

The Effects of School-related Gender-based Violence on Education and Health Outcomes in Rural Malawi: A Longitudinal Analysis

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Introduction

Despite progress in reducing gender inequalities in access to primary school in low-income settings, policy makers and researchers have increasingly questioned whether girls' schooling, in its current form, effectively transforms inequitable gender norms, or merely reflects and reinforces those norms (Chisamya, DeJaeghere, et al. 2012; UNESCO 2014; Mensch, Clark, et al. 2001). One area of focus for this discussion has been school-related gender-based violence (SRGBV), which the United Nations (UN) defines as, "acts of sexual, physical or psychological violence inflicted on children in and around schools because of stereotypes and roles or norms attributed to or expected of them because of their sex or gendered identity" (UNGEI & UNESCO 2013). Parkes and colleagues (2013) conceptualize violence against girls in school in an even broader sense, integrating the role of sexual harassment and abuse in the community, high burdens of housework, coercive school discipline, and the "hidden curriculum" that discourages girls from speaking out about their experiences. Drawing on data from the UN Study on Violence against Children, Plan International estimates that approximately 250 million children experience SRGBV every year (Greene, Robles, et al. 2013).

Beyond its immediate psychological and physical effects, SRGBV, which is often perceived as targeting girls disproportionately, may affect school performance and attainment, as well as the longer-term health and well-being of survivors (Greene, Robles, et al. 2013; Kim & Bailey 2003). However, despite policy attention to SRGBV (UNGEI & UNESCO 2013; USAID 2003), the research to date on this issue has been largely qualitative (Human Rights Watch 2001; Leach, Machakanja, et al. 2000) and descriptive (Afenyadu & Goparaju 2003), with few quantitative analyses linking the experience of SRGBV to education and health outcomes (USAID 2003). For example, using a convenience sample of secondary school students in Ghana, Afenyadu and Goparaju (2003) found that 15 percent of both male and female students reported experiencing forced sex, although only 5 percent of the perpetrators were teachers. Parkes and colleagues (2013) found that 86% of girls in school (ages 8-17) in Kenya, 82% in Ghana, and 66% in Mozambique reported experiencing some form of violence in the previous 12 months. While respondents indicated that violence had taken place in diverse settings, the most common perpetrators reported were school peers and community members. Some studies also focus on GBV experienced by school-aged youth, without including data on the perpetrators or locations of the violence. For example, using a random household sample of adolescents in Kwazulu-Natal, South Africa, Hallman (2007) found that reported experience of non-consensual sex was associated with lower levels of school enrollment among females and males, and poorer educational attainment and progression among females, although the survey did not ask about the location or perpetrator of the violence.

The purpose of these analyses is to begin to fill gaps in the literature on SRGBV by exploring its effects on education and health outcomes in rural Malawi. Drawing on previous research and theory, we hypothesize that experience of SRGBV affects students' interest in schooling, and subsequently their attendance, performance, and educational attainment. We also hypothesize that, due to poor performance and lack of interest in school, students who experience SRGBV may be more likely to transition to marriage and parenthood than their peers. We will explore whether this experience is more common for girls, as is often assumed, and whether the effects of SRGBV vary by gender. Our research questions are:

- (1) To what extent do adolescent students in rural southern Malawi experience SRGBV?
- (2) Does experience of SRGBV affect education outcomes, including literacy and attainment?
- (3) Does experience of SRGBV lead to earlier marriage or childbearing/fatherhood?
- (4) Do these relationships vary by gender?

Study Context

Malawi is among the ten poorest countries in the world with a gross national income per capita of \$270 in 2013 (World Bank 2014). Age at marriage among women is early, with nearly half of 20–24-year-olds in 2010 marrying by age 18. While beginning to decline, fertility remains high; on average women have 5.7 children (National Statistical Office (NSO) & ICF Macro, 2011). Although Malawi still ranks on the low end among African countries in grade attainment, there has been substantial progress in the last couple of decades. Since the elimination of school fees in 1994, Malawi has achieved nearly universal access to primary school. In 2010, 4% of males and 8% of females aged 20–24 had never attended school compared with 11% of males and 34% of females aged 40–44. Moreover, 51% of young men and 38% of young women aged 20–24 had completed primary school, (which extends through eight grades known as standards) compared with 29% of males aged 40–44 and 16% of females.¹

