their schools and heighten their ability to support victims of violence. Notably, the reporting of victims and GFPs' familiarity with the helpline's exact number significantly improved only in schools where the training was exclusive to girls. Given that a child victim's consent is essential for the lodging of a formal complaint by the 116 helpline, we interpret this result as suggestive evidence that girls became more proactive in formally reporting incidents of violence when they received targeted training.

4.3 Violence against girls and schooling

We now look at whether the reduction in teacher and school staff violence improves girls' educational outcomes. To capture school enrollment, we use administrative data from primary and secondary schools in the study districts. In column 1 of Table 6, the dependent variable is enrollment, defined as a dummy variable equal to 1 if the girl was enrolled in a primary or secondary school in the study districts at the time of our endline survey, and 0 otherwise.[11] In columns 2 and 3, we examine girls' learning outcomes using standardized tests we conducted during the endline data collection. These tests were based on the Early Grade Mathematics Assessment (EGMA) and Early Grade Reading Assessment (EGRA) that were adapted for the

[10] According to our conversations with GFPs since the school council involves the parents and community leaders, GFPs were more likely to report GBV if they had the victims' report. Instead, when GFPs were suspicious of a case and did not have the report of the victim, they would inform only school authorities or ask for guidance from LFC.

[11] Given that we only have administrative records from schools in study districts, if the intervention affected the adolescents' likelihood to migrate out of the study area, this may bias our estimates.

Mozambique context by Chimbutane et al. (2022).

Column 1 shows that in schools where only girls received training (T1 schools), there was a 5.7 pp increase in the likelihood of girls being enrolled at endline, equating to nearly a 10% rise in enrollment relative to the control group, where the enrollment rate was 61%. For T3 schools, where both genders were trained, the increase in girls' enrollment was also positive, at 4.4 pp, suggesting a similar effect size to T1. However, this result for T3 is less precise at conventional levels, indicating we cannot definitively conclude the treatment effects are identical across T1 and T3. In contrast, the treatment effect for T2 is economically smaller (1.6 pp) and imprecisely estimated, with the test of equally treatment effects between T1 and T2 being marginally significant (p-value of 0.16).

In terms of their academic achievement, we do not find any significant impact on girls' performance in math or reading (in Portuguese) scores. While the point estimates are generally positive, they are imprecisely estimated. One difference to note across the various treatment arms is that girls in T1 schools seem to do slightly better in reading compared to girls in T2 schools. The difference between the two arms is marginally significant, with a p-value equal to 0.069.

Overall, the results in Table 6 show that in schools where girls received student training, there is an increase in girls' enrollment. Taken together with our results on violence against girls, they imply that while targeting boys alone may have comparable impacts on reducing violence to those targeting girls, focusing on girls may be more effective at not only reducing violence but also increasing school enrollment among girls. In light of the top-down and horizontal components of the intervention, we interpret these results as an indication that the training of teachers (GFPs) plays a key role in reducing GBV by deterring perpetrators. However, to improve girls' educational attainment as a result of reduced GBV, it may be necessary to specifically target potential victims with student training.

Based on our findings, we argue that in symmetrical power dynamics, the reduction in GBV leads to improved economic outcomes for victims when two conditions are met: (i) potential perpetrators are deterred, and (ii) victims are proactive in reporting incidents. In the specific context of teacher-student sexual violence in Mozambican schools, the active involvement of GFPs in addressing GBV and imposing sanctions on perpetrators acted as a deterrent. However, for this deterrent effect

to positively impact girls' educational attainment, girls must report past incidents, which is more likely to happen when they receive the student training component. While we do not have reliable self-reported data on incident reporting, three pieces of evidence support our hypothesis.[12] First, the observed increase in knowledge about the helpline among GFPs in T1 suggests a higher likelihood of them initiating such reports, which in turn requires the child's consent to lodge a formal process. In addition, in T1 schools, GFPs were significantly more likely to report the incident to the school council, which includes parents and community leaders, increasing the social sanction to perpetrators. Second, teachers in T1 schools show a more pronounced awareness of laws protecting children's rights and the legal consequences of engaging in sexual acts with minors. Third, compared to their counterparts in T2 and T3 schools, girls in T1 schools express greater comfort discussing GBV issues (see Table A.8).[13]

Thus, by proactively engaging in formal reporting of instances of abuse by teachers or school staff, victimized girls can play a crucial role in the removal of such perpetrators from the educational setting. This, in turn, helps reestablish a healthy dynamic between teachers and students, fostering a safer learning environment. Consistent with this, we find that girls in T1 schools are less likely to report feeling "very unsafe" at school (see Table A.7).

5 Conclusion

In this study, we investigate the impact of violence against girls in schools on their educational outcomes in the context of Mozambique. To do so, we design, implement, and evaluate an intervention aimed at enhancing the capacity of school personnel to address gender violence (GFP training) and promoting proactive behaviors among students regarding gender violence (Student training). Our analysis indicates

[12] Following the WHO's Intimate Partner Violence survey instrument structure, we only inquire if the violence incident was reported whenever the respondent disclosed such an event. As a result, our self-reported reporting measure combines the effect on the prevalence of violence and the effect on a reporting variable with a high share of zeros, deeming it unsuitable for causal analysis.

[13] At the end of the adolescent survey, respondents were asked to report how they felt while talking about violence with the enumerators. In Table A.8, we test for treatment effects on this outcome. The results show that girls in T1 schools were significantly more likely to report that they felt "Good" and less likely to feel "Bad" compared to the control group and to girls in T3 schools.

that such intervention can attain a significant reduction—by 75%—in the prevalence of violence by teachers and school staff toward girls. Remarkably, this reduction is consistent across schools regardless of whether the student training targets girls only, boys only, or both. However, we find that for this reduction in violence to positively influence educational outcomes, girls must receive the student training component of the intervention. Our analysis of administrative records reveals that in such schools, the intervention leads to a 10% increase in girls' school enrollment.

We interpret these findings as highlighting the necessity of a dual approach to mitigating violence and improving girls' schooling. Such an approach should involve deterring potential perpetrators and fostering proactive behavior among victims, particularly through increased formal reporting of gender-based violence. We posit that within contexts characterized by asymmetrical power dynamics, such as schools, reductions in GBV can enhance economic outcomes by combining perpetrator deterrence with victim proactivity to penalize abusers and restore power balance.

References

ActionAid (2013). Stop Violence Against Girls in School: Sucess Stories.

Adams-Prassl, A., K. Huttunen, E. Nix, and N. Zhang (2023, 09). Violence Against Women at Work*. *The Quarterly Journal of Economics*, qjad045.

Amaral, S., G. Borker, N. Fiala, A. Kumar, N. Prakash, and M. M. Sviatschi (2023). Sexual harassment in public spaces and police patrols: Experimental evidence from urban india. Technical report, National Bureau of Economic Research.

Andrew, A., S. Krutikova, G. Smarelli, and H. Verma (2022). Gender Norms, Violence and Adolescent Girls' Trajectories. Evidence from a Field Experiment in India. Working paper.

Banerjee, A., E. La Ferrara, and V. H. Orozco (2019a, July). The entertaining way to behavioral change: Fighting hiv with mtv. Working Paper 26096, National Bureau of Economic Research.

