

School violence, perceptions of safety and school attendance: results from a cross-sectional study in Rwanda and Uganda

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Background Adolescents displaced by conflict face a number of risks, and access to education has potential to have multiple protective aspects in humanitarian settings. Yet, the impact of violence experienced at school by adolescents in humanitarian contexts is poorly understood, especially in terms of impacts on educational outcomes.

Methods A household survey of adolescents in a refugee camp in Rwanda (n=274) and in two refugee settlements in Uganda (n=763) was conducted. Multiple logistic regression models were used to assess the influence of violence experienced at school on school attendance, feelings of fear and feelings of safety at school.

Results In multiple logistic regression models, adjusting for socio-demographic variables, exposure to school violence was significantly associated with feelings of safety at school (adjusted odds ratio (AOR)=2.29, 95% confidence interval (CI)=1.20-4.38) and days of school missed (AOR=3.28, 95% CI=1.54-7.01) in Rwanda. In Uganda, exposure to violence was significantly associated with all outcomes: school fear (AOR=2.26, 95% CI=1.48-3.44), school safety (AOR=1.90, 95% CI=1.23-2.92) and school attendance (AOR=2.39, 95% CI=1.52-3.74). Gender-stratified analyses indicated that in both contexts exposure to school violence is significantly associated with school attendance, school fear, and school safety for girls, but the association is weaker amongst boys (with experience of violence significantly associated with school attendance for boys in Uganda, but not for other outcomes and not in Rwanda).

Conclusions This study presents some initial and novel findings on the relationships between violence experienced at school and educational outcomes amongst adolescents displaced by conflict.

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Displacement in low and middle-income countries confers significant risks for exposure to violence, loss of familiar and social support, and disruptions in key developmental processes for adolescents (1). Access to quality educational opportunities in conflict-affected settings has often been neglected in terms of humanitarian funding and policy prioritization (2), yet access to and attendance at school may be a critical protection mechanism for children in humanitarian settings (3). The International Network for Education in Emergencies emphasizes the multiple protective aspects of access to education in emergencies, indicating that quality education is both “life-sustaining and life-saving,” providing “physical, psychological and cognitive protection” to children and adolescents impacted by conflict (4).

Some research indicates that education and school can act as a protective factor in humanitarian contexts. In assessing mental health and psychosocial well-being of former Nepalese child soldiers, Kohrt et al. found that higher levels of education prior to affiliation with armed groups was associated with better psychosocial outcomes (5). A systematic review of risk and protective factors for mental health and psychosocial well-being of child soldiers identified some evidence that access to education was associated with reduced mental health symptoms (6). Outside of humanitarian contexts, positive school environment has been found to be a moderator in the relationship between children’s exposure to community violence and adverse mental health outcomes (7, 8).

Yet, data also indicate that in low and middle-income contexts, there are high levels of various forms of violence against children and adolescents in school settings. Violence against children surveys [VACS] conducted in several low-income countries indicate high levels of violence victimization in school settings (9, 10). For example, the VACS in Cambodia found that amongst females aged 18-24, 17.2% reported that school was the location of first incident of sexual abuse, and 12.9% of males aged 18 to 24 reported the same; male teachers were identified as the most common perpetrator of physical violence outside the household (11). Yet, while violence against children in school settings is known to be a widespread problem in low and middle-income contexts, the majority of evidence concerning violence against children in these contexts focuses on household and community violence, and in humanitarian contexts, on war-related violence (12).

Despite an increase in research on violence and its association with health outcomes amongst displaced adolescents in humanitarian settings (13), several school-based studies have focused on exposure to violence due to conflict and household violence, and did not assess exposure to violence within school settings (14-16). Levels of exposure to violence within school settings in humanitarian contexts are underexplored, and outcomes relating to education itself – in particular, feelings of safety at school, and absenteeism – are rarely assessed in studies in low and middle-income contexts, and completely absent from published literature in humanitarian contexts. A systematic review of the association between violence and several measures of educational attainment, including absenteeism, did not identify any studies assessing these factors that were conducted in humanitarian contexts (17).