Although access to school has increased, it appears to have had little positive impact on other critical schooling outcomes, namely retention, grade repetition, and skill acquisition.² In fact, according to the results of numeracy tests administered in Standard 6 in Malawi, no students scored in the “competent” range or above (UNESCO, 2005). Indeed, Malawi had the lowest numeracy scores of 14 countries in the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ). Furthermore, although policies and interventions to encourage girls’ school enrollment have contributed to near gender parity in primary school entry (Anzar, Harpring, Cohen, & Leu, 2004; Chimombo et al., 2000), girls are still more likely to leave school than are boys and do so at a younger age (Baird, Garfein, McIntosh, & Ozler, 2012). Due to late entry, repetition, and temporary withdrawal, adolescents of the same age attend a wide range of standards.

Data

The Malawi Schooling and Adolescent Study (MSAS) is a longitudinal study of 2,649 adolescents resident in two contiguous rural districts in the southern region of the country, and reported to be aged 14–16 in January 2007. The initial sample consisted of 1,764 students (875 girls and 889 boys) who were randomly selected from the enrollment rosters at 59 randomly selected primary schools in Machinga and Balaka districts. The probability of a particular school being included was proportional to its enrollment in 2006. At each school, approximately 30 students stratified by gender and age who were enrolled in standards 4–8, the last four years of primary school, were interviewed. An additional sample of 885 adolescents (462 girls and 423 boys) who were not enrolled in school was drawn from the communities surrounding the selected primary schools. For this analysis the sample is restricted to male and female students at baseline in 2007.

Follow-up interviews have been conducted annually between 2007 and 2011 as well as in 2013.³ The study successfully re-interviewed 91%, 90%, 88%, 88% and 83% of the original sample in 2008, 2009, 2010, 2011, and 2013, respectively. The MSAS adolescent instrument includes an extensive set of questions on household and family characteristics, schooling history and experiences, employment, health, marriage, and sexual behavior and pregnancy. The study also included a short literacy test. Respondents were asked to read two sentences in English, a task at which they should be proficient by standard 4.⁴ The literacy tests were scored as (a) cannot read any part of the sentence, (b) able to read only part, and (c) able to read whole sentence. The same literacy assessment was repeated in each follow-up round for comparability.

The first three rounds of data collection (2007–2009) also assessed school quality, including students’ experiences of school-related gender-based violence. Students were asked whether they had experienced several behaviors (teased or upset; punched, slapped, or whipped; had sexual comments made to you; touched or pinched on your breasts, buttocks or genitalia; and peeped at while using the toilet), and whether each behavior had been perpetrated by a teacher at school, a schoolmate, and/or on the way to school.

¹ The differences between cohorts are likely larger due to selective mortality; those aged 40–44 who did not attend school or completed few years are less likely to have survived until 2010.

² For a discussion of the effect of free primary education on school quality and community-state relations, see (Kendall, 2007).

³ Due to a reduction in funding, data were not collected in 2012.

⁴ The sentences used were drawn from the 2004 MDHS.

Students reported whether each behavior had occurred: never, once or twice, a few times, many times, or almost every day in the current school year. Sensitive questions in the adolescent survey, including those on students' experiences of SRGBV, were asked via audio computer-assisted self-interviews (ACASI), with the intent of protecting privacy and reducing underreporting.

Methods

Using data from the first three rounds of MSAS (2007-2009), we explore the prevalence and effects of SRGBV – including verbal harassment and physical and sexual violence – on education and reproductive health outcomes.

Key Variables

We examine the effects of SRGBV on four outcomes:

- English literacy, defined as the ability to read two complete English sentences aloud (yes = 1, no = 0);
- School enrollment, defined as whether a respondent was enrolled in and attending school at the time of the interview in each data collection round (yes = 1, no = 0);
- Ever married, defined as respondents who were unmarried (or cohabiting) at baseline and reported that they were married (or cohabiting) by round 2 or 3 (yes = 1, no = 0); and
- Ever gave birth, defined as respondents who had never given birth at baseline, and reported that they had given birth by round 2 or 3 (yes = 1, no = 0).