Banerjee, A., E. La Ferrara, and V. H. Orozco (2019b, May). Entertainment, Educa-

tion, and Attitudes Toward Domestic Violence. *AEA Papers and Proceedings 109*, 133–37.

Carrell, S. E. and M. L. Hoekstra (2010, January). Externalities in the classroom: How children exposed to domestic violence affect everyone's kids. *American Economic Journal: Applied Economics 2*(1), 211–28.

Cassidy, R., A. Dam, W. Janssens, U. Kiani, and K. Morsink (2023). Targeting Men, Women or Both to Reduce Child Marriage. Working paper.

Chimbutane, F., C. Lauchande, C. Herreraalmanza, N. Karachiwalla, J. Leight, and D. Maggio (2022). Educating Children Together Phase 2 (ECT2) Final Evaluation Report. USDA Evaluation Report: `https://pdf.usaid.gov/pdf_docs/PA00Z94F.pdf`.

Devries, K. M., L. Knight, J. C. Child, A. Mirembe, J. Nakuti, R. Jones, J. Sturgess, E. Allen, N. Kyegombe, J. Parkes, 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.

Dhar, D., T. Jain, and S. Jayachandran (2022, March). Reshaping Adolescents' Gender Attitudes: Evidence from a School-Based Experiment in India. *American Economic Review 112*(3), 899–927.

Ellsberg, M., L. Heise, WHO, et al. (2005). Researching violence against women: a practical guide for researchers and activists.

Folke, O. and J. K. Rickne (2020). Sexual harassment and gender inequality in the labor market.

Giorgio, M., E. Sully, and D. W. Chiu (2021). An assessment of third-party reporting of close ties to measure sensitive behaviors: The confidante method to measure abortion incidence in ethiopia and uganda. *Studies in Family Planning 52*(4), 513–538.

Green, D. P., A. M. Wilke, and J. Cooper (2020). Countering violence against women by encouraging disclosure: A mass media experiment in rural uganda. *Comparative Political Studies 53*(14), 2283–2320.

Gutierrez, I. A., O. Molina, and H. R. Nopo (2018). Stand Against Bullying: An Experimental School Intervention. IZA Discussion Paper No. 11623.

Karmaliani, R., J. McFarlane, H. M. A. Khuwaja, Y. Somani, S. S. Bhamani, T. Saeed Ali, N. Asad, E. D. Chirwa, and R. Jewkes (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.

La Ferrara, E., A. Chong, and S. Duryea (2012, July). Soap Operas and Fertility: Evidence from Brazil. *American Economic Journal: Applied Economics 4*(4), 1–31.

LFC (2017). Child Protection in Mozambique, Technical Report.

Owolabi, O. O., M. Giorgio, E. Leong, and E. Sully (2023). The confidante method to measure abortion: implementing a standardized comparative analysis approach across seven contexts. *Population health metrics 21*(1), 9.

Romero, M. and J. Sandefur (2021, 11). Beyond Short-Term Learning Gains: the Impact of Outsourcing Schools in Liberia After Three Years. *The Economic Journal 132*(644), 1600–1619.

Romero, M., J. Sandefur, and W. A. Sandholtz (2020, February). Outsourcing education: Experimental evidence from liberia. *American Economic Review 110*(2), 364–400.

Seager, J., M. Shah, M. Goldstein, and J. Montalvao (2022). Two Sides of Gender: Sex Power and Adolescence. Working paper.

Smarelli, G. (2023). Improving School Management of Violence. Evidence from a Nation-wide Policy in Peru. Working paper.

Sviatschi, M. M. and I. Trako (2023). Gender Violence, Enforcement and Human Capital: Evidence from Women Justice Centers in Peru. Working paper.

UNICEF (2018). Violence Against Childen in Schools in Mozambique: Towards an Institutionalized Reporting and Referral Mechanism.

World Health Organization (2001). Putting women first: ethical and safety recommendations for research on domestic violence against women. Technical report, World Health Organization.

World Health Organization (2016). Ethical and safety recommendations for intervention research on violence against women: building on lessons from the WHO publication putting women first: ethical and safety recommendations for research

on domestic violence against women.

World Bank (2018). World Development Report 2018 – Learning to Realize Education's Promise.