In this study we report on levels of exposure to violence in schools in refugee settings in Rwanda and Uganda. We ask the following research questions: 1) Do levels of exposure to school violence differ by setting and by gender; 2) Is exposure to violence at school significantly associated with three outcomes: feelings of safety, fear at school, and school attendance, and 3) Do these associations differ by gender?

METHODS

Study setting and sample

The data in this study were collected in the context of the “Measuring Impact through a Child Protection Index” study (18), in the second wave of data collection for the study.

Kiziba Camp, Rwanda

Data collection was conducted in Kiziba Camp, Rwanda, in October–November 2015. Refugees in Kiziba Camp, which was established in 1996, are from the Democratic Republic of Congo [DRC], and fled to Rwanda due to large-scale armed conflict in areas of Eastern DRC. There is currently no option for repatriation of refugees from Rwanda to DRC, due to on-going insecurity in Eastern DRC. Kiziba Camp is located approximately 15 kilometers from Karongi town, in Karongi District, in Rwanda’s Western Province. Some families, with assistance from non-governmental organizations [NGOs], have been able to cultivate gardens and raise small livestock, like rabbits, in the space directly outside their residence, however, there are limited income-generation activities in the camp, and refugees are largely reliant on food rations.

Kiryandongo and Adjumani refugee settlements, Uganda

Data collection was conducted in Kiryandongo and Adjumani settlements, Uganda, between June–August 2016. Outbreaks of violence occurred across South Sudan in December of 2013; as the conflict grew in intensity and complexity, civilians from several different regions were forced to flee to neighboring countries, including Northern Uganda. The situation in South Sudan has continued to deteriorate significantly, and at the time of data collection, large numbers of refugees were entering Uganda from South Sudan daily. In just one month, between July 26th 2016 and August 30th 2016, the number of refugees in Adjumani increased from 140,502 to 173,650. Uganda has become the host to the largest number of refugees in South Sudan across the region – more than one million, and at the time of data collection, numbers of refugees in both settlements – which were established and operating prior to the recent influx – were growing rapidly.

A combination of systematic random sampling and follow-up of respondents who participated in the baseline data collection was used in both contexts. In Kiziba Camp, the total sample size was 274 households and in Kiryandongo and Adjumani refugee settlements, a total of 380 households were included in Adjumani and 383 were included in Kiryandongo, for a total sample of 763 in Uganda. Further details of data collection procedures can be found elsewhere (18).

Measures

Instruments were developed for the purposes of the study, and were translated from English to relevant languages (for Rwanda, Kinyarwanda, and for Uganda, Dinka and Nuer), with group checking of translations during data collector training. The survey included items adapted from studies of Violence against Children designed by the Centers for Diseases Control (19) and the ISPCAN Child Abuse Screening Tool – Children’s Version (10, 20), and measures of violence are displayed in Table 1. The recall period for moderate physical violence was past term, and for the other items, was past 12 months. These recall periods were explored and selected based on discussions with community research partners and data collectors.

Table 1. Items used to measure violence in the survey instrument

TYPE OF VIOLENCE	QUESTION(S)
Physical violence	Have you been hit, pushed, kicked or shoved on school property?
Severe physical violence	Has someone threatened or injured you with a weapon such as a gun, knife, or stick on school property?
Verbal abuse	Have you been screamed or yelled at very loudly or aggressively at school?
Sexual violence	Has a teacher or principal offered you money, gifts, food, shelter, or a better grade in school if you had sex with him?; <i>and</i> Have you had sexual intercourse with a teacher or principal because you hoped to receive money, gifts, food, services or shelter?

Socio-demographics

The module on socio-demographics asked adolescents to report several demographic characteristics, including age and whether the respondent had attended school in the most recent school term.

