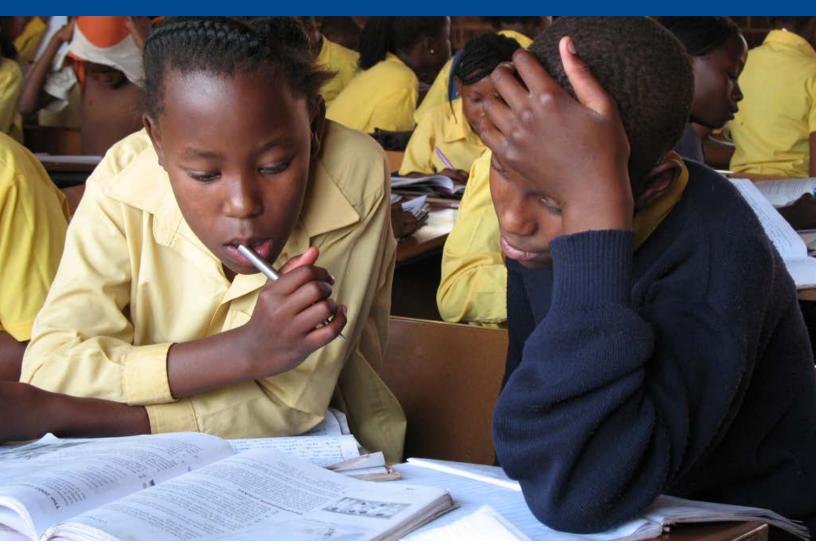# LITERATURE REVIEW ON THE INTERSECTION OF SAFE LEARNING ENVIRONMENTS AND EDUCATIONAL ACHIEVEMENT

EdData II: Data for Education Research and Programming (DERP) in Africa

Table of Contents

List of Tables

Abbreviations

EdData II	Education Data for Decision Making
FGD	focus group discussion
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Assessment
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SRGBV	school-related gender-based violence
TIMSS	Trends in International Mathematics and Science Study
UAE	United Arab Emirates
UK	United Kingdom
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development

Executive Summary

Introduction

A safe school is one that is free of danger and possible harm for students, but in reality, violence in schools is a global phenomenon. Moreover, studies in developing countries indicate that school violence is especially prevalent in such settings. For example, more than half of South African and Botswanan children say they are bullied "approximately weekly."

Despite considerable progress in documenting and conceptualizing school violence, surprisingly few studies in any part of the world have examined its impact on educational achievement. In view of this, RTI International was commissioned by the United States Agency for International Development (USAID) to conduct a literature review of the available evidence, with particular, but not sole, reference to developing countries. This literature review was performed through a systematic online search of academic journals. Relevant research reports from aid agencies and international nongovernmental organizations were also considered.

Defining and Conceptualizing School Violence

Bullying is one of the most common forms of school violence. The term "school violence" also encompasses corporal punishment, cruel and humiliating forms of psychological punishment, sexual and gender-based violence, fighting, and gang-related violence. Vulnerability to bullying and other forms of school violence varies among students, based on gender, sexuality, disability, stigmatized illness (including HIV/AIDS), refugee status, or minority group status.

In some contexts, violence is a commonplace feature of schools as institutions, rather than an aberration. Violence in these contexts includes school-related gender-based violence, such as sexual harassment and assault, which has been highlighted as a cause for concern in developing countries for more than a decade. However, some researchers argue that all school violence is gendered. Conceptualizing school violence as profoundly gendered provides a coherent framework for analysis and helps to bring boys into sharper focus as both potential victims and perpetrators.

Impact of School Violence on Educational Achievement

There is an association between the safety of schools in developing countries and educational achievement measured in standardized tests. For instance, a key finding of the Progress in International Reading Literacy Study (PIRLS) 2011 (Mullis et al., 2012b) is that students in developing countries whose principals reported "moderate problems

of discipline and safety" in their schools had substantially lower reading achievement than students whose principals reported "hardly any problems" in these matters.

Research from developing and developed countries indicates that school violence affects educational achievement through diverse causal pathways. Direct and indirect experiences of school violence can lead to school avoidance, low student participation in class, and an inability to concentrate in class or on school homework. These experiences of school violence can also lead to depression and reduced self-esteem, poor student attitudes towards school, and a lack of student engagement with the school.

Comments on the Literature

Research on the linkages between school violence and educational achievement in developing countries is sparse and patchy; consequently making reliable comparisons among locations or analyses of trends impossible. Despite the gaps in existing knowledge, the evidence that school violence has a negative impact on educational achievement in developing countries is compelling. School violence has also been found to affect students' physical and psychological health, emotional well-being, and social capital. Whether from a human rights or a human capital standpoint, school violence is a serious issue.

Recommendations for USAID

The significance of school violence for developing countries is not reflected by its low policy profile at the international and especially the national levels. There is an opportunity for USAID to take a leadership role in this important, but relatively neglected field by:

- Raising awareness about the impact of school violence on educational achievement among national education policy makers and other donor agencies.
- Supporting large-scale, gender-sensitive longitudinal and comparative research in developing countries. For instance, this research could include more developing countries in existing cross-national studies of educational achievement and by sharpening the focus on school violence in such studies. Research data could also be obtained through support to interested ministries of education to investigate the impact of school violence on educational achievement in their own school sectors.
- Supporting qualitative studies to investigate the findings of large-scale quantitative surveys in greater depth.
- Encouraging context-specific studies to investigate the relative vulnerabilities of students in the same school, as well as the prevalence and impact of violence in schools as a whole.

2

Data for Education Research and Programming (DERP) in Africa—Literature Review on the Intersection of Safe Learning Environments and Educational Achievement

- Helping to strengthen the most widely used school climate frameworks by emphasizing the importance of school safety.
- Reviewing programs for reducing school violence in developing countries, helping to disseminate evidence-based best practices, and supporting a wider roll-out of effective interventions.

Overall, a critical mass of evidence must be compiled to highlight the profound and long-lasting harm that school violence inflicts on its immediate victims and their societies. This evidence could then be used to help spur changes in international education policies and practices.

1. Introduction

Violence in educational settings is a global phenomenon. For instance, evidence from the United Kingdom (UK) indicates that 30 percent of children aged 7 years and 20 percent of children aged 11 years sometimes experience bullying at school (Brown and Taylor, 2008), with a smaller proportion of pupils experiencing frequent bullying. During the 2009–2010 school year in the United States, 23 percent of public schools reported that bullying occurred among students on a daily or weekly basis, and 9 percent reported widespread disorder in classrooms on a daily or weekly basis (Robers et al., 2012). A relatively small, but increasing body of evidence from developing countries indicates that various types of school violence are even more common in such settings and are, in some cases, increasing (Mullis et al., 2012a; Saito, n.d.). This evidence suggests that school violence is a serious threat both to children's access to education and their right to a good quality education. In response to a growing recognition of the scale and severity of the problem, the concept of "school safety" has been developed and promoted by education theorists as an integral element of a good quality education.

Most studies of school violence analyze the impact on students from a health or psychology viewpoint. Surprisingly, few studies in any part of the world have examined the impact of school violence on educational achievement. Yet despite the lack of research on this topic, there is enough evidence to warrant the hypothesis that school violence does reduce educational achievement in developing countries. The purpose of this literature review was to review the available evidence with particular reference to developing countries, but also including relevant research from developed countries.

This literature review is organized into 10 sections. Section 2 briefly describes the method used for the literature review. Section 3 discusses some key conceptualizations and frameworks relevant to school violence. Section 4 defines "educational achievement" and briefly discusses the approaches that researchers have used to measure it and investigate the causal linkages between school violence and educational achievement. Section 5 identifies certain groups of students who tend to be most at risk from school violence. Section 6 describes the analysis of the evidence on linkages between school violence and educational achievement in developing countries. Section 7 reviews the evidence from the latest Progress in International Reading Literacy Study (PIRLS) and the latest Trends in International Mathematics and Science Study (TIMSS; most of the countries participating in these two studies from 2011 were developed countries). Section 8 analyzes the findings from various recent academic studies in developed countries. Section 9 contains comments on the methodology used in the academic studies reviewed. Section 10 of this report presents a short conclusion and some suggested recommendations for USAID.

4

Data for Education Research and Programming (DERP) in Africa—Literature Review
on the Intersection of Safe Learning Environments and Educational Achievement

2. Method

A systematic, online search of the World of Knowledge and Google Scholar[a] databases was conducted to identify studies published in the past 10 years that supported the analysis of the association between school violence and educational achievement.[b] During the first round of the literature search, relevant citations located in articles and reports were identified and followed up with these publications to identify emerging themes. Several journals, such as the *Journal of School Violence*, were searched online using various key terms, agreed upon in planning this exercise. Those terms included gang violence, gender-based violence, criminal violence, political violence, sexual violence, gender violence, corporal punishment, bullying, other vulnerable children, conflict, and child protection.