Figure 1: Experimental design

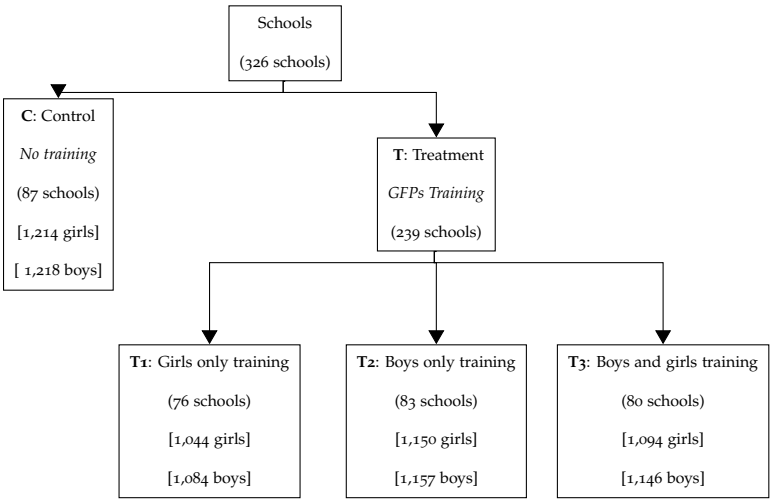


Figure 2: Map of study area and schools, by treatment status

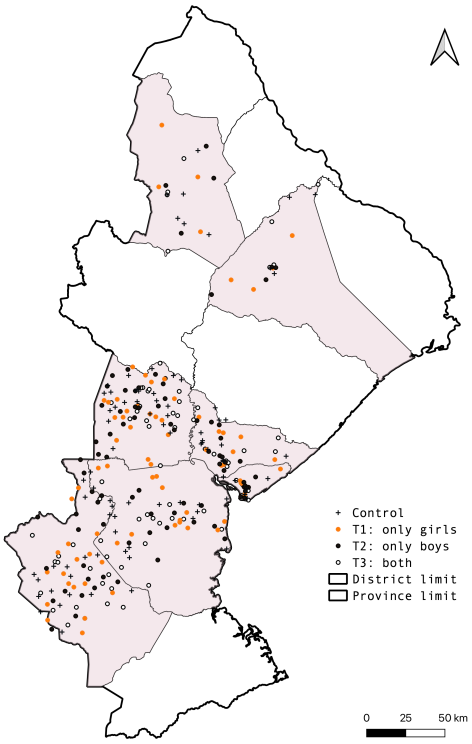


Figure 3: Project timeline

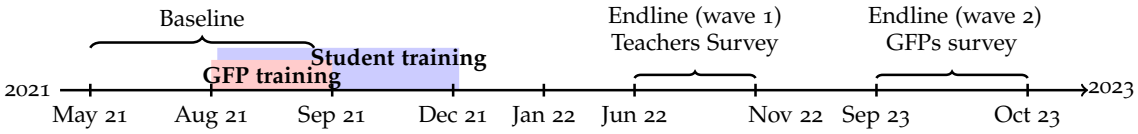


Table 1: Baseline descriptives and balance tests

	(1) **Control** Mean (SD)	(2) **T1** Mean (SD)	(3) **T2** Mean (SD)	(4) **T3** Mean (SD)	(5) **T1-C**	(6) **T1-T2**	(7) **T1-T3**	(8) **T2-C**	(9) **T2-T3**	(10) **T3-C**
Panel A: Violence in the last month										
Violence by a student (self-rep.)	0.290	0.287	0.284	0.271	0.971	0.846	0.378	0.831	0.477	0.403
	(0.454)	(0.452)	(0.451)	(0.444)						
Violence by teachers/staff (self-rep.)	0.094	0.059	0.051	0.051	0.034	0.678	0.727	0.005	0.974	0.009
	(0.292)	(0.235)	(0.221)	(0.221)						
Emotional violence	0.363	0.386	0.361	0.348	0.211	0.264	0.027	0.890	0.316	0.392
	(0.481)	(0.487)	(0.481)	(0.477)						
Physical violence	0.254	0.263	0.249	0.261	0.566	0.493	0.684	0.950	0.753	0.824
	(0.436)	(0.440)	(0.433)	(0.439)						
Sexual violence	0.171	0.182	0.169	0.149	0.444	0.583	0.086	0.893	0.242	0.227
	(0.376)	(0.386)	(0.375)	(0.356)						
Violence against girls by a student	0.184	0.176	0.208	0.169	0.801	0.171	0.577	0.290	0.052	0.433
	(0.388)	(0.381)	(0.406)	(0.375)						
Violence against girls by teachers/staff	0.042	0.027	0.022	0.031	0.153	0.588	0.653	0.042	0.302	0.305
	(0.201)	(0.162)	(0.147)	(0.173)						
Panel B: Other outcomes and socio-demographic characteristics										
Age	13.497	13.457	13.555	13.336	0.549	0.198	0.310	0.458	0.015	0.083
	(1.434)	(1.504)	(1.448)	(1.420)						
No education, mother	0.430	0.420	0.409	0.369	0.750	0.659	0.146	0.433	0.337	0.061
	(0.495)	(0.494)	(0.492)	(0.483)						
Secondary+ education, mother	0.089	0.099	0.100	0.113	0.565	0.960	0.725	0.625	0.702	0.350
	(0.285)	(0.299)	(0.300)	(0.317)						
No education, father	0.234	0.220	0.223	0.211	0.941	0.986	0.683	0.950	0.640	0.603
	(0.424)	(0.415)	(0.417)	(0.408)						
Secondary+ education, father	0.165	0.204	0.213	0.202	0.259	0.822	0.878	0.153	0.692	0.294
	(0.371)	(0.403)	(0.410)	(0.402)						
Younger siblings	0.853	0.866	0.862	0.847	0.564	0.968	0.375	0.498	0.294	0.797
	(0.354)	(0.341)	(0.345)	(0.360)						
Older brothers	0.725	0.754	0.727	0.728	0.193	0.264	0.418	0.912	0.795	0.706
	(0.447)	(0.431)	(0.446)	(0.445)						
Older sisters	0.708	0.751	0.708	0.701	0.066	0.114	0.081	0.852	0.862	0.997
	(0.455)	(0.433)	(0.455)	(0.458)						
Ever had a partner	0.046	0.055	0.048	0.042	0.446	0.600	0.251	0.817	0.495	0.621
	(0.210)	(0.228)	(0.213)	(0.201)						
Has a partner	0.031	0.043	0.035	0.033	0.299	0.542	0.357	0.632	0.709	0.937
	(0.174)	(0.202)	(0.184)	(0.179)						
Initiation Rituals	0.285	0.321	0.308	0.290	0.203	0.759	0.234	0.309	0.359	0.906
	(0.452)	(0.467)	(0.462)	(0.454)						
Test score: Math	0.051	0.122	0.074	0.149	0.416	0.732	0.710	0.638	0.477	0.234
	(0.968)	(0.921)	(0.994)	(0.919)						
Attitudes: Violence	0.540	0.561	0.495	0.516	0.515	0.004	0.206	0.036	0.136	0.556
	(0.499)	(0.497)	(0.500)	(0.500)						
Attitudes: GBV	0.338	0.313	0.317	0.291	0.319	0.925	0.640	0.253	0.691	0.146
	(0.473)	(0.464)	(0.466)	(0.455)						
Attitudes: Dating violence	0.644	0.639	0.631	0.619	0.771	0.565	0.807	0.353	0.739	0.577
	(0.479)	(0.481)	(0.483)	(0.486)						
Social desirability score	-0.010	0.043	-0.012	0.075	0.366	0.503	0.838	0.772	0.347	0.238
	(1.001)	(0.962)	(0.995)	(0.982)						

Note. All information refers to the baseline survey. The sample is restricted to girls who were tracked and resurveyed at endline. Columns 1-4 display the mean and standard deviation of the variable of interest among girls in control, T1, T2, and T3 schools respectively. Columns 5-10 display p-values based on a regression of the variable of interest on treatment dummies, controlling for randomization strata with standard errors clustered at the school (unit of randomization) level.

Table 2: Effects on prevalence of violence against girls

	Self-reported		Reported by Others	
	Any kid	Teachers + school staff	Any kid	Teachers + school staff
	(1)	(2)	(3)	(4)
Girls (T1)=1	0.005	-0.008**	-0.002	-0.009**
	(0.022)	(0.004)	(0.011)	(0.004)
Boys (T2)=1	-0.005	-0.004	0.002	-0.008*
	(0.020)	(0.004)	(0.010)	(0.004)
Both (T3)=1	0.018	-0.006	0.005	-0.009**
	(0.021)	(0.004)	(0.011)	(0.004)
P-value T1=T2	0.613	0.216	0.678	0.586
P-value T1=T3	0.567	0.406	0.512	0.930
P-value T2=T3	0.253	0.706	0.780	0.558
Mean control	0.184	0.012	0.088	0.017
N. Clusters	325	325	326	326
Observations	3,471	3,471	7,098	7,098

Note: Regression coefficients are based on ANCOVA models with strata (district × high GBV) fixed effects. Standard errors are clustered at the school level in parentheses. The dependent variables in columns 1 and 2 are indicators of whether the respondent reported experiencing any type of violence in the past month from other students in the school (column 1) or from teacher or school staff (column 2). The dependent variables in columns 3 and 4 are an indicator of whether the respondent reported witnessing any type of violence against girls in the past month from any other student in the school (column 3) or any teacher or school staff (column 4). All specifications control for the baseline value of the dependent variable and social desirability score at baseline. * p<0.10, ** p<0.05, *** p<0.01.