School safety, fear at school and school attendance

School safety and school fear were operationalized using two items, in both settings. To assess perceptions of school safety, adolescents were asked to answer the question, “How much of the time do you feel safe at school?,” with response options of “All of the time,” “Most of the time,” “Some of the time” and “None of the time.” To assess fear experienced at school, adolescents were asked to respond to the statement, “In the past three months, I have been scared to go to school,” with possible response options being “Not True or Hardly Ever True,” “Somewhat True or Sometimes True” and “Very True or Often True.” To assess school attendance related to safety, adolescents were asked to report on how many days he or she did not attend school due to feeling unsafe at school or on the way to and from school.

Analysis

All data were collected via mobile phone based platforms, and exported for analysis from a secure server into Stata 12.1. Missing values were explored; for some violence exposure items, up to 10% of respondents in Rwanda and up to 5% of respondents in Uganda responded either “No response” or “Don’t know.” Respondents with missing values for any of the violence exposure items were excluded from multiple logistic regression models. We conducted sensitivity analyses to assess the impact of excluding these respondents on results, recoding missing values as “No” and including these responses in multiple logistic regression models, and the significance and direction of the majority of variables in each model stayed the same. Descriptive statistics were calculated, with gender and country comparisons conducted chi-squared tests. Multiple logistic regressions were conducted for three outcomes: feelings of fear at school (somewhat or very vs. none), feeling safe at school (some or none of the time vs. most or all of the time) and school attendance (as above). For all multiple logistic models, age, highest level of education and gender were included as potential confounders, with the primary exposure – any experience of school violence, which was calculated as a binary variable – calculated as exposure to any of the five items focused on physical, sexual or verbal violence at school. Finally, we conducted gender-stratified analysis, conducting multiple logistic regressions on all the same three outcomes, and controlling for the same confounders, on male and female respondents separately, for each country.

Ethical approval

The Columbia University Medical Center IRB approved the research in Rwanda (AAAQ1362), and UNHCR and AVSI Rwanda reviewed ethical protocol in accordance with existing Rwandan camp-based research regulations. In Uganda, Mildmay Uganda Research Ethics Committee approved the research. In addition, the Office of the Prime Minister granted clearance to conduct research in the refugee settlements in Uganda.

RESULTS

Table 2 indicates that there were significant differences in exposure to physical violence and verbal abuse between the two sites, for example, 3.6% of respondents in Rwanda reported having been screamed or yelled at loudly at school, compared to 12.1% in Uganda ($P < .001$). Perceptions and feelings of safety and fear and school attendance also differed between sites. For example, in Rwanda, 51.9% of respondents reported feeling safe all the time at school, compared to 61.0% in Uganda. Significant differences by gender were identified for school fear in Rwanda ($P = 0.028$) and Uganda ($P = .047$), and for school attendance in Uganda ($P = .001$).

Table 2. Descriptive characteristics of enrolled adolescents at endline (T2) in Rwanda (N=251) and Uganda (N=763)