3. Definitions and Conceptual Frameworks

3.1 Defining School Safety and School Violence

Some conceptualizations of school safety or safe learning environments are very broad, but from the standpoint of this literature review, Prinsloo's (2006) definition is more suitable because of its sharp focus on the problems of school violence. In that publication, Prinsloo stated, "A safe school may be defined as one that is free of danger and where there is an absence of possible harm; a place in which non-educators, educators, and all learners may work, teach, and learn without fear of ridicule, intimidation, humiliation, or violence." This definition was developed in the context of South Africa, which has very high rates of violence in many of its schools.

Pinheiro, an independent expert appointed by the United Nations' Secretary-General Kofi Annan, defined the term "school violence" in a report for the United Nations' study on violence against children (Pinheiro, 2006). In this publication, Pinheiro's definition of "school violence" encompasses corporal punishment, cruel and humiliating forms of psychological punishment, sexual and gender-based violence, bullying, fighting, and gang-related violence (Pinheiro, 2006). One aspect of school violence that is not explicitly mentioned in this definition is students' fear of violence. School safety tends to be defined by students' and teachers' perceptions; therefore, this is an important omission. Milam et al. (2010) conducted a study of the linkages between perceived school and neighborhood safety and academic achievement in Baltimore, MD (United States). In that 2010 publication, the researchers suggested that it was students' fear of and anxiety about violence that affected their academic performance, rather than their actual experiences of violence, although, of course, they are related. Leach and

---

[a] Google Scholar was used because it enables access to grey literature such as United Nations' and national government reports and peer-reviewed academic articles.
[b] Although 2003 was chosen as the cut-off point, a few particularly interesting documents published before 2003 were also examined.

Humphreys (2007) discussed how girls' fear of violence on their way to and from school was likely to affect their performance at school. Chen and Weikart (2008) studied school violence in New York City (United States) and commented on the importance of students' perceptions where school safety was concerned. Chen and Weikart stated that if students believe their school is unsafe, then this will affect attendance.

School safety has been included as a dimension of educational quality in several school climate models, including the Child-Friendly/Girl-Friendly Schools initiative by the United Nations Children's Fund (UNICEF, 2012). Another example is the quality education model developed by EdQual, an academic research program funded by the UK's Department for International Development for developing country contexts. In EdQual's model, school safety is viewed as part of an enabling school environment.

In Pinheiro's report (2006), the Secretary-General of the United Nations sets forth policy recommendations for the creation of safe schools, providing governments with a platform for action. In the United States, the U.S. Department of Education's Safe and Supportive Schools model contextualizes school violence in pervasive school incivility and emphasizes the problem of bullying. This model is particularly concerned with the linkages between school violence and the underachievement of black and Hispanic students.

3.2 Framing School Violence

Research on school violence comes from many disciplines such as psychology, public health, educational sociology, and educational economics and from gender and development studies. Naturally, researchers in these disciplines tend to frame the same problem in different ways (Cornell and Mayer, 2010). For instance, psychologists may view school violence in terms of individual characteristics and background, whereas educational sociologists may see it as an aspect of school culture (e.g., Chen and Weikart, 2008). As a way of bringing together disparate approaches, Swearer et al. (2010) recommended using holistic frameworks, which recognize that behavior is shaped both by individual characteristics and by nested, contextual systems. Those systems directly affecting children and adolescents include families, schools, and peer groups; the students' relationships with teachers and parents; the parents' relationships with the school; the neighborhoods in which schools are located; and cultural norms and values (Swearer et al., 2010).

Several researchers have made convincing arguments that violence, including gender-based violence, is in some contexts a common element of schools as institutions rather than an aberration (Leach and Mitchell, 2006). For instance, Ngakane et al. (2012) interviewed secondary school students in Lesotho for a study. In the publication, the researchers discussed an authoritarian atmosphere "with an ethos of control and punishment," suggesting that schooling itself can be a form of violence. Using a holistic framework to analyze school violence therefore entails the recognition that some school violence is directed toward students by their teachers and principals.

3.3   Conceptualizing School Violence and Gender

Since the early 2000s, there has been a particular interest in the scale and severity of school-related gender-based violence (SRGBV) in developing countries. Academic and donor interest in SRGBV followed international nongovernmental organization campaigns, which helped spread awareness of the problem (e.g., Human Rights Watch, 2001). USAID (2008) defines SRGBV as follows:

> School-related gender-based violence results in sexual, physical, or psychological harm to girls and boys. It includes any form of violence or abuse that is based on gendered stereotypes or that targets students on the basis of their sex. The underlying intent of gender-based violence is to reinforce gender roles and perpetuate gender inequalities. It includes, but is not limited to rape, unwanted sexual touching, unwanted sexual comments, corporal punishment, bullying, and verbal harassment. Unequal power relations between adults and children and males and females contribute to gender violence. Violence can take place in the school, on school grounds, going to and from school, or in school dormitories and may be perpetrated by teachers, students, or community members. Both girls and boys can be victims, as well as perpetrators.

Rather than conceptualizing SRGBV as a subset of violent behaviors, a more sophisticated way of analyzing the linkage between gender and school violence is to conceptualize all school violence as gendered, because it is entwined with gendered social dynamics, gender inequalities, and sexualities (Leach and Mitchell, 2006). Evidence from empirical studies from several sub-Saharan African countries supports this argument. For instance, Hamlall and Morrell (2012) discussed fighting among boys in a South African secondary school in terms of masculine identities. In addition, Morojele (2011) interpreted bullying against boys in Lesotho's schools as a performance of hegemonic masculinity. As for corporal punishment, researchers in several countries have commented on its gendered nature, pointing out that it is practiced more often and more harshly on boys rather than girls, and usually by male teachers (e.g., Leach and Humphreys [2007], Dunne [2007] in Botswana and Ghana, and DevTech Systems, Inc. [2005] in Jamaica). A study in China found that 27 percent of male students had experienced corporal punishment compared to 10 percent of female students (Qi and Dunne, 2006, cited in Pinheiro, 2006).

Homophobic bullying and violence against children who do not conform to heterosexual behavioral norms or appearance codes also fall into the category of gendered violence. Writing of the harassment of gay, lesbian, and transgender students in the United States, Gordon and Meyer (2007) conceptualized such harassment as a way of policing and enforcing the observance of traditional gender roles. In Jamaica, boys who do not conform to prevailing masculine norms may also be subjected to violence as a result (DevTech Systems, Inc., 2005).

Leach and Mitchell (2006) distinguish between explicit sexual violence, such as sexual assault, and implicit gender-based violence permeating routine school practices. As an example of implicit gender-based violence in schools in Bostwana and Ghana, Dunne (2007) observed the routine intimidation and humiliation of female students by male teachers and students. For instance, male students attempted to control the behavior of girls in the school playground.

Conceptualizing school violence as profoundly gendered provides a coherent framework for analysis. Conceptualizing all school violence as gendered also entails moving beyond the discourse of girls as victims (Leach and Humphreys, 2007), recognizing that girls sometimes commit acts of violence themselves and often resist their tormentors (Morojele, 2011; Parkes and Heslop, 2011). Finally, understanding that all school violence is gendered brings boys into sharper focus as potential victims and as perpetrators.

3.4   Bullying

One of the most common and widely documented forms of school violence is bullying, which is the subject of many of the studies cited in this report. The term "bullying" applies to a range of behaviors, including acts perpetrated on the way to and from school and in the school. In a publication, Olweus, a pioneer in this field, defines bullying as negative acts that are intentional, take place repeatedly over time, and are characterized by asymmetric power relationships (Olweus, 1993, cited in Eriksen et al., 2012). Many studies about bullying include verbal and relational bullying in their definition and physical aggression (e.g., Hemphill et al., 2011). Relational bullying is defined as socially manipulative non-physical behavior intended to harm another individual, for instance through public humiliation or exclusion. In some studies from developed countries, bullying is included under the broader concept of peer victimization (e.g., Wang et al., 2011).