Table 3: Effects on GFPs

	Outlined Activities		Students' Reporting	Activities upon Reporting			
	Talk to students	Report to school authorities	Gender Based violence	Knows how to contact the helpline	Knows number of the helpline	Engage with teachers	Report to school council
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Girls (T1)	0.342***	0.122**	0.098**	0.529***	0.236***	0.151*	0.162**
	(0.074)	(0.058)	(0.043)	(0.068)	(0.069)	(0.081)	(0.077)
Boys (T2)	0.312***	0.124**	0.050	0.325**	0.117*	0.023	0.082
	(0.071)	(0.051)	(0.034)	(0.074)	(0.062)	(0.076)	(0.074)
Both (T3)	0.278***	0.094*	0.003	0.392***	0.100	0.113	0.117
	(0.071)	(0.051)	(0.025)	(0.075)	(0.063)	(0.077)	(0.078)
P-value T1 = T2	0.71	0.97	0.31	0.00	0.11	0.11	0.29
P-value T1 = T3	0.43	0.66	0.03	0.05	0.08	0.64	0.57
P-value T2 = T3	0.66	0.61	0.17	0.38	0.81	0.24	0.65
Mean control	0.21	0.08	0.02	0.27	0.15	0.42	0.38
Observations	318	318	318	318	318	318	318

Note: The dependent variable in column 1 is an indicator variable equal to 1 if the respondent talked to students at school about GBV topics. In column 2 the dependent variable is an indicator variable equal to 1 if the respondent reported GBV cases to the school authorities, in column 3 the dependent variable is an indicator variable equal to 1 if the student reported GBV to the GFP, and in column 3 and 4 it is an indicator variable equal to 1 if the respondent knew how to contact the helpline and could state the correct number for the *Linha Fala Criança* helpline. In column 5 the dependent variable is an indicator variable equal to 1 if the respondent shared material or talked to teachers at school about GBV issues, and in column 6 it is an indicator equal to 1 if the respondent reported GBV cases to the school council. All the activities occurred in the past academic year. * p<0.10, ** p<0.05, *** p<0.01.

Table 4: Effects on adolescents' identification of violence

	(1) Both vignettes as violent	(2) All 7 items correct	(3) Proportion of correct items
Girls (T1)	0.039**	0.005**	0.007
	(0.018)	(0.002)	(0.008)
Boys (T2)	0.030*	0.004*	-0.003
	(0.016)	(0.002)	(0.007)
Both (T3)	-0.002	0.002	-0.002
	(0.017)	(0.002)	(0.008)
P-value T1=T2	0.617	0.521	0.181
P-value T1=T3	0.025	0.255	0.228
P-value T2=T3	0.057	0.533	0.915
Mean control	0.225	0.002	0.454
N. Clusters	326	326	326
Observations	7,128	7,061	7,061

Note: Regression coefficients are based on ANCOVA models with strata (district × high GBV) fixed effects. Standard errors are clustered at the school level in parentheses.All specifications control for the social desirability score at baseline. The dependent variable in column 1 is an indicator variable of whether the respondent is able to correctly identify two vignettes depicting GBV as very violent (see Appendix B.2.1). The dependent variables in columns 2 and 3 are based on the correct identification of four GBV items and three non-GBV items in Appendix B.2.2). The outcome in column 2 is an indicator variable of whether the respondent correctly identifies all seven items. The outcome variable in column 3 in the proportion of items correctly identified. * p<0.10, ** p<0.05, *** p<0.01.

Table 5: Effects on adolescents' attitudes toward violence

	(1) Acceptability violence	(2) Acceptability GBV	(3) Dating violence
Girls (T1)	-0.008	0.005	0.017
	(0.021)	(0.021)	(0.020)
Boys (T2)	-0.009	-0.011	-0.011
	(0.021)	(0.022)	(0.020)
Both (T3)	-0.029	-0.006	-0.011
	(0.021)	(0.021)	(0.021)
P-value T1=T2	0.972	0.467	0.177
P-value T1=T3	0.307	0.624	0.183
P-value T2=T3	0.324	0.801	0.990
Mean control	0.518	0.347	0.512
N. Clusters	326	326	326
Observations	7,102	7,081	7,112

Note: Regression coefficients are based on ANCOVA models with strata (district × high GBV) fixed effects. All specifications control for the social desirability score at baseline. Standard errors are clustered at the school level in parentheses. The dependent variable is an indicator of whether the respondent considers any of the four statements in Appendix B.3 reflecting violence to be acceptable (column 1), considers any of the eight statements reflecting GBV to be acceptable (column 2), or whether they agree with any of the seven statements reflecting gender norms around dating violence (column 3). All specifications control for the baseline value of the dependent variable. * p<0.10, ** p<0.05, *** p<0.01.

Table 6: Effects on girls' schooling

		Test scores	
	Enrollment	Math	Portuguese
	(1)	(2)	(3)
Girls (T1)=1	0.057**	0.004	0.094
	(0.029)	(0.068)	(0.061)
Boys (T2)=1	0.016	0.020	-0.013
	(0.027)	(0.065)	(0.064)
Both (T3)=1	0.044	0.033	0.009
	(0.028)	(0.063)	(0.065)
P-value T1=T2	0.160	0.812	0.069
P-value T1=T3	0.653	0.655	0.156
P-value T2=T3	0.326	0.829	0.731
Mean control	0.607	-0.008	-0.015
N. Clusters	326	325	325
Observations	4,258	3,483	3,483

Note: The dependent variable in column 1 is an indicator of whether the respondent was enrolled at school at the moment of the interview and was interviewed. In column 2 the dependent variable is the math standardized test score based on the proportion of correct answers, and in column 3 it is the Portuguese standardized test score based on the proportion of correct answers. The construction of the dependent variables in columns 1 and 2 differs only for secondary schools. Specification 3 controls for the baseline value of the dependent variable. * p<0.10, ** p<0.05, *** p<0.01.

A Appendix

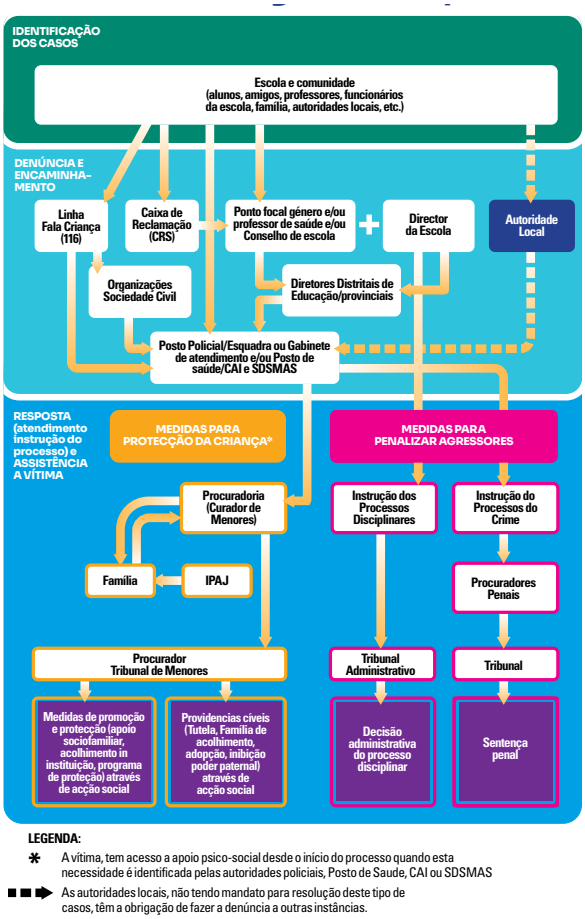
A.1 GBV Referral and Response

We followed a simplified version of the multi-sectoral mechanism of support to victims of GBV. This tool was developed by UNICEF – see Figure A.1 – and aims to connect victims to institutional, legal and health services trained to provide GBV support. Under this system, GFPs were guided through the different tools, their role in it, and how they must refer students who are victims of GBV. GFPs were instructed to seek victim consent prior to reporting. They could also call LFC helpline to seek guidance on how to proceed with respect to situations they were struggling to address within the school. The system was covered in the training and it was part of the manual shared with teachers. In practice, GFPs were instructed to use the hotline service since this was in many cases the only closely available option, and it was also the most simple tool to discuss and practice during sessions. To students seeking support on GBV we shared information on the first and most easily accessible tool to seek support i.e., the GFP, and information on the hotline LFC.