DEMOGRAPHIC CHARACTERISTICS	RWANDA	UGANDA	DIFFERENCE BY COUNTRY	DIFFERENCE BY GENDER	
	N (%)	N (%)	P-VALUE	RWANDA P-VALUE	UGANDA P-VALUE
Age (years):					
13-15	122 (48.6)	401 (52.6)	0.277	0.929	0.011
16-23	129 (51.4)	362 (47.4)			
Schooling completed:					
Primary school or below	122 (48.6)	642 (87.6)	< 0.001	0.108	0.625
Some secondary school	129 (51.4)	91 (12.4)			
Gender:					
Male	1118 (47.0)	376 (49.3)	0.533	-	-
Female	133 (53.0)	387 (50.7)			
Exposure to School Violence					
During the past year, have you been hit, pushed, kicked or shoved on school property?					
No	182 (81.3)	617 (85.0)	0.181	0.042	< 0.001
Yes	42 (18.7)	109 (15.0)			
During the past year, has someone threatened or injured you with a weapon such as a gun, knife, or club on school property?					
No	203 (91.0)	690 (95.0)	0.026	0.260	0.245
Yes	20 (9.0)	36 (5.0)			
During the past year, have you been screamed or yelled at very loudly or aggressively at school?					
No	215 (96.4)	632 (87.9)	< 0.001	0.403	0.526
Yes	8 (3.6)	87 (12.1)			
During the past year, has a teacher or principal offered you money, gifts, food, shelter, or a better grade in school if you had sex with him?					
No	237 (98.8)	711 (98.9)	0.863	0.095	0.436
Yes	3 (1.2)	8 (1.1)			
During the past year, have you had sexual intercourse with a teacher or principal because you hoped to receive money, gifts, food, services or shelter?					
No	237 (98.8)	697 (98.0)	0.467	0.611	0.005
Yes	3 (1.2)	14 (2.0)			
School Safety, School Fear, School Attendance					
How much of the time do you feel safe at school?					
All of the time	124 (51.9)	445 (61.0)	< 0.001	0.098	0.050
Most of the time	44 (18.4)	163 (22.4)			
Some of the time	69 (28.9)	110 (15.1)			
None of the time	2 (0.8)	11 (1.5)			
In the past three months, I have been scared to go to school:					
Not true or hardly ever true	183 (76.9)	601 (82.3)	< 0.001	0.028	0.047
Somewhat true or sometimes true	25 (10.5)	99 (13.6)			
Very true or often true	30 (12.6)	30 (4.1)			
During the past term, on how many days did you not go to school because you felt you would be unsafe at school or on your way to or from school?					
0 days	167 (73.6)	555 (76.8)	0.049	0.109	0.001
1 day	13 (5.7)	46 (6.3)			
2 or 3 days	15 (6.6)	55 (7.6)			
4 or 5 days	7 (3.1)	27 (3.7)			
6 or more days	11 (4.8)	25 (3.5)			
Did not go to school in the past term (for other reason)	14 (6.2)	15 (2.1)			

Table 3 presents results of multiple logistic regression models, adjusting for socio-demographic variables, and examining the association of exposure to violence to 3 outcomes: school safety, school fear, and school attendance. In Rwanda, exposure to school violence was significantly associated with feelings of safety at school (AOR=2.29, 95% CI=1.20-4.38) and days of school missed (AOR=3.28, 95% CI=1.54-7.01). Age was significantly associated with all outcomes in Rwanda, with older respondents more likely to report feelings of fear at school, for example, controlling for exposure to violence (AOR=3.01, 95% CI=1.48-6.11). In Uganda, exposure to violence was significantly associated with all outcomes: school fear (AOR=2.26, 95% CI=1.48-3.44), school safety (AOR=1.90, 95% CI=1.23-2.92) and school attendance (AOR=2.39, 95% CI=1.52-3.74), while no socio-demographic variables were significantly associated with any of the outcomes in the models.

Table 3. Estimates of adjusted relationships between demographic predictors and school violence on school safety, school fear, & school attendance outcomes for Rwanda and Uganda

	AOR*	OR 95% CI	P-VALUE	AOR*	OR 95% CI	P-VALUE	AOR*	OR 95% CI	P-VALUE
Rwanda	School fear (somewhat/very vs none)			School safety (some/none vs all/most)			Days missed school due to safety (2+ vs 0/1)		
Age (16-17 vs 13-15 years)	3.01	1.48-6.11	0.002	1.95	1.03-3.67	0.040	4.58	2.11-9.96	<0.001
Highest education (secondary vs primary)	1.55	0.77-3.12	0.22	1.49	0.78-2.84	0.23	1.22	0.58-2.53	0.60
Gender (female vs male)	0.93	0.49-1.76	0.83	0.71	0.40-1.28	0.26	1.60	0.78-3.31	0.20
Any experience of school violence	1.50	0.73-3.08	0.27	2.29	1.20-4.38	0.012	3.28	1.54-7.01	0.002
Uganda	School fear (somewhat/very vs none)			School safety (some/none vs all/most)			Days missed school due to safety (2+ vs 0/1)		
Age (16-17 vs 13-15 years)	1.16	0.78-1.72	0.46	1.18	0.79-1.77	0.42	0.71	0.46-1.09	0.12
Highest education (secondary vs primary)	1.29	0.74-2.27	0.37	0.90	0.48-1.68	0.75	1.14	0.60-2.19	0.69
Gender (female vs male)	0.98	0.66-1.44	0.90	1.23	0.82-1.84	0.31	1.23	0.80-1.87	0.35
Any experience of school violence	2.26	1.48-3.44	<0.001	1.90	1.23-2.92	0.004	2.39	1.52-3.74	<0.001