Some of the most striking evidence on the prevalence of bullying worldwide comes from the latest PIRLS conducted in 2011 (Mullis et al., 2012b). Approximately 325,000 students in 48 education systems across the world were surveyed; students in 9 other education systems were also included in the study for benchmarking purposes. The survey included a "students bullied at school" scale, which covered relational and physical bullying. Thirty-three percent of fourth-grade students reported that they were bullied "approximately weekly," and another 20 percent said they were bullied "approximately monthly." In other words, more than 50 percent of these students said they experienced bullying at school (Mullis et al., 2012b). The results of the latest full TIMSS (Mullis et al., 2012a), also conducted in 2011, indicate that bullying is on the increase in participating countries. High levels of bullying have also been reported in primary schools in the 15 Southern and Eastern African countries of the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ; Saito, n.d.).

Several studies indicate that bullying affects boys more than girls (e.g., Jefthas and Artz, 2007). Bullying does not just impact the students targeted by the act; it also negatively impacts the school climate and students' perceptions of safety in general (Ripski and Gregory, 2009).

4. School Violence, Educational Achievement, and Causal Pathways

One definition of "educational achievement" is students' understanding of particular information and their proficiency with specific skills (Ebel and Frisbie, 1986, cited in Beran et al., 2008).[c] Most of the studies from developed countries reviewed in this report use scores in standardized tests and examinations, often in English and mathematics, as indicators of educational achievement (e.g., Fonagy et al., 2005). These studies relate the scores to perceptions or reported experiences of violence, either on an individual level or aggregated to a school level. However, in one study by Beran et al. (2008), the researchers assessed the linkage between school violence and achievement in Canada by using teachers' subjective perceptions of students' performance as the relevant indicator.

For developing countries, Saito (n.d.) and the prePIRLS and TIMSS studies used scores in standardized tests to explore the impacts of school violence. Saito (n.d.) analyzed scores in the SACMEQ countries, and a very small number of developing countries participated in the prePIRLS and TIMSS, both in 2011.[d] The prePIRLS is designed for countries where reading achievement is too low to be measured by the mainstream PIRLS tests. Section 6.3 of this report analyzes the results from the prePIRLS and TIMSS, both in 2011. More commonly, researchers in developing countries rely on students' and teachers' subjective accounts for data on the impact on students' academic performance. Many studies are concerned with the proximate outcomes of experiencing violence such as school avoidance, inability to concentrate, or depression, rather than on the subsequent impact on students' educational achievement. These studies are included in this literature review, partly because there are so few studies linking violence to objectively measured achievement. Although the studies cannot demonstrate associations between violence and educational achievement, they are valuable because they illuminate some of the causal mechanisms involved.

---

[c] Rather than "educational achievement," some studies reviewed here use closely related terms such as "academic outcomes" (Kosciw et al., 2013), "educational outcomes" (Eriksen et al., 2012), "academic achievement" (Glew et al., 2008), "educational attainment" (e.g., Brown and Taylor, 2008), or "academic performance" (e.g., Juvonen et al., 2011). In some cases, these terms are synonyms. Subtle differences that may distinguish these concepts from one another are not explored in this report because they are outside the scope of the literature review.

[d] Colombia, Botswana, and non-English/Afrikaans South Africa participated in prePIRLS 2011. From sub-Saharan Africa, Botswana, Ghana, and South Africa participated in TIMSS 2011. For a list of all the countries participating in TIMSS 2011, see Annex 3 of this report.

5. Who Is Most at Risk?

In both developing and developed countries, vulnerability to bullying and other forms of school violence varies based on gender, sexuality, disability, stigmatized illness (including HIV/AIDS), refugee status, or minority group status (Jones et al., 2008; Pinheiro, 2006). Several studies from the United States and Europe disaggregated the experiences of students according to aspects of their social identities, such as poverty, sexual orientation, or belonging to an ethnic minority; however, this is far rarer in academic studies from developing countries. For instance, although relevant studies in the United States and Europe are often concerned with the specific experiences of black and ethnic minority students (e.g., Peguero, 2011), on the whole, this is not reflected in the literature from developing countries. In addition, although homophobic violence is identified as a serious issue in schools in many developed countries such as the UK, the United States, and Australia (e.g., Kosciw et al., 2013), little is known about the prevalence of homophobic violence in developing countries (Leach and Humphreys, 2007). The existing, very patchy evidence suggests that homophobic bullying is likely to be a serious problem. For instance, a five-country study in Southern Africa highlighted the harassment that gay and lesbian students experienced at school (Long et al., 2003).

Although school violence against students with disabilities is another under-researched topic, when Gichuke (2010) investigated child abuse against students with disabilities in two schools in Kenya, the researcher discovered a "high rate" of corporal punishment and sexual abuse. According to a study by the United Nations High Commissioner for Refugees (UNHCR, 2005) in Southern Africa, refugee children are another at-risk group.

6. Evidence from Developing Countries

6.1 Introduction

There is a lack of research examining the impact of school violence on objectively measured educational achievement in developing countries that could be due to several different reasons. First, it is difficult to separate this issue from all of the other problems that typify resource-poor schools and are also associated with low achievement (e.g., poor teaching standards, a lack of pedagogical materials). Second, there is a lack of reliable and comparable test scores. Third, although large-scale quantitative surveys are favored in developed countries, there are considerable, practical difficulties involved when carrying out such surveys in developing countries. Many studies in this field from developing countries rely either on small-scale surveys or on qualitative data collected through interviews and focus group discussions (FGDs). The analysis of qualitative data can generate important insights into the causal pathways linking violence and educational outcomes.

Most of the relevant studies from developing countries come from one region, sub-Saharan Africa. Furthermore, rather than evaluating educational achievement, most of these studies discuss the linkage between school violence and poor attendance and dropping out of school. Other studies assess the proximate psychological and behavioral outcomes of violence while in school (e.g., lack of concentration), relying on subjective perceptions from students and occasionally teachers. Some of the most striking evidence is discussed in this section of the report. Annex 1 contains a matrix of all of the relevant studies identified during this literature review.

6.2   Impact on Enrollment, Attendance, and Completion

As discussed below, many researchers identified violence as a barrier to accessing education:

- In a study of the gendered nature of 12 junior secondary schools in Ghana and Botswana, Dunne et al. (2005) found that male students engaged in routine intimidation of girls in all of the schools. Schoolgirl mothers who had dropped out said that their experiences with gender violence in school were a factor in their lack of success in remaining in school.

- In the same study, male students identified corporal punishment as a "major factor" in boys' truancy and dropout (Dunne, 2007).

- Ampiah and Adu-Yeboah (2009) interviewed 89 children, adolescents, and teenagers (64 boys and 25 girls) aged 7 to 16 years who had dropped out of school in northern Ghana. The results from the interview showed that 63 percent of boys and 69 percent of girls reported that corporal punishment at school was one of the reasons why they had dropped out.

- In Ethiopia, 60 percent of female students stated in a survey that school violence was the main cause of absenteeism among girls (B&M Development Consultant PLC, 2008).

- Dunne et al. (2012) used data from a national health survey to investigate the linkage between experiences of bullying at school and absenteeism among senior high school students in Ghana. The researchers found that being bullied was associated with low attendance for boys and girls and that the likelihood of school absenteeism increased with the frequency of bullying. In addition, students who experienced bullying were almost twice as likely to miss school as those who were not bullied.

6.3   Impact on Achievement in School

prePIRLS

Three countries (Colombia, non-English/Afrikaans South Africa, and Botswana) participated in prePIRLS 2011, which is the sister study to PIRLS. The prePIRLS is

designed to accommodate countries where reading achievement is too low for measurement in PIRLS. Similar to the main PIRLS (see Section 3.4 of this report), the prePIRLS collects test data to analyze trends in the reading achievement of fourth-grade students. The prePIRLS also includes questionnaires to investigate children's experiences at home and school, including the topics of school safety and school violence.

In prePIRLS countries, an average of 13 percent of students were in schools judged by their teachers to be "not safe and orderly," compared to an average of 4 percent for countries participating in the main PIRLS. Table 1 shows a broad positive and consistent association between the safety and orderliness of schools in South Africa and Botswana and reading achievement. However, the situation is slightly different in Colombia. Although there is a gap between the average achievement of Colombian children in schools identified as "safe and orderly" and the average achievement of children in schools judged to be either "somewhat safe and orderly" or "not safe and orderly," the average achievement of children in the two latter categories of school is the same. Mullis et al. (2012b) offer no explanation for this finding. It is also evident from Table 1 that average achievement in Colombia was considerably higher than in both South Africa and Botswana across all three categories of school.

Students in prePIRLS countries whose principals reported moderate problems of discipline and safety in their schools had substantially lower reading achievement than pupils whose principals reported "hardly any problems" in these matters.