When it comes to response systems, once a case is reported to the hotline, trained LFC case-workers review the information. When a call is verified to be a true report of GBV, case-workers initiate a process of investigation where further information is collected on the victim, situation and perpetrator. Victims are then referred to support systems that are close to where they reside. Case-workers that are part of - and vetted by - LFC provide support to victims in person. If the victim consents to pursue legal action, the perpetrators are then dealt by the legal system. The MINEDH is not an integral part of the referral system, but after discussions with case-workers and LFC teams, it was mentioned that during the course of an investigation, MINEDH officials and other school teachers may become aware that there is a GBV investigation taking place.

It is important to emphasize that LFC is a free service available in the province and is targeted to responses to GBV issues. LFC operates with trained GBV teams, is linked with a network of NGOs and other institutional support systems to refer and respond to GBV in the province. LFC case-workers are trained by UNICEF on the GBV referral system and other GBV response techniques.

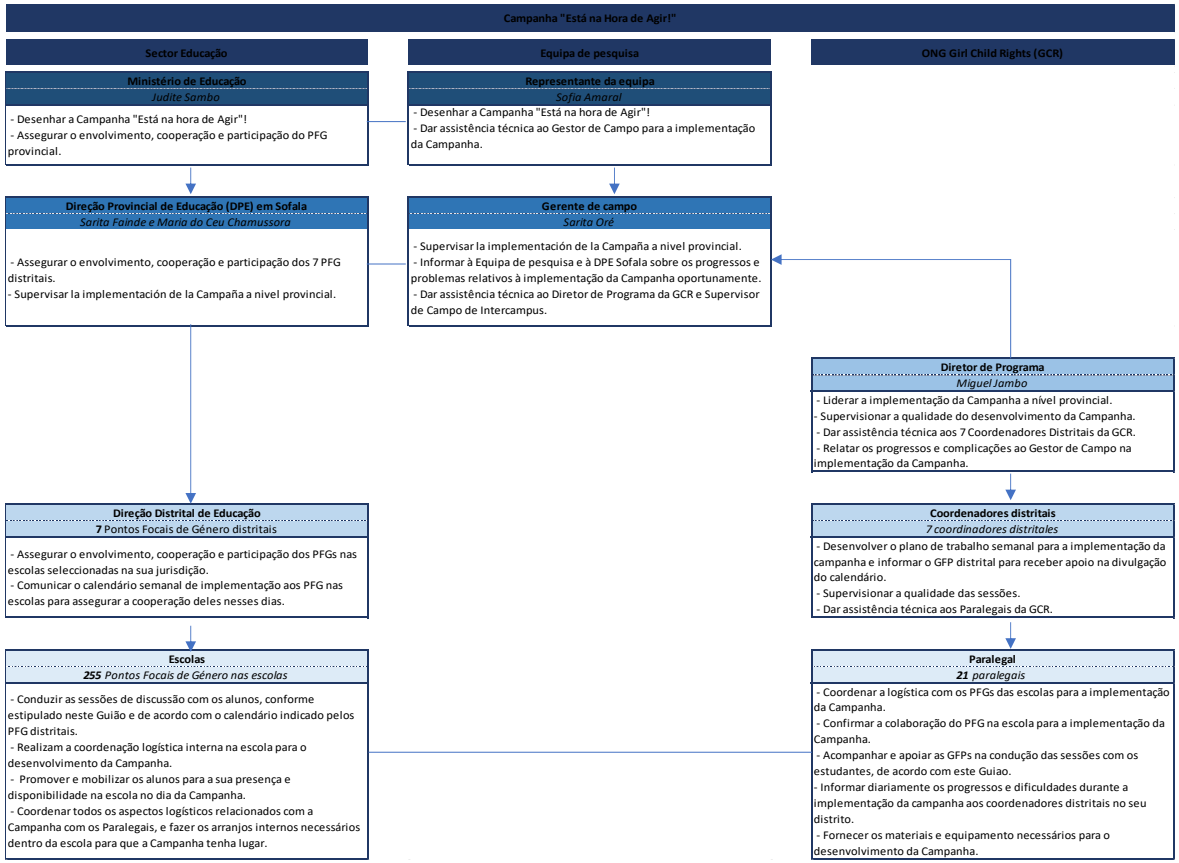
Figure A.1: UNICEF's victim support mechanism



Notes: The figure displays UNICEF's victim support mechanism used for the GFP training of the Está na Hora de Agir intervention.

A.2 Intervention details

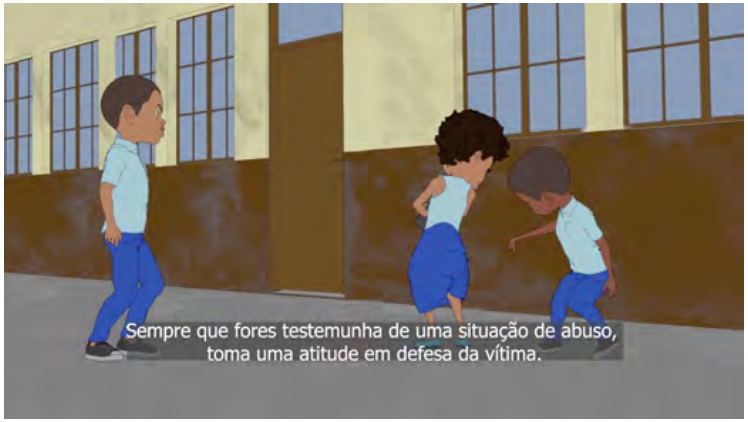
Figure A.2: Role of GFPs in Está na Hora de Agir



Notes: The figure displays the organizational chart provided to GFPs during GFP training. The bottom left panel specifies the GFP engagement role with students and their provision of logistic support to the intervention's implementation.

Figure A.3: Sample screenshots from first animated video

(A) Screenshot 1



(B) Screenshot 2

(C) Screenshot 3

(D) Screenshot 4

Notes: The figure displays screenshots from the first animated video that was developed and used as part of the intervention. The video starts with an example of a situation where two male students lift the skirt of a female student (screenshot 1) followed by a male teacher who inappropriately rubs a female student's shoulders during class (screenshot 2) and then touches her private parts after class (screenshot 3). The video then shows the female student discussing the situation with the GFP (screenshot 4) and shows that the teacher perpetrating the GBV loses his job as a result. The video concludes with the slogan Está na Hora de Agir ("It's Time to Act") and the number for the Linha Fala Criança helpline.