aOR – adjusted odds ratio, OR – odds ratio, CI – confidence interval

*Adjusted for demographic predictors of age, education, gender and any experience of school violence.

Table 4 and Table 5 display results of gender-stratified analyses in Rwanda and Uganda samples. Results consistently indicate that exposure to school violence is significantly associated with school attendance, school fear, and school safety for girls, but the association is weaker amongst boys (with experience of violence significantly associated with school attendance for boys in Uganda, but not for other outcomes and not in Rwanda). For example, in Rwanda, boys' experience of violence had a non-significant relationship with days of school missed at school (AOR=2.04, 95% CI=0.71-5.84), compared to girls (AOR=5.80, 95% CI=1.87-17.93). In Uganda, boys' exposure to violence at school was not associated with school fear (AOR=1.34, 95% CI=0.67-2.65), with girls exposed to school violence more than three times more likely than girls not exposed to school violence to report that it is somewhat or very true that she had been scared to go to school in the past three months (AOR=3.32, 95% CI=1.90-5.82).

Table 4. Estimates of adjusted relationships between school violence and school safety, school fear, & school attendance outcomes for Rwanda stratified by gender

	AOR*	OR 95% CI	P-VALUE	AOR*	OR 95% CI	P-VALUE	AOR*	OR 95% CI	P-VALUE
Males:	School fear (somewhat/very vs none)			School safety (some/none vs all/most)			Days missed school due to safety (2+ vs 0/1)		
Age (16-17 vs 13-15 years)	2.07	0.76-5.70	0.157	3.04	1.18-7.85	0.021	3.78	1.15-12.45	0.029
Highest education (secondary vs primary)	1.73	0.61-4.90	0.302	0.94	0.36-2.47	0.903	1.59	0.49-5.14	0.437
Any experience of school violence	0.70	0.26-1.89	0.485	1.38	0.59-3.26	0.458	2.04	0.71-5.84	0.183
Females:	School fear (somewhat/very vs none)			School safety (some/none vs all/most)			Days missed school due to safety (2+ vs 0/1)		
Age (16-17 vs 13-15 years)	4.98	1.67-14.86	0.004	1.41	0.57-3.50	0.459	5.83	1.96-17.36	0.002
Highest education (secondary vs primary)	1.47	0.54-3.99	0.446	2.16	0.85-5.48	0.104	0.98	0.37-2.62	0.974
Any experience of school violence	4.38	1.43-13.36	0.010	4.42	1.62-12.06	0.004	5.80	1.87-17.93	0.002

aOR – adjusted odds ratio, OR – odds ratio, CI – confidence interval, *Adjusted for age, education, and any experience of school violence.