Table 1:   School Safety and Orderliness and Fourth-Grade Reading Achievement (Mullis et al., 2012b)

Country	Safe and Orderly		Somewhat Safe and Orderly		Not Safe and Orderly	
	Students (%)	*Average Achievement*	*Students (%)*	*Average Achievement*	*Students (%)*	*Average Achievement*
Colombia	35	581	54	574	11	574
South Africa[a]	35	467	51	463	14	433
Botswana	23	483	62	461	15	439

[a] Non English/Afrikaans schools only.

Lastly, the information in Table 2 shows that, in general, school-wide perceptions of bullying were negatively associated with average reading achievement. There is a small anomaly in the figures for Colombia in that Colombian children who are bullied monthly scored slightly higher than their counterparts who are "almost never" bullied. There is no discussion of this anomaly in the PIRLS 2011 report (Mullis et al., 2012b).

Given the apparent inconsistencies in the data for both school safety and orderliness and perceptions of bullying in Colombia, there seems to be a need for further research to investigate them.

It is notable that more than half of South African and Botswanan children say they were bullied "approximately weekly."

Table 2: Students Bullied at School and Fourth-Grade Reading Achievement (Mullis et al., 2012b)

Country	Almost Never Bullied		Bullied Approximately Monthly		Bullied Approximately Weekly		Average Scale Score
	Students (%)	Average Achievement	Students (%)	Average Achievement	Students (%)	Average Achievement	
Colombia	36	587	30	588	34	562	9.4
South Africa[a]	17	511	28	483	55	447	8.3
Botswana	10	497	36	473	54	454	8.4

[a] Non English/Afrikaans schools only.

These associations are in line with the PIRLS findings for developed countries (for more discussion, see Section 7 of this report). The indicators are aggregated by school, so they do not provide any insights into disparate experiences among students in the same schools related to gender or other aspects of social identity.

Southern and Eastern Africa Consortium for Monitoring Educational Quality

Saito (n.d.) analyzed data from a survey involving approximately 61,000 sixth-grade students in 2007 to investigate the linkage between violence in SACMEQ primary schools and scores in standardized tests. Indicators for school violence are based on head teachers' perceptions of the frequency of a range of violent behaviors in their schools, such as fighting, bullying, and harassment.[e] Indicators for educational achievement are based on school mean scores for tests in reading, mathematics, and HIV/AIDS knowledge.

Initially, the relevant findings are puzzling. In eight countries, higher perceived rates of violence in schools were associated with lower test scores in all subjects for that school. However, in four countries, higher rates of violence were associated with higher scores. Saito (n.d.) explained this apparent paradox by suggesting that teachers and principals who run relatively safe and effective schools may be more likely to perceive and report instances of violence than their counterparts in poorly performing schools. The

---

[e] In the 2007 survey, no distinction was made regarding the sex of perpetrators or victims, and SRGBV was not listed separately as a form of school violence. These issues will be rectified in the 2013 survey (Saito, n.d.).

ministries of education in Kenya and Zanzibar have responded to the survey's findings by making policy recommendations on school violence to SACMEQ.

6.4   Other Negative Outcomes

A study of corporal punishment in Botswana (Humphreys, 2008) found that teachers' habitual use of that tactic affected students' classroom participation, thus limiting their opportunity to learn. Both girls and boys, but particularly girls, explained how their fears of being beaten and verbally humiliated prevented them from answering or asking questions in class.

The following study results showed that experiences of school violence leads to negative outcomes that are likely to reduce educational achievement for the students concerned:

- In Ethiopia, SRGBV causes loss of concentration in class and overall worse school performance for affected girls (B&M Development Consultant PLC, 2008).
- In Ghana and Botswana, Dunne et al. (2005) found that intimidation and sexual harassment caused poor classroom concentration and academic performance for girls.
- In northern Zambia, a survey of 50 school students revealed that SRGBV against girls led to depression, suicidal thoughts, unwanted pregnancies, and sexually transmitted infections (Mtonga, 2010).

7.   PIRLS and TIMSS Evidence

7.1   Introduction

Forty-eight developed countries participated in PIRLS 2011. TIMSS 2011 measured fourth- and eighth-grade student achievement in 63, mostly developed, countries. Similar to PIRLS, TIMSS 2011 also investigated aspects of school safety (for a full list of countries that participated in TIMSS 2011, see Annex 2 of this report). Relevant highlights from the findings of these two studies are included in Sections 7.2, PIRLS Evidence, and 7.3, TIMSS Evidence.

7.2   PIRLS Evidence

The evidence from the main PIRLS 2011 study of developed countries was consistent with the data already reported from the three prePIRLS countries. The evidence was namely that teachers' perceptions of school safety, principals' perceptions of school discipline, and bullying were all related to average reading achievement. This evidence is further discussed as follows:

- The safer the school as reported by their teachers, the higher the students' average reading achievement (Mullis et al., 2012b).
- Substantially lower reading achievement was realized for students whose principals had reported moderate discipline and safety problems in their schools, compared to principals who reported "hardly any problems" in their schools with these matters (Mullis et al., 2012b). PIRLS 2011 asked students for their perceptions on bullying. The students' responses revealed that bullying was directly related to average reading achievement in schools.

7.3 TIMSS Evidence

Mullis et al (2012a) observed that TIMSS 2011 used the following indicators relevant to school violence: *Safe and Orderly School*, based on teachers' perceptions; *School Discipline and Safety,* based on principals' perceptions; and *Students Bullied at School*, based on students' perceptions. As with PIRLS, these indicators apply to schools rather than to individual students. These indicators are described further in the following paragraphs.

Safe and Orderly School

Table 3 shows the percentages of eighth-grade students in schools judged by their mathematics teachers to be "safe and orderly," "somewhat safe and orderly," and "not safe and orderly" (Mullis et al., 2012a). Table 3 also contains data on the linkage between the teachers' perceptions of school safety and orderliness and the students' average test scores for mathematics.

Table 3:   School Safety and Orderliness and Eighth-Grade Average Mathematics Achievement (Mullis et al., 2012a)

Safe and Orderly		Somewhat Safe and Orderly		Not Safe and Orderly	
Students (%)	*Average Achievement*	*Students (%)*	*Average Achievement*	*Students (%)*	*Average Achievement*
45	479	49	458	6	445

On average, the safer the school (as reported by the teachers), the higher the students' average mathematics achievement (Mullis et al., 2012a). The mathematics achievement gap between students in the "safe and orderly" and "not safe and orderly" schools was greater at the eighth grade (34 points) than at the fourth grade (28 points).

School Discipline and Safety

Table 4 shows the percentages of eighth-grade students in schools judged by their principals to have "hardly any" or "minor" or "moderate" problems with discipline and safety (Mullis et al., 2012a). Table 4 also contains data on the linkage between their principals' perceptions of school discipline and safety and the students' average test scores for mathematics. Students whose principals reported "moderate problems" in

their schools had substantially lower mathematics achievement, by 45 points on average, than students whose principals reported "hardly any problems."

Table 4:   School Discipline and Safety and Eighth-Grade Average Mathematics Achievement (Mullis et al., 2012a)

Hardly Any Problems		Minor Problems		Moderate Problems	
Students (%)	*Average Achievement*	*Students (%)*	*Average Achievement*	*Students (%)*	*Average Achievement*
61	496	29	482	11	451

Students Bullied at School

For TIMSS 2011, students were asked to say how often, if ever, they were bullied at school, choosing from "almost never," "approximately monthly," and "approximately weekly." Table 5 shows the linkage between levels of bullying and mathematics achievement scores for fourth-grade students. There was a correlation between higher rates of bullying and lower average mathematics achievement. In addition, there was a 32-point difference in achievement between students who reported they were "almost never" bullied and pupils who said they were bullied "approximately weekly."

Table 5:   Students Bullied at School and Fourth-Grade Average Mathematics Achievement (Mullis et al., 2012a)

Almost Never		Approximately Monthly		Approximately Weekly	
Students (%)	*Average Achievement*	*Students (%)*	*Average Achievement*	*Students (%)*	*Average Achievement*
48	501	32	493	20	469

8.   Other Evidence from Developed Countries

8.1   Introduction

In this section, the evidence for developed countries, other than PIRLS 2011 and TIMSS 2011 results, is analyzed. More academic literature is available that examines school violence in developed countries rather than in developing countries. In addition, studies analyzing the impacts of school violence on educational achievement, as opposed to its prevalence or nature, are scarce (Strøm et al., 2013). The majority of researchers in this narrow field focus on bullying rather than other forms of school violence.