Figure A.4: Sample screenshots from second animated video

(A) Screenshot 1

(B) Screenshot 2

(C) Screenshot 3

(D) Screenshot 4

Notes: The figure displays screenshots from the second animated video that was developed and used as part of the intervention. The video starts with an example of a situation where a male student pushes a female student because he is frustrated after losing a football game in school (screenshot 1). This is followed by another male student who is emotionally abusive to a female student because he jealous of her (screenshots 2 and 3). The video concludes with the slogans "Tu tens o poder" ("You have the power") and Está na Hora de Agir ("It's Time to Act") and the number for the Linha Fala Criança helpline.

A.3 Appendix Tables

Table A.1: Attrition

	Any	Girls	Boys
	(1)	(2)	(3)
Girls (T1)=1	-0.020	-0.024	-0.016
	(0.022)	(0.025)	(0.024)
Boys (T2)=1	0.010	0.024	-0.004
	(0.023)	(0.027)	(0.024)
Both (T3)=1	-0.033	-0.037	-0.028
	(0.022)	(0.025)	(0.025)
P-value T1=T2	0.168	0.061	0.599
P-value T1=T3	0.516	0.582	0.633
P-value T2=T3	0.054	0.017	0.330
Mean control	0.178	0.192	0.165
N. Clusters	326	326	326
Observations	8,558	4,258	4,300

Notes: Regression coefficients are based on OLS regression controlling for strata (district × high GBV) fixed effects. Standard errors are clustered at the school level in parentheses. The dependent variable is an indicator of whether the student is not found in endline. All specifications control for the baseline value of the dependent variable. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A.2: Baseline descriptives and balance tests for boys

	(1) **Control** Mean (SD)	(2) **T1** Mean (SD)	(3) **T2** Mean (SD)	(4) **T3** Mean (SD)	(5) **T1-C**	(6) **T1-T2**	(7) **T1-T3**	(8) **T2-C**	(9) **T2-T3**	(10) **T3-C**
Panel A: Violence in the last month										
Violence by a student (self-rep.)	0.246	0.242	0.238	0.264	0.926	0.794	0.561	0.857	0.396	0.479
	(0.431)	(0.429)	(0.426)	(0.441)						
Violence by teachers/staff (self-rep.)	0.039	0.040	0.040	0.035	0.852	0.988	0.615	0.842	0.608	0.744
	(0.193)	(0.196)	(0.195)	(0.183)						
Emotional violence	0.387	0.362	0.374	0.395	0.455	0.632	0.324	0.836	0.648	0.769
	(0.487)	(0.481)	(0.484)	(0.489)						
Physical violence	0.195	0.182	0.200	0.205	0.619	0.337	0.274	0.618	0.940	0.543
	(0.396)	(0.386)	(0.400)	(0.404)						
Sexual violence	0.135	0.159	0.163	0.155	0.104	0.716	0.594	0.059	0.376	0.210
	(0.342)	(0.366)	(0.370)	(0.362)						
Violence against girls by a student	0.126	0.145	0.138	0.129	0.262	0.824	0.399	0.306	0.483	0.754
	(0.332)	(0.353)	(0.345)	(0.335)						
Violence against girls by teachers/staff	0.020	0.022	0.024	0.025	0.679	0.773	0.779	0.492	0.985	0.479
	(0.139)	(0.148)	(0.154)	(0.156)						
Panel B: Other outcomes and socio-demographic characteristics										
Age	14.229	14.090	14.151	14.059	0.308	0.547	0.797	0.611	0.351	0.179
	(1.698)	(1.709)	(1.681)	(1.650)						
No education, mother	0.397	0.414	0.380	0.411	0.712	0.432	0.994	0.647	0.394	0.684
	(0.490)	(0.493)	(0.486)	(0.492)						
Secondary+ education, mother	0.051	0.078	0.070	0.090	0.092	0.631	0.822	0.186	0.477	0.055
	(0.219)	(0.268)	(0.256)	(0.287)						
No education, father	0.195	0.251	0.155	0.200	0.022	0.001	0.041	0.127	0.149	0.922
	(0.396)	(0.434)	(0.362)	(0.400)						
Secondary+ education, father	0.129	0.154	0.174	0.174	0.444	0.524	0.541	0.159	0.979	0.167
	(0.336)	(0.361)	(0.380)	(0.380)						
Younger siblings	0.869	0.869	0.844	0.863	0.770	0.156	0.583	0.253	0.387	0.791
	(0.338)	(0.338)	(0.363)	(0.344)						
Older brothers	0.765	0.770	0.752	0.741	0.673	0.398	0.103	0.686	0.467	0.249
	(0.424)	(0.421)	(0.432)	(0.438)						
Older sisters	0.723	0.748	0.715	0.713	0.161	0.098	0.039	0.869	0.758	0.642
	(0.448)	(0.434)	(0.452)	(0.453)						
Ever had a partner	0.144	0.133	0.156	0.145	0.740	0.237	0.667	0.347	0.553	0.855
	(0.351)	(0.340)	(0.363)	(0.352)						
Has a partner	0.081	0.071	0.085	0.085	0.711	0.368	0.566	0.552	0.846	0.762
	(0.273)	(0.258)	(0.279)	(0.278)						
Initiation Rituals	0.066	0.061	0.057	0.076	0.749	0.631	0.215	0.401	0.074	0.335
	(0.248)	(0.239)	(0.231)	(0.265)						
Test score: Math	-0.001	-0.014	0.062	0.093	0.725	0.242	0.176	0.396	0.839	0.301
	(0.998)	(0.979)	(0.983)	(0.929)						
Attitudes: Violence	0.491	0.471	0.476	0.458	0.366	0.804	0.999	0.476	0.805	0.362
	(0.500)	(0.499)	(0.500)	(0.498)						
Attitudes: GBV	0.281	0.320	0.290	0.264	0.249	0.265	0.114	0.947	0.645	0.701
	(0.450)	(0.467)	(0.454)	(0.441)						
Attitudes: Dating violence	0.592	0.578	0.535	0.553	0.523	0.158	0.512	0.024	0.376	0.143
	(0.492)	(0.494)	(0.499)	(0.498)						
Social desirability score	-0.031	-0.041	-0.041	0.011	0.939	0.894	0.385	0.844	0.329	0.471
	(0.981)	(0.970)	(0.973)	(1.013)						

Note. All information refers to the baseline survey. The sample is restricted to boys who were tracked and resurveyed at endline. Columns 1-4 display the mean and standard deviation of the variable of interest among boys in control, T1, T2, and T3 schools respectively. Columns 5-10 display p-values based on a regression of the variable of interest on treatment dummies, controlling for randomization strata with standard errors clustered at the school (unit of randomization) level.