Table 5. Estimates of adjusted relationships between school violence and school safety, school fear, & school attendance outcomes for Uganda stratified by gender

	AOR*	OR 95% CI	P-VALUE	AOR*	OR 95% CI	P-VALUE	AOR*	OR 95% CI	P-VALUE
Males:	School fear (somewhat/very vs none)			School safety (some/none vs all/most)			Days missed school due to safety (2+ vs 0/1)		
Age (16-17 vs 13-15 years)	1.19	0.69-2.06	0.532	0.94	0.53-1.68	0.834	0.46	0.24-0.89	0.021
Highest education (secondary vs primary)	1.69	0.80-3.58	0.171	1.17	0.49-2.82	0.722	0.78	0.26-2.36	0.664
Any experience of school violence	1.34	0.67-2.65	0.405	1.65	0.83-3.30	0.155	3.36	1.70-6.62	<0.001
Females:	School fear (somewhat/very vs none)			School safety (some/none vs all/most)			Days missed school due to safety (2+ vs 0/1)		
Age (16-17 vs 13-15 years)	1.11	0.63-1.97	0.722	1.47	0.84-2.56	0.178	1.03	0.57-1.86	0.932
Highest education (secondary vs primary)	0.96	0.41-2.27	0.933	0.70	0.29-1.68	0.420	1.38	0.60-3.16	0.449
Any experience of school violence	3.32	1.90-5.82	<0.001	2.05	1.17-3.59	0.012	1.80	0.99-3.27	0.052

aOR – adjusted odds ratio, CI – confidence interval, OR – odds ratio, *Adjusted for age, education, and any experience of school violence.

DISCUSSION

Education in humanitarian contexts is assumed to be a protective environment, and beyond the direct aims of educating refugee youth, education in conflict-affected settings aims at increasing normalcy of displacement settings, improving children and adolescents' psychosocial well-being and providing a safe environment in which to avoid violence and unrest that may predominate in refugee camps. However, evidence of high levels of violence experience in school settings in surveys of violence against children in low and middle-income countries suggest that the protective role of schools and education in humanitarian settings should be interrogated, and relationships between violence experienced in school settings and educational outcomes, including feelings of safety at school and school attendance, explored. This study presents some initial and novel findings on these relationships, with results indicating consistent associations between experiences of violence at school and outcome measures tested in this study: feeling safe at school, feeling scared to go to school, and missing days of school due to feeling unsafe, amongst female refugee adolescents in camps and settlements in Rwanda and Uganda. These outcomes in particular are rarely assessed, and give unique insights in the nature and experience of education in these contexts.

The association between exposure to violence and educational attainment outcomes is well-established, with a global systematic review and meta-analysis indicating that violence is associated with a range of educational outcomes, including school absence, academic achievement and school graduation (21). However, existing evidence on the association between exposure to violence and educational outcomes is limited to non-refugee populations, and this study adds to the existing evidence-base by expanding existing findings to refugee populations, in this case amongst female refugee adolescents in Rwanda and Uganda. Exposure to violence at school was associated with missing a higher number of days of school due to fear in both Uganda and Rwanda. Importantly, gender stratified analysis indicated that this association is driven by the association between exposure to school violence amongst female adolescents. This finding also suggests potentially fruitful future directions of research, in expanding measurement of educational outcomes and assessing these relationships in other refugee settings.

Little is known about the gendered patterning effect of adolescent exposures to school violence on feelings of safety and school attendance in conflict-affected settings. Evidence from other settings of higher exposure to school violence among girls (22), differential mental health outcomes (22) and treatment seeking behavior (23) from exposure to school violence indicates that gender differential impacts may exist and should be further explored. Across both sites gender-stratified analyses suggest that girls' experiences of school violence significantly increased their feelings around fear and safety, and had a negative consequence on their school attendance in Rwanda. The deleterious effect of school violence for girls (but not boys) could reflect both girls' unique vulnerabilities to violence within schools and gendered coping mechanisms in response to experiencing violence (24). Gendered patterns of reporting (25), vulnerability (24), educational expectations, social support, and access to resources (26), are also potential explanations for these findings. Additional research is needed to disentangle this complex relationship between gendered experiences of school violence and scholastic outcomes.