8.2   Highlights from the Findings

The matrix in Annex 1 of this report includes a list of all of the articles from developed countries that contain evidence of associations between school violence and low academic achievement, objectively defined. Some of the most striking findings of these articles are as follows:

- Fonagy et al. (2005) used scores for a battery of standardized tests to measure the academic achievement of students before and after the introduction of a bullying and violence prevention program in Kansas (United States) elementary schools. The mean test score for students whose school participated in the program in both the year of testing and the previous year was 54.5 percent, compared to 47.5 percent for students in the control group whose schools did not participate in the program at all. Children who attended schools participating in the program for two consecutive years showed an average gain of 8 to 10 percentage points compared to their test scores before the start of the program.

- For 10th-grade students in Norwegian junior high schools, bullying has severe consequences for the academic grades of both non-bullied and bullied students with ethnic Norwegian parents, although not for students with non-ethnic Norwegian parents (Strøm et al., 2013). The researchers suggested that the apparent lack of an association between bullying and academic achievement for children with non-ethnic Norwegian parents may be because of the additional difficulties for students in Norwegian schools, which might "drown out" any effects of bullying.

According to the following studies, the negative impact from school violence on educational achievement can be enduring:

- The experience of being bullied at school at 7 or 11 years of age affected British students' educational attainment at 16 years of age and in later life (Brown and Taylor, 2008).

- Wolniak and Engberg (2010) measured the frequency of different acts of violence observed by students throughout their time in high school to construct an "exposure to violence" scale. The acts of violence included students fighting, violence directed at a teacher, and students carrying guns or knives and the presence of security officers or metal detectors at the school entrance. Increased exposure to school violence had a lasting and negative influence on academic performance and was associated with a significantly negative effect on first-year college grades.

A longitudinal study in UK primary schools did not identify a linkage between being a victim of direct bullying for students aged 6 or 7 years with low academic achievement, although being a victim of relational bullying was an important predictor of academic achievement for the same age group (Woods and Wolke, 2004).[f] Apart from this study, the evidence that school violence reduces educational achievement is very strong, although not voluminous, in developed countries.

---

[f] Rothon et al. (2011) suggested that these findings, which are anomalous in the literature, might be because of the short time lag between the measure for bullying and that for academic achievement.

8.3   Investigating Causal Pathways

How precisely does school violence affect educational achievement in developed countries? The main causal impacts discussed in the studies reviewed for this report include school avoidance and poor attendance, inability to concentrate, depression and reduced self-esteem, poor student attitudes to school and lack of engagement with school, choice of learning strategy, and teachers' perceptions. These relationships are described in the following paragraphs.

School Avoidance and Poor Attendance

Several researchers conducted studies on school violence and found that bullying, in particular, reduces school attendance and leads to low educational achievement for victims. For instance,

- In a study of New York City (United States) elementary schools, Chen (2007) found that school disorder (a concept that includes school violence) directly and indirectly affects student achievement. School disorder indirectly affects achievement through student attendance rates. Poor attendance accounted for 45 percent of the total reduction in academic achievement.

- Barrett et al. (2012) used data from the 2007 National Crime Victimization Survey's School Crime Supplement to explore the linkage between fear of school crime, avoidance in school, and academic experiences in the United States. The researchers found that fear increased the likelihood of absenteeism. There were also negative correlations between the students' fear of school crime and high grades and aspirations to continue to higher education.

- Kosciw et al. (2013) analyzed the impact of victimization (defined as verbal or physical harassment and physical assault) at school on attendance and grades for a sample of young lesbian, gay, and bisexual students from all 50 states in the United States. The researchers found that victimization predicted more missed school days.

- In New Zealand, Henrickson (2008) found that "coming out" early as gay was associated with low education levels. Henrickson suggested that this finding was because coming out early leads to bullying and insults at school which, in turn, cause many such students to drop out of school.

- Abramovay and Rua (2005) used mixed methods to study elementary and secondary school violence in 13 Brazilian state capitals and in the Federal District. Overall, 6 percent of students said they had skipped classes because of school violence.

Inability to Concentrate

According to Chen (2007), school disorder affects student achievement by disrupting teaching and directing student energy to safety concerns rather than to learning. Additional findings from other studies are as follows:

- Nearly half of all students surveyed in Brazil reported that school violence prevented them from concentrating on their studies (Abramovay and Rua, 2005). After evaluating this result and the Abramovay and Rua (2005) finding on absenteeism in Brazil, the implication is that students who maintain their attendance despite the threat of school violence are nevertheless affected.
- In the United States, elementary school students and teachers in a suburban elementary school reported being unable to concentrate in class because of a fear of bullying (Hazel, 2010).

Depression and Reduced Self-Esteem

Psychology literature has established that for students, experiences of being bullied are associated with depression, anxiety, loneliness, and reduced self-esteem, both during the period of victimization and over time (e.g., Boulton, 2008 [study in the UK]; Hemphill et al., 2011 [study in Australia]; and Kosciw et al., 2013 [study in the United States]). Such feelings can, in turn, interfere with concentration and task completion in class (Fonagy et al., 2005).

Poor Student Attitudes to School and Lack of Engagement with School

Several studies have explored associations between victimization and students' attitudes and level of engagement at school. The highlights from these studies are presented as follows:

- Ripski and Gregory (2009) studied 10th-grade students in high schools in the United States. Individual students' perceptions of victimization predicted lower academic engagement (based on teacher assessments) and lower reading and mathematics achievement on standardized tests. The researchers suggested that victimized students may lose trust in the school staff, leading to the pupils' disengagement from classroom activities.
- Wang et al. (2011) found that the impacts of peer victimization, including bullying, in U.S. schools included poor academic adjustment[g] for students in seventh and eighth grades and that this effect was stronger on girls than on boys.

Choice of Learning Strategy

In a study of students in Hong Kong secondary schools, Tam (2008) found that levels of peer victimization, which includes bullying, in classrooms affected students' ability to use an "achievement strategy" in their learning. According to Tam (2008), this strategy is present in learners who are motivated to achieve goals, organize their own work, and mobilize internal and external resources to accomplish their goals. These learners are also more able to focus their internal energy on learning and achieving goals for a

---

[g] In the Wang et al. (2011) study, the researchers measured academic adjustment by responses to the following two questions: (1) in your opinion, what does your class teacher(s) think about your school performance compared to your classmates? and (2) how do you feel about school at present?

longer period of time. High levels of peer victimization in classrooms were found to have a moderate, negative effect on students' use of an "achievement strategy."

Teachers' Perceptions

In a study of Danish children, Eriksen et al. (2012) found that teachers tend to perceive bullied children and bullies as having weaker academic skills, worse moods, and worse social competencies than children not involved in bullying. The researchers hypothesized that if the teachers lose confidence and willingness to invest in the bullies and bullying victims, then this might affect the future educational outcomes for those students.

9.   Comments on Methodology

The relevant literature from both developed and developing countries suffers from some methodological limitations. Some of the most significant problems besetting research from developing countries are summarized as follows:

- There is a notable shortage of large-scale quantitative studies on the impact of school violence on academic achievement from developing countries; the SACMEQ and prePIRLS studies are welcome exceptions. Although there is a larger body of literature on the prevalence of school violence, this is also very limited.

- In many studies, indicators for school violence rely on perceptions. However, in some cases, the perceptions are from teachers or school principals, and this could result in underestimates. For example, an underestimate could result because most incidences of bullying are likely to take place away from adults and may not be reported to school authorities.

- Teachers' and principals' perceptions of the school as a whole say little about the diversity of experiences among students. For example, teachers and principals might not discuss whether students from marginalized groups suffer disproportionately from the violence that occurs in their school. More generally, the literature from developing countries does not disaggregate students' experiences of violence according to social identity.

- Relying on perceptions also makes it difficult to compare results between locations. For instance, as Saito (n.d.) has mentioned, in some cases, teachers' perceptions of rates of violence may reflect different degrees of sensitivity to the problem rather than actual incidence. In cross-national studies, diversity of cultural norms may also affect perceptions.

- The techniques used to measure school violence tend to be rather crude. For instance, studies such as the SACMEQ survey and prePIRLS do not distinguish between the severities of different forms of school violence. Saito (n.d) suggested that weightings should be assigned to different variables.

- In both developed and developing countries, there are very few longitudinal studies that track the impacts of school violence on educational achievement over time (Juvonen et al., 2011). Cross-sectional studies attempting to discover linkages between variables such as school violence and educational achievement cannot establish the direction of the causal effect, as some researchers in developed countries have pointed out (e.g., Glew et al., 2008; Ripski and Gregory, 2009). In contrast, a study conducted in the United States by Fonagy et al. (2005) showed the value of using a longitudinal research design. These researchers compared school-wide educational achievement before and after the schools participated in a bullying prevention program. They discovered a significant improvement in educational achievement, which is compelling evidence of the link between bullying and achievement.