Table A.3: Balance test for GFPs

	Age	Gender=male	Born in Sofala	Born in Beira	University grad.	Years in school	GFP in 2021
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Girls (T_1)	-0.173	0.027	0.041	0.058	-0.063	0.407	0.062
	(0.983)	(0.070)	(0.056)	(0.077)	(0.055)	(0.697)	(0.045)
Boys (T_2)	-0.383	-0.135**	0.019	0.071	0.038	0.267	0.058
	(0.931)	(0.061)	(0.057)	(0.077)	(0.059)	(0.677)	(0.044)
Both (T_3)	-0.083	0.071	-0.015	0.017	-0.034	0.311	0.080*
	(0.971)	(0.070)	(0.060)	(0.075)	(0.058)	(0.700)	(0.043)
Observations	318	318	318	318	318	318	318
Control mean	35.05	0.27	0.83	0.38	0.25	6.77	0.88
P-value T1=T2	0.82	0.01	0.69	0.87	0.07	0.84	0.91
P-value T1=T3	0.93	0.55	0.33	0.60	0.59	0.89	0.61
P-value T2=T3	0.74	0.00	0.56	0.49	0.23	0.95	0.52

Notes: Dependent variables are as follows: column 1: Age, column 2: Gender (male = 1), column 3: Born in Sofala Province, column 4: Born in Beira district, column 5: Education: University graduate, column 6: Years as teacher in this school, column 7: was a GFP in 2021.

Table A.4: Knowledge about laws and sentences related and unrelated to GBV

	GBV Laws and Sentences		Laws not concerning GBV		
	(1)	(2)	(3)	(4)	(5)
T1: only girls	0.211***	2.639**	0.057	0.014	-0.084
	(0.063)	(1.171)	(0.058)	(0.016)	(0.066)
T2: only boys	0.123**	0.629	0.037	-0.005	-0.047
	(0.055)	(1.201)	(0.053)	(0.011)	(0.065)
T3: both	0.066	3.633**	-0.025	-0.003	-0.058
	(0.064)	(1.674)	(0.062)	(0.012)	(0.071)
Observations	551	168	551	551	551
Control mean	0.28	10.56	0.20	0.01	0.27
P-value T1 = T2	0.15	0.07	0.72	0.18	0.54
P-valueT1 = T3	0.04	0.49	0.19	0.26	0.70
P-value T2 = T3	0.35	0.04	0.29	0.81	0.87

Note: (1) is a dummy variable = 1 if the person declares to know the Law on the Promotion and Protection of Children's Rights (Law No. 7/2008) or declares to know sentence (in years) for sexual acts with children under 16, with or without consent; (2) Years of sentence for sexual acts with children under 16, with or without consent, according to the person; (3) knows about law of Domestic Violence Perpetrated Against women Act (2009); (4) knows about the Labour Law (Law No. 23/2007). (5) knows the Civil Registration Code 2004. * p<0.10, ** p<0.05, *** p<0.01.

Table A.5: Prevalence of violence against girls, past month by social desirability

	Self-reported		Reported by Others	
	Any student	Teachers + school staff	Any student	Teachers + school staff
	(1)	(2)	(3)	(4)
Girls (T1)	0.008	-0.009**	-0.002	-0.009**
	(0.022)	(0.004)	(0.011)	(0.004)
Girls (T1) × SDB	0.010	0.001	0.016*	-0.004
	(0.019)	(0.003)	(0.009)	(0.004)
Boys (T2)	-0.007	-0.004	0.002	-0.008*
	(0.021)	(0.005)	(0.010)	(0.004)
Boys (T2) × SDB	0.022	0.007	0.004	-0.003
	(0.019)	(0.005)	(0.010)	(0.004)
Both (T3)	0.022	-0.008*	0.006	-0.009**
	(0.021)	(0.004)	(0.011)	(0.004)
Both (T3) × SDB	0.009	0.002	-0.010	-0.003
	(0.018)	(0.004)	(0.010)	(0.004)
Mean control	0.187	0.012	0.088	0.017
N. Clusters	325	325	326	326
Observations	3,379	3,379	7,128	7,128

Note: Regression coefficients are based on ANCOVA models with strata (district × high GBV) fixed effects. Standard errors are clustered at the school level in parentheses. The dependent variables in columns 1 and 2 are indicators of whether a girl reported experiencing any type of violence in the past month from any other student in the school (column 1) or any teacher or school staff (column 2). The dependent variables in columns 3 and 4 are indicators of whether the student reported witnessing any type of violence against girls in the past month from any other student in the school (column 3) or any teacher or school staff (column 4). SDB is the respondent's social desirability score at baseline. All specifications control for the baseline value of the dependent variable. * p<0.10, ** p<0.05, *** p<0.01.

Table A.6: Sexual Violence by Teachers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Girls (T1)	-0.008*	-0.002	-0.002	-0.002	-0.004	-0.002	-0.002	-0.004
	(0.005)	(0.005)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.009)
Boys (T2)	-0.008*	-0.008**	-0.002	-0.004	-0.004	-0.003	-0.004	-0.013*
	(0.005)	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)	(0.003)	(0.007)
Both (T3)	-0.008*	-0.006	0.004	-0.005	-0.006	-0.004*	-0.004	-0.003
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.008)
Observations	3305	3284	3333	3201	3333	3284	3323	3453
Control mean	0.011	0.009	0.004	0.007	0.008	0.006	0.007	0.025
P-value T1=T2	0.946	0.049	0.923	0.432	0.938	0.721	0.461	0.227
P-value T1=T3	0.990	0.447	0.078	0.979	0.666	0.689	0.952	0.125
P-value T2=T3	0.953	0.323	0.096	0.418	0.629	0.418	0.442	0.941

Notes: Regression coefficients are based on ANCOVA models with strata (district $\times$ high GBV) fixed effects. Standard errors are clustered at the school level in parentheses. Dependent variables in column 1-7 are dummies equal to 1 if the respondent said a teacher or school staff has done the following to her in the past month: Column 1 'Forced you to perform sexual acts?', Column 2 'Touched you in a way that made you uncomfortable?', Column 3 'Kissed or forced you to kiss him/her?', Column 4 'Made you take off your clothes?', Column 5 'Took off his/her clothes?', Column 6 'Made you touch your own private parts?', Column 7 'Made you touch his/her private parts?'. The dependent variable in column 8 is a dummy =1 if the respondent said yes to any of the items mentioned in columns 1-7. All specifications control for the baseline value of the dependent variable and social desirability score at baseline. * p<0.10, ** p<0.05, *** p<0.01.

Table A.7: Effects on girls' perceptions of safety at school

	(1) Very safe	(2) More or less safe	(3) Very unsafe
Girls (T1)	0.027	-0.002	-0.025*
	(0.031)	(0.028)	(0.014)
Boys (T2)	-0.005	0.023	-0.017
	(0.032)	(0.030)	(0.014)
Both (T3)	0.057*	-0.047*	-0.010
	(0.031)	(0.028)	(0.015)
Observations	3483	3483	3483
Control mean	0.65	0.29	0.06
P-value T1=T2	0.28	0.38	0.53
P-value T1=T3	0.31	0.09	0.27
P-value T2=T3	0.04	0.01	0.61

Notes: Regression coefficients are based on ANCOVA models with strata (district × high GBV) fixed effects. All specifications control for the social desirability score at baseline. Standard errors are clustered at the school level in parentheses. The dependent variables are indicators for whether the respondent said she felt "very safe" (column 1), "More or less safe" (column 2), or "Very unsafe" (column 3) at school. All specifications control for the baseline value of the dependent variable. * p<0.10, ** p<0.05, *** p<0.01.