Exposure to violence in conflict-affected contexts is usually assessed in relation to various psychosocial outcomes (12), with psychosocial outcomes measured and defined as symptoms of adverse mental health outcomes, for example, depression, anxiety or post-traumatic stress disorder. This study expands understanding of the psychosocial impacts of exposure to violence by assessing perceptions of safety at school and feelings of fear at school. A limited literature examines feelings of safety and fear at school, exploring associations with different forms of violence (27), but given the implications of perceptions of safety and feelings of fear for adolescent well-being, further exploration of this outcome in humanitarian contexts would be useful. Feelings of safety and fear, and narratives surround-

ing these feelings, may influence adolescents' activities and participation in community life. For example, qualitative exploration of conflict-affected girls' perceptions of safety and risk in spaces in displacement contexts in Ethiopia and Democratic Republic of Congo identified narratives of fear and safety that significantly constrained girls' use of public spaces and participation in community life (24). The findings from the present study indicate both that feelings of safety and fear at school are directly associated with individual experiences of violence at school. Further exploration of how and in what circumstances these feelings constrain adolescents' activities would further inform understanding of the relationship between exposure to violence and psychosocial well-being.

The findings detailed in this paper are relevant from a policy and programmatic perspective from the perspective of humanitarian funding and programming, and achievement of the Sustainable Development Goals. In the humanitarian field, funding and support for education for refugee children and adolescents is extremely limited and rarely perceived as a priority by donors (28). However, education is primarily conceptualized and proposed as a protection intervention (29). However, our findings indicate that humanitarian policy and programming should incorporate violence prevention interventions within school settings, recognizing the role of schools as sites of exposure to violence, given the relationship between exposure to violence at school, educational outcomes and psychosocial well-being identified in this research. The Sustainable Development Goals include goals focused both on reduction of violence against children (Goal 16 – “End abuse, exploitation, trafficking and all forms of violence against and torture of children”) and provision of quality education (Goal 4 – “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”), including Target 4a, providing “safe, non-violence, inclusive and effective learning environments for all”. UNHCR guidance indicates that planning for funding, activities and interventions to achieve the SDGs should include refugees and that achievement of relevant targets at country-level should include monitoring and tracking disaggregated data concerning refugees and displaced persons (30). UNHCR is particularly engaged with actions to plan for achieving targets related to Goal 4, seeking to ensure that refugees are included in plans to expand inclusive and quality education (31); evidence concerning high levels of violence at schools, and relationships between this violence and adverse educational outcomes, indicates that efforts to ensure greater inclusion of refugees in expansion of education to children and adolescents in low and middle-income countries should be combined with violence prevention programming and improvements in school safety, and with a gender lens.

The findings from this analysis should be interpreted in light of the following limitations. The sample was not powered to identify gender differences in all outcomes, and some outcomes that were close to significant may have been identifiable in a larger sample. All exposures and outcomes were assessed using self-report, which is subject to recall bias; girls and boys who have been exposed to violence may be more able to recall that they missed school for reasons related to fear compared to girls and boys who have not experienced violence. Objective measures of outcomes – for example, school attendance records – were not available or reliable in this setting, so while the limitations of self-report should be taken into account while interpreting these findings, self-report provided the most feasible and reliable form of measurement in this context. In addition, respondents were not asked to identify the perpetrator of the violence; the perpetrator of the violence may have been a peer, teacher or other adult on school premises. Experiences and impacts of violence may differ by perpetrator, and this limitation restricted analysis to a broader assessment of relationships between violence by any perpetrator and outcomes.

CONCLUSIONS

This study presents some initial findings on the relationships between violence and educational outcomes amongst adolescent refugees in humanitarian contexts in Rwanda and Uganda. Consistent associations between experiences of violence at school and outcome measures

tested in this study – feeling safe at school, feeling scared to go to school, and missing days of school due to feeling unsafe – amongst female refugee adolescents in camps and settlements in Rwanda and Uganda indicate that educational settings may not be consistently protective, and prevention of violence at school may improve educational outcomes.

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Competing interests: The authors have completed the Unified Competing Interest form at www.icmje.org/coi_disclosure.pdf (available on request from the corresponding author) and declare no conflict of interest.

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