10. Conclusion and Recommendations

School violence affects learning. Yet, Cornell and Mayer (2010) commented that "the complex interplay of school violence and disruption, academic achievement, and prevention approaches is not well understood." This is even truer of developing countries because to date, relevant research in developed countries has far outweighed that in developing countries. Regions other than sub-Saharan Africa are especially under-represented. In short, research on the linkages between school safety and violence and educational achievement in developing countries is very sparse and patchy, making reliable comparisons among locations or analyses of trends impossible. If more developing countries participated in the prePIRLS, then this might pave the way for better understandings of the linkages between school-wide violence and achievement in the developing world. However, it is important to note that, in their current form, PIRLS and TIMSS cannot provide insights about the diverse experiences of individual students arising from their social identities.

Despite this knowledge gap, there is enough evidence to support the hypothesis that school violence has a negative impact on educational achievement in developing countries. The negative effects are likely to apply both to the victims of school violence and to other students in the same school (Strøm et al., 2013). School violence not only affects educational achievement, but it also impacts physical and psychological health, emotional well-being, social capital, and the wider economies of developing countries (Pereznieto et al., 2010). Whether from a human rights or a human capital standpoint, it is clear that the significance of school violence for developing countries is not reflected by its low policy profile at the international and especially the national levels.

Taking into consideration the findings from this literature review, USAID could assume a leadership role in this important, but relatively neglected, field, for instance by:
- Raising awareness about the impact of school violence on educational achievement among national education policy makers and other donor agencies.

Both human rights and human capital arguments could be discussed to reflect the differing priorities and concerns of the advocacy targets.

- Supporting large-scale, gender-sensitive longitudinal and comparative research in developing countries. Rather than initiating new studies, it would be more efficient to include more developing countries in existing longitudinal surveys, notably the prePIRLS and TIMSS, and to add more questions about school violence (Pereznieto et al., 2010). In addition, USAID might consider supporting small-scale qualitative studies designed to investigate any particularly interesting patterns or inconsistencies in the findings of large-scale quantitative surveys such as prePIRLS and TIMSS.

- Assisting interested SACMEQ ministries of education to investigate the impact of school violence on educational achievement. The United Nations Educational, Scientific, and Cultural Organization's (UNESCO's) International Institute for Education Planning is already working on a qualitative study to supplement the regular SACMEQ quantitative surveys (Saito, n.d.). Such a study might help to illuminate the impacts of school violence.

- Encouraging context-specific studies to investigate the relative vulnerabilities of students in the same school, as well as the prevalence and impact of violence in schools as a whole. Pereznieto et al. (2010) called for detailed analyses of the educational attainment of victims and non-victims so comparisons could be made.

- Helping to strengthen the most widely used school climate frameworks by emphasizing the importance of school safety.

- Reviewing programs for reducing school violence in developing countries, helping to disseminate evidence-based best practices, and supporting a wider roll-out of effective interventions.

Overall, a critical mass of evidence must be compiled to highlight the profound and long-lasting harm that school violence inflicts on its immediate victims and their societies. This evidence could then be used to help spur changes in international education policies and practices.

Annex 1: Matrix of Relevant Studies

Note: The following matrix contains a list of studies that indicates linkages between school violence and educational achievement or between violence and mediating factors such as the inability to concentrate or absenteeism.

Authors (Publication Year)[a]	Country	Focus	School Violence Indicators	Indicators of Educational Achievement or Mediating Factors
CROSS-NATIONAL STUDIES				
Mullis et al., 2012a (Trends in International Mathematics and Science Study [TIMSS] 2011)	63, mostly developed countries[b]	Safe and orderly school, school discipline and safety, and bullying	Teachers' and principals' perceptions of school safety and students' reports of bullying experiences (collected through questionnaires)	Standardized and comparable test results aggregated by school
Mullis et al., 2012b (Progress in International Reading Literacy Study [PIRLS] 2011)	Education systems in 48 developed countries, nine benchmarking participants, and three developing countries[c]	Safe and orderly school, school discipline and safety, and bullying	Teachers' and principals' perceptions of school safety and students' reports of bullying experiences (collected through questionnaires)	Standardized and comparable test results aggregated by school
DEVELOPING COUNTRIES				
Humphreys (2008)	Botswana	Corporal punishment	Reports from individual students	Low participation in class (girls); poor attendance and dropping out of school (boys)
Dunne (2007)	Botswana	Corporal punishment	Reports from individual students (collected through questionnaires, interviews, observations, and focus group discussions [FGDs])	Poor attendance and dropping out of school (boys)
Dunne et al. (2005)	Botswana and Ghana	School-related gender-based violence (SRGBV; e.g., intimidation and sexual harassment)	Reports from individual students (collected through interviews and FGDs)	Poor concentration and performance in class or dropping out of school (specifically for schoolgirl mothers)
Abramovay and Rua (2005)	Brazil	Broad spectrum of school violence	Reports from individual students about the consequences of school violence	Inability to concentrate in class, loss of desire to go to school, becoming upset and indignant, and poor attendance
B&M Development	Ethiopia	Violent acts	Reports from individual students (collected	Non-enrollment, poor attendance, loss

Data for Education Research and Programming (DERP) in Africa—Literature Review on the Intersection of Safe Learning Environments and Educational Achievement

23

Authors (Publication Year)[a]	Country	Focus	School Violence Indicators	Indicators of Educational Achievement or Mediating Factors
Consultant PLC (2008)			through questionnaires, interviews, and FGDs); case studies collected	of concentration, lower participation, reduced ability to complete homework, and overall worse performance in school
Dunne et al. (2012)	Ghana	Bullying (psychological and physical)	Reports from individual senior high school students	Poor attendance
Ampiah and Adu-Yeboah (2009)	Ghana	Corporal punishment	Reports from individual students	Dropping out of school
Leach and Sitaram (2007)	India (Goa)	Sexual harassment	Reports from individual female students	Reduction in desire to continue schooling
Bisika et al. (2009)	Malawi	SRGBV	Reports from individual female students (collected through questionnaires); teachers' and parents' perceptions (collected through interviews)	Performance problems at school and dropping out of school
Naz et al. (2011)	Pakistan	Corporal punishment	Reports from students of experiences (collected through interviews)	Poor academic performance (self-reported)
Saito (n.d.)	SACMEQ[d]	Spectrum of school violence	Head teachers' perceptions of frequency of violent behaviors (e.g., fighting, bullying)	Scores on standardized tests for reading, mathematics, and HIV/AIDS knowledge
Townsend et al. (2008)	South Africa	Bullying	Reports from individual students of experiences collected through questionnaires	Dropping out of school
Human Rights Watch (2001)	South Africa	SRGBV	Reports from individual female students, parents, social workers, and therapists (collected through interviews)	Diminished school performance because of trauma or emotional or behavioral disorders, poor attendance, changing schools, or dropping out of school
Mtonga (2010)	Zambia	Spectrum of school violence	Reports from individual students	Unwanted pregnancies, sexually transmitted infections, depression, or suicidal thoughts
DEVELOPED COUNTRIES				
Konishi et al. (2010)	Canada	Bullying	Principals' perceptions of rates of bullying in their schools	Programme for International Assessment (PISA) test in reading and mathematics
Beran et al. (2008)	Canada	Bullying	Reports from individual students of being bullied	Teachers' reports of achievement
Eriksen et al. (2012)	Denmark	Bullying	Teachers' and parents' perceptions of bullying	National grade test scores

Authors (Publication Year)[a]	Country	Focus	School Violence Indicators	Indicators of Educational Achievement or Mediating Factors
Henrickson (2008)	New Zealand	Bullying (school and community)	Reports from individual students of physical and/or verbal abuse and being bullied	Education attainment levels over time (e.g., secondary school only, post-graduate degree)
Strøm et al. (2013)	Norway	Bullying	Reports from individual students of being bullied	Most recent school grades in four subjects
Ammermueller (2012)	United Kingdom	Bullying	Reports from students of physical violence and mothers' perceptions of bullying	TIMSS test results
Rothon et al. (2011)	United Kingdom	Bullying	Reports from individual students of being bullied	Scores in national English, mathematics, and science tests for individual students
Brown and Taylor (2008)	United Kingdom	Bullying	Reports from individual students of being bullied	Grades in national examinations of individual students at 16 years of age and highest levels of educational attainment thereafter
Kosciw et al. (2013)	United States	Victimization	Reports from individual students of verbal and physical harassment and physical assault due to sexual orientation or gender expression	School grades for individual students
Juvonen et al. (2011)	United States	Bullying	Reports from individual students of victimization and peer identifications of bullying victims	School grades for individual students
Peguero (2011)	United States	Various forms of victimization and violence in high school	Reports from students (collected through a longitudinal survey questionnaire)	Dropping out of high school
Hazel (2010)	United States	Bullying	Students' fears about bullying and their perceptions of safety (collected through interviews with teachers and students)	Inability to concentrate and absenteeism
Milam et al. (2010)	United States	School safety	Students' perceptions of school safety (mean score for the school)	By school, the percentage of students scoring proficient or advanced in standardized state examinations for mathematics and reading
Wolniak and Engberg (2010)	United States	Broad spectrum of school violence	Reports from individual students of experiences of school violence (collected with a 17-item survey instrument)	First year of college grades for individual students
Ripski and Gregory (2009)	United States	Victimization and school climate	Reports from individual students of being victimized and their perceptions of hostility and safety in school	Standardized tests in reading and mathematics
Chen and Weikart	United States	School disorder	Police reports of major, minor, and non-crime	School mean scores for state