Table A.8: Feelings when talking about GBV with enumerator

	Good	Bad	Same
	(1)	(2)	(3)
Girls (T1)	0.042*	-0.011	-0.031*
	(0.024)	(0.015)	(0.017)
Boys (T2)	-0.035	0.029	0.005
	(0.026)	(0.018)	(0.018)
Both (T3)	0.013	-0.002	-0.011
	(0.023)	(0.015)	(0.018)
P-value T1=T2	0.002	0.032	0.037
P-value T1=T3	0.195	0.569	0.246
P-value T2=T3	0.056	0.086	0.376
Mean control	0.782	0.070	0.148
N. Clusters	325	325	325
Observations	3,721	3,721	3,721

Note: Regression coefficients are based on OLS models with strata (district × high GBV) fixed effects. Standard errors are clustered at the school level in parentheses. The dependent variable is an indicator of whether the student has felt good (column 1), bad (column 2), or same (column 3) while talking about violence with the enumerator. * p < 0.10, ** p < 0.05, *** p < 0.01.

B Measurement

B.1 Prevalence of violence

To measure the prevalence of violence during the past month, we asked respondents if they ever experienced any of the following. If they said "Yes," we asked when was the last time they experienced this. If the last time the respondent experienced any of these was within the past month, we coded the prevalence of any violence as 1 and 0 otherwise. Moreover, we classify the types of violence as emotional (items 1–4), physical (items 5–8), or sexual (items 9–15).

1. Insulted you or made you feel bad about yourself?
2. Belittled or humiliated you in front of other people?
3. Did things to scare or intimidate you?
4. Threatened to hurt you or a friend of yours?
5. Hit you or threw something that could hurt you?
6. Pushed you or pulled your hair?
7. Punched you or hit you with something else that hurt you?
8. Kicked you, dragged you or spanked you?
9. Showed you his/her private parts or pretend to show himself to you?
10. Made nasty comments/expressions/looks/whistles at you?
11. Stalked you in a way that made you uncomfortable?
12. Groped/touched you in a way that made you uncomfortable?
13. Looked at you in a way that made you uncomfortable?
14. Made sexual comments to you in a way that made you uncomfortable?
15. Pulled your skirt/pants/shorts?

B.2 Identification of violence

We use three indicators to measure adolescents' ability to identify violent acts.

1. The first indicator is based on the following two vignettes:

Vignette 1. Ana and José are two students at the school. They are on their first date and are going to a community social gathering together. José spends the whole time talking to an old girlfriend. After José and Ana leave, Ana gets angry and gives José a shove. He is sore but does not need medical attention.

Vignette 2. Maria and Pedro are two students from the same school. They have been together for a month and are getting to know each other. They both went to a community meeting where they both drank a beer that someone offered them. After they leave, Maria gets very angry and hits Pedro. He is hurt and needs a bandage. This kind of thing has happened several times before.

After the vignettes were read out to the respondents, they were asked to report to what extent they thought this situation was violent or abusive. They could answer "Very violent," "More or less violent," "Slightly violent," or "Not violent at all." The indicator was coded as 1 if the respondent found both situations "Very violent" and 0 otherwise.

2. The second and third indicators are based on a series of questions describing various situations. The respondent was asked to report if they thought the situation constituted GBV or not. The specific situations are the following:

   a. A group of students is tugging on a girl's skirt.
   b. A female student yells at a male student because he has different ideas.
   c. A teacher uses a female student's pen without asking.
   d. A male student insults a female student because he thinks her outfit is racy.
   e. A teacher slaps a student if he doesn't pay attention.
   f. A teacher pretends to show his private parts (parts that are normally not shown) to a female student.
   g. A girlfriend pushes her boyfriend because she is jealous.

   The correct answer should be that items a, d, f, and g constitute GBV and items b, c, and e do not. We then generate one indicator that is equal to 1 if the respondent identified all of these items correctly as being GBV or not, and a second indicator that is the proportion of items they identified correctly.

B.3 Attitudes toward violence

We use three indicators to measure adolescents' attitudes toward violence:

1. **Acceptability of violence:** An indicator equal to 1 if the respondent considers the use of violence as being "acceptable" in any of the following situations:

- A student insults/humiliates another student if they argue or have a disagreement.
- A teacher threats/hurts/scares a student if they argue or have a disagreement.
- A student pushes/slaps/hits/kicks another student if they argue or have a disagreement.
- A teacher pushes/slaps/hits/kicks a student if he/she is not behaving as the teacher expects (e.g., not paying attention, disrupting the class).

2. **Acceptability of GBV:** An indicator equal to 1 if the respondent considers the use of violence as being "acceptable" in any of the following situations:
   - A student shows or simulates showing his/her intimate parts to another student if he/she likes her/him.
   - A teacher shows or simulates showing his/her intimate parts to a student if he/she likes her/him.
   - A student stalks/stares at another student if he/she likes her/him.
   - A teacher stalks/stares at a student if he/she likes her/him.
   - A student touches/gropes another student if he/she likes her/him.
   - A teacher touches/gropes a student if he/she likes her/him.
   - A student makes comments or sexually harass another student if he/she likes her/him.
   - A teacher makes comments or sexually harass a student if he/she likes her/him.

3. **Dating violence:** An indicator equal to 1 if the respondent agrees with any of the following statements:
   - What boys want should take priority over what girls want when there is no money in the house.
   - If a boy likes a girl, he should be able to kiss her even if she doesn't want to.
   - If a boy likes a girl, he should be able to touch her even if she doesn't want to.
   - A boyfriend takes care of his girlfriend by controlling where she goes and who she sees.
   - A boyfriend has the right to have sex with his girlfriend even when she says no.
   - In a relationship, the guy should always have the last word, even if it is not right.

- If girls wear short skirts or drink alcohol at a party, they are asking to be mistreated or abused.

B.4 Social desirability index

Our social desirability index is identical to the index used by Dhar et al. (2022), which is based on Crowne and Marlowe (1960). In particular, each respondent was asked to state if the following statements are true or false for themselves:

1. It is sometimes hard for me to go on with my work if I am not encouraged.
2. I sometimes feel resentful when I don't get my way.
3. On a few occasions, I have given up doing something because I thought too little of my ability.
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
5. No matter who I'm talking to, I'm always a good listener.
6. There have been occasions when I took advantage of someone.
7. I'm always willing to admit it when I make a mistake.
8. I sometimes try to get even rather than forgive and forget.
9. I am always courteous, even to people who are disagreeable.
10. I have never been upset when people expressed ideas very different than my own.
11. There have been times when I was quite jealous of the good fortune of others.
12. I am sometimes irritated by people who ask favors of me.
13. I have deliberately said something that hurt someone's feelings.

The social desirability index sums how many of the responses are the socially desirable ones. More specifically, we create dummy variables equal to 1 if the respondent responded "False" to items 1–4, 6, 8, and 11–13; and "True" to items 5, 7, 9, and 10. The social desirability index is the mean of these 13 dummy variables, standardized with respect to the control group.