Data for Education Research and Programming (DERP) in Africa—Literature Review on the Intersection of Safe Learning Environments and Educational Achievement

25

Authors (Publication Year)[a]	Country	Focus	School Violence Indicators	Indicators of Educational Achievement or Mediating Factors
(2008)			incidents in schools	examinations in English and mathematics
Glew et al. (2008)	United States	Bullying	Reports from individual students of being bullied	School grade averages
Chen (2007)	United States	School disorder	Police reports of major, minor, and non-crime incidents in schools	School mean scores for state examinations in English and mathematics
Fonagy et al. (2005)	United States	Bullying	School participation or non-participation in a state anti-bullying program	Standardized test scores in several subjects

[a] The articles are arranged first by region or country, and then by year of publication and in alphabetical order based on the authors' names.
[b] See Annex 3 of this report for a full list of participating countries, which include Botswana, Ghana, and South Africa.
[c] The three developing country education systems are Botswana, Colombia, and non-English/Afrikaans South Africa. These systems participated in prePIRLS, a sister study to the main PIRLS.
[d] The 15 countries of The Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ).

26

Data for Education Research and Programming (DERP) in Africa—Literature Review on the Intersection of Safe Learning Environments and Educational Achievement

Annex 2: Countries Participating in TIMSS 2011

- Armenia
- Australia
- Austria
- Azerbaijan
- Bahrain
- Belgium (Flemish)
- Botswana
- Chile
- Chinese Taipei
- Croatia
- Czech Republic
- Denmark
- England
- Finland
- Georgia
- Germany
- Ghana
- Honduras
- Hong Kong, Special Administrative Region
- Hungary
- Indonesia
- Iran (Islamic Republic of)
- Ireland
- Israel
- Italy
- Japan
- Jordan
- Kazakhstan
- Korea (Republic of)
- Kuwait
- Lebanon
- Lithuania

- Macedonia
- Malaysia
- Malta
- Morocco
- The Netherlands
- New Zealand
- Northern Ireland
- Norway
- Oman
- Palestinian National Authority
- Poland
- Portugal
- Qatar
- Romania
- Russian Federation
- Saudi Arabia
- Serbia
- Singapore
- Slovak Republic
- Slovenia
- South Africa
- Spain
- Sweden
- Syrian Arab Republic
- Thailand
- Tunisia
- Turkey
- Ukraine
- United Arab Emirates (UAE)
- United States
- Yemen

28

*Data for Education Research and Programming (DERP) in Africa—Literature Review
on the Intersection of Safe Learning Environments and Educational Achievement*

Benchmarking Participants

- Abu Dhabi, UAE
- Alabama, United States
- Alberta, Canada
- California, United States
- Colorado, United States
- Connecticut, United States
- Dubai, UAE
- Florida, United States
- Indiana, United States
- Massachusetts, United States
- Minnesota, United States
- North Carolina, United States
- Ontario, Canada
- Quebec, Canada

References

Abramovay, M., and M.D.G. Rua. 2005. Violence in schools: Concise version. Brasília: UNESCO. Available at http://unesdoc.unesco.org/images/0013/001339/133967e.pdf.

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

Ampiah, J.G., and C. Adu-Yeboah. 2009. Mapping the incidence of school dropouts: A case study of communities in Northern Ghana. *Comparative Education 45*:219–232.

B&M Development Consultant PLC. 2008. *A Study on Violence Against Girls in Primary Schools and Its Impacts on Girls' Education in Ethiopia*. Addis Ababa: Save the Children Denmark, Ministry of Education & Ministry of Women's Affairs. Available at http://www.ungei.org/resources/files/Study_on_Violence_Against_Schoolgfils_final.pdf.

Barrett, K.L., W.G. Jennings, and M.J. Lynch. 2012. The relation between youth fear and avoidance of crime in school and academic experiences. *Journal of School Violence 11*:1–20.

Beran, T.N., G. Hughes, and J. Lupart. 2008. A model of achievement and bullying: Analyses of the Canadian National Longitudinal Survey of Children and Youth data. *Educational Research 50*:25–39.

Bisika, T., P. Ntata, and S. Konyani. 2009. Gender-violence and education in Malawi: A study of violence against girls as an obstruction to universal primary school education. *Journal of Gender Studies 18*:287–294.

Boulton, M. 2008. Pupils' perceptions of bullying and disruptions to concentration and attention to school work. *Pastoral Care in Education 26*:83–89.

Brown, S., and K. Taylor. 2008. Bullying, education, and earnings: Evidence from the National Child Development Study. *Economics of Education Review 27*:387–401.

Chen, G. 2007. School disorder and student achievement. *Journal of School Violence 6*:27–43.

Chen, G., and L.A. Weikart. 2008. Student background, school climate, school disorder, and student achievement: An empirical study of New York City's middle schools. *Journal of School Violence 7*:3–20.

Cornell, D.G., and M.J. Mayer. 2010. Why do school order and safety matter? *Educational Researcher 39*:7–15.

DevTech Systems, Inc. 2005. *The Safe Schools Program Jamaica Assessment Report*. Washington, D.C.: USAID. Available at http://pdf.usaid.gov/pdf_docs/PNADD898.pdf.

Data for Education Research and Programming (DERP) in Africa—Literature Review on the Intersection of Safe Learning Environments and Educational Achievement

Dunne, M. 2007. Gender, sexuality, and schooling: Everyday life in junior secondary schools in Botswana and Ghana. *International Journal of Educational Development 27*:499–511.

Dunne, M., R. Sabates, C. Bosumtwi-Sam, and A. Owusu. 2012. Peer relations, violence and school attendance: Analyses of bullying in senior high schools in Ghana. *Journal of Development Studies*:1–16.

Dunne, M., F. Leach, B. Chilisa, T. Maundeni, R. Tabulawa, N. Kutor, L. Dzama Forde, and A. Asamoah. 2005. *Gendered School Experiences: The Impact on Retention and Achievement in Botswana and Ghana. Educational Papers.* London: Department for International Development. Available at http://r4d.dfid.gov.uk/PDF/Outputs/gender/paper56.pdf.

Ebel, R.L., and D.A. Frisbie. 1986. *Essentials of Educational Measurement.* Fourth edition, Englewood Cliffs, NJ: Prentice-Hall.

Eriksen, TL.M., H.S. Nielsen, and M. Simonsen. 2012. The Effects of Bullying in Elementary School. IZA Discussion Paper No. 6718. Available at http://ftp.iza.org/dp6718.pdf.

Fonagy, P., S. Twemlow, E. Vernberg, and F. Sacco. 2005. Creating a peaceful school learning environment: The impact of an antibullying program on educational attainment in elementary schools. *Medical Science Monitor 11*:317–325.

Gichuke, W.V. 2010. The nature and extent of child abuse in selected residential secondary schools for students with exceptional needs in Thika district, Kenya. Unpublished thesis, Kenyatta University.

Glew, G.M., M.-Y. Fan, W. Katon, and F.P. Rivara. 2008. Bullying and school safety. *Journal of Pediatrics 152*:123–128.

Gordon, A.R., and I. H. Meyer. 2007. Gender nonconformity as a target of prejudice, discrimination, and violence against LGB individuals. *Journal of LGBT Health Research 3*:3:55–71.

Hamlall, V., and R. Morrell. 2012. Conflict, provocation, and fights among boys in a South African high school. *Gender and Education 24*:483–498.

Hazel, C. 2010. Interactions between bullying and high-stakes testing at the elementary school level. *Journal of School Violence 9*:339–356.

Hemphill, S.A., A. Kotevski, T.I. Herrenkohl, L. Bond, M.J. Kim, J.W. Toumbourou, and R.F. Catalano. 2011. Longitudinal consequences of adolescent bullying perpetration and victimization: A study of students in Victoria, Australia. *Criminal Behaviour & Mental Health 21*:107–116.

Henrickson, M. 2008. You have to be strong to be gay: Bullying and educational attainment in LGB New Zealanders. *Journal of Gay & Lesbian Social Services 19*:67–85.

Human Rights Watch. 2001. *Scared at School: Sexual Violence Against Girls in South African Schools*. New York: Human Rights Watch. Available at http://www.hrw.org/reports/2001/safrica.

Humphreys, S. 2008. Gendering corporal punishment: Beyond the discourse of human rights. *Gender & Education 20*:527–540.

Jefthas, D., and L. Artz. 2007. Youth violence: A gendered perspective. Chapter 2 in *Someone Stole My Smile: An Exploration into the Causes of Youth Violence in South Africa*. Monograph 3. Edited by Burton, P. Cape Town: Centre for Justice and Crime.

Jones, N., K. Moore, E. Villar-Marquez, and E. Broadbent. 2008. Painful Lessons: The Politics of Preventing Sexual Violence and Bullying at School. Working Paper 295. London and Surrey: Overseas Development Institute and Plan International. Available at http://dspace.cigilibrary.org/jspui/bitstream/123456789/25134/1/WP%20295%20-%20Painful%20Lessons.pdf?1.

Juvonen, J., Y. Wang, and G. Espinoza. 2011. Bullying experiences and compromised academic performance across middle school grades. *Journal of Early Adolescence 31*:152–173.

Konishi, C., S. Hymel, B.D. Zumbo, and Z. Li. 2010. Do school bullying and student–teacher relationships matter for academic achievement? A multi-level analysis. *Canadian Journal of School Psychology 25*:19–39.

Kosciw, J.G., N.A. Palmer, R.M. Kull, and E.A. Greytak. 2013. The effect of negative school climate on academic outcomes for LGBT youth and the role of in-school supports. *Journal of School Violence 12*:45–63.

Leach, F., and S. Humphreys. 2007. Gender violence in schools: Taking the "girls-as-victims" discourse forward. *Gender and Development 15*:51–65.

Leach, F., and S. Sitaram. 2007. Sexual harassment and abuse of adolescent schoolgirls in South India. *Education, Citizenship and Social Justice 2*:257–277.

Leach, F., and C. Mitchell. 2006. *Combating Gender Violence in and Around Schools*. Trentham Books.

Long, S., A.W. Brown, and G. Cooper. 2003. *More Than a Name: State-Sponsored Homophobia and Its Consequences in Southern Africa*. New York and San Francisco: Human Rights Watch & The International Gay and Lesbian Human Rights Commission. Available at http://www.iglhrc.org/sites/default/files/160-1.pdf.

Milam, A.J., C.D.M. Furr-Holden, and P.J. Leaf. 2010. Perceived school and neighborhood safety, neighborhood violence and academic achievement in urban school children. *The Urban Review 42*:458–467.

Morojele, P. 2011. What does it mean to be a girl? Implications of girls' and boys' experiences of gender roles in rural Lesotho primary schools. *Education as Change 15*:133–147.

Mtonga, R.E. 2010. Gender-based violence against female pupils at a high school in northern Zambia. *Injury Prevention 16*:A22.

Mullis, I.V.S., M.O. Martin, P. Foy, and A. Arora. 2012a. *TIMSS 2011 International Results in Mathematics*. TIMSS and PIRLS International Study Center, Boston College, Chestnut Hill, MA.

Mullis, I.V.S., M.O. Martin, P. Foy, and K.T. Drucker. 2012b. *Progress in International Reading Study (PIRLS) 2011 International Results in Reading*. TIMSS and PIRLS International Study Center, Boston College, Chestnut Hill, MA.

Naz, A., W. Khan, U. Daraz, M. Hussain, and Q. Khan. 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.

Ngakane, M.V., N. Muthukrishna, and J.E. Ngcobo. 2012. Experiencing violence in schools: Voices of learners in the Lesotho context. *Anthropologist 14*:39–48.

Olweus, D. 1993. *Bullying at School: What We Know and What We Can Do*. Oxford: Blackwell Publishing.

Parkes, J., and J. Heslop. 2011. *Stop Violence Against Girls in School: A Cross-Country Analysis of Baseline Research from Ghana, Kenya, and Mozambique*. Institute of Education, University of London, for ActionAid International. Available at http://www.ungei.org/resources/files/svags_-_a_cross_country_analysis_of_baseline_research_from_ghana_kenya_and_mozambique.pdf.

Peguero, A. 2011. Violence, schools, and dropping out. *Journal of Interpersonal Violence 26*:3753–3772.

Pereznieto, P., C. Harper, B. Clench, and J. Coarasa. 2010. *The Economic Impact of School Violence: A Report for Plan International*. London: Plan International & Overseas Development Institute.

Pinheiro, P. 2006. *Report of the Independent Expert for the United Nations Study on Violence Against Children*. Geneva: Secretary-General of the United Nations. Available at http://www.unicef.org/violencestudy/reports/SG_violencestudy_en.pdf.

Prinsloo, S. 2006. Sexual harassment and violence in South African schools. *South African Journal of Education 26*:305–318.

Qi, C.J., and M.P. Dunne. 2006. *Childhood Maltreatment Experiences of Young People in China. Prevalence and Associations with Mental Health Among 3,577 Students in Six Provinces*. Peking: All-China Women's Federation, UNICEF China & Institute of Child and Adolescent Health, Peking University.

Ripski, M.B., and A. Gregory. 2009. Unfair, unsafe, and unwelcome: Do high school students' perceptions of unfairness, hostility, and victimization in school predict engagement and achievement? *Journal of School Violence 8*:355–375.

Robers, S., J. Zhang, J. Truman, and T.D. Snyder. 2012. *Indicators of School Crime and Safety: 2011*. Prepared for the National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice. Available at http://bjs.gov/content/pub/pdf/iscs11.pdf.

Rothon, C., J. Head, E. Klineberg, and S. Stansfeld. 2011. Can social support protect bullied adolescents from adverse outcomes? A prospective study on the effects of bullying on the educational achievement and mental health of adolescents at secondary schools in East London. *Journal of Adolescence 34*:579–588.

Saito, M. n.d. *Violence in Primary Schools in Southern and Eastern Africa—Evidence from SACMEQ*. International Institute for Educational Planning's Involvement in Capacity Building for Evidence-Based Policy Research on Quality of Education. Available at http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SHS/pdf/preventing_violence_saito.pdf.

Strøm, I.F., S. Thoresen, T. Wentzel-Larsen, and G. Dyb. 2013. Violence, bullying, and academic achievement: A study of 15-year-old adolescents and their school environment. *Child Abuse & Neglect 37*:243–251.

Swearer, S.M., D.L. Espelage, T. Vaillancourt, and S. Hymel. 2010. What can be done about school bullying? Linking research to educational practice. *Educational Researcher 39*:38–47.

Tam, F.W.-M. 2008. The effect of peer victimization on learning. *Journal of School Violence 7*:43–63.

Townsend, L., A.J. Flisher, P. Chikobvu, C. Lombard, and G. King. 2008. The relationship between bullying behaviors and high school dropout in Cape Town, South Africa. *South African Journal of Psychology 38*:21–32.

UNHCR (United Nations High Commissioner for Refugees). 2005. *Refugee and Returnee Children in Southern Africa: Perceptions and Experiences of Violence: A Qualitative Study of Refugees and Returnee Children in UNHCR Operations in Angola, South Africa, and Zambia*. Pretoria: UNHCR.

UNICEF (United Nations Children's Fund). 2012. Basic education and gender equality: Child-friendly schooling approach. Available at http://www.unicef.org/education/bege_61717.html.

USAID (United States Agency for International Development). 2008. *Addressing School-Related Gender-Based Violence. Equate Technical Brief*. Washington DC: USAID. Available at http://pdf.usaid.gov/pdf_docs/PNADM831.pdf.

Wang, J., R.J. Iannotti, and J.W. Luk. 2011. Peer victimization and academic adjustment among early adolescents: Moderation by gender and mediation by perceived classmate support. *Journal of School Health 81*:386–392.

Wolniak, G.C., and M.E. Engberg. 2010. Academic achievement in the first year of college: Evidence of the pervasive effects of the high school context. *Research in Higher Education 51*:451–467.

Woods, S., and D. Wolke. 2004. Direct and relational bullying among primary school children and academic achievement. *Journal of School Psychology 42*:135–155.