We examine all four outcomes for female students at baseline, but only English literacy and school enrollment for male students at baseline, since a much smaller proportion of males than females entered marriage and parenthood during follow-up.⁵

We also include the following control variables in our regression models: age at baseline (14, 15, 16); ethnic group (Chewa, Yao, Lomwe, other); employment status of the student in the previous 12 months (1=yes, 0=no); whether the mother and father of the student completed primary school (1=yes, 0=no); and household assets (continuous).

Data Analyses

We begin by describing student reports of school-related gender-based violence, as well as conducting tests for differences in these reported experiences by gender. We then describe transitions related to each outcome of interest between baseline and round 3 of data collection separately by gender. Next, we run a series of bivariate and multivariable logistic regression models to explore the association between experiences of SRGBV at baseline and literacy status, school dropout, and transitions to marriage (for girls) and motherhood (for girls) by round 3. The multivariable models control for relevant demographic and socio-economic status variables.

Preliminary Results

Figure 1 displays the proportion of students reporting at baseline (2007) that they had experienced each type of SRGBV in the current school year. Verbal harassment and physical abuse were reported more frequently than sexual harassment and abuse for both girls and boys. For example, 21 percent of girls and 22 percent of boys reported that they had ever been hit by a teacher, while 4 percent of girls and 6 percent of boys reported that they had been touched or pinched on their breasts or genitalia by a teacher in the current school year. In contrast to findings and assumptions in other studies, reported experiences of SRGBV were comparable for boys and girls, and in some cases (teased by teacher, sexual harassment by teacher, and schoolmates and teachers peeping into the toilet) reports were higher for boys. Only one type of SRGBV – sexual harassment on the way to school – was reported more frequently by girls.

⁵ By round 3, only 2% of males had been married (compared to 29% of females), and only 4% of males had become fathers (compared to 22% of females giving birth).

Table 1 shows the proportion of respondents experiencing each outcome at baseline and round 3. While girls' performance in English reading was significantly better than that of boys at baseline, by round 3 there was no gender difference in this skill, reflecting the higher risk of skill loss experienced by girls in the study (Soler-Hampejsek, Mensch et al. 2014). Dropout was significantly higher for girls than boys during the first two years of follow-up; 44 percent of girls left school compared to 22 percent of boys. Girls were also significantly more likely than boys to transition to marriage (29 percent of girls and 2 percent of boys) or parenthood (20 percent of girls and 3 percent of boys) between rounds 1 and 3.

Table 2 provides odds ratios from bivariate logistic regression models estimating the association between experiences of SRGBV at baseline (2007) and the outcomes of interest at round 3 (2009), by gender. For girls, several types of harassment and violence were associated with increased odds of school dropout, and transitioning to marriage and motherhood. Being peeped at in the toilet was also associated with lower odds of English literacy for girls (and boys). For boys, sexual harassment and violence were associated with lower odds of English literacy, but none of the SRGBV experiences were associated with school dropout. Somewhat surprisingly, being teased or upset (for girls) and having sexual comments made to you (for boys) was associated with higher odds of English literacy.

Tables 3a (girls) and 3b (boys) expand the analyses to multivariable logistic regression models, echoing many of the findings in Table 2. Most notably, sexual violence was associated with lower odds of English reading and higher odds of entering marriage and motherhood for girls, controlling for demographic and socio-economic variables. Being teased or upset was again associated with higher odds of English literacy for girls, and being peeped at in the toilet was associated with lower odds of literacy. For boys, sexual violence was associated with lower odds of English literacy, while having sexual comments made to you was again associated with higher odds of literacy, controlling for demographic and socio-economic variables.

In future analyses, we will use discrete-time hazard models to examine the longitudinal relationships between the experience of SRGBV and the outcomes of interest in rounds 1, 2, and 3 by gender, incorporating clustering of students within schools as necessary (Rabe-Hesketh & Skrondal 2008). We will also investigate the potential pathways linking SRGBV to education performance, attainment, and transitions to adulthood. For example, we will explore whether school engagement mediates the relationship between experience of SRGBV and school performance or attainment, and whether students who experience SRGBV engage in earlier or riskier sexual activity than their peers who do not experience SRGBV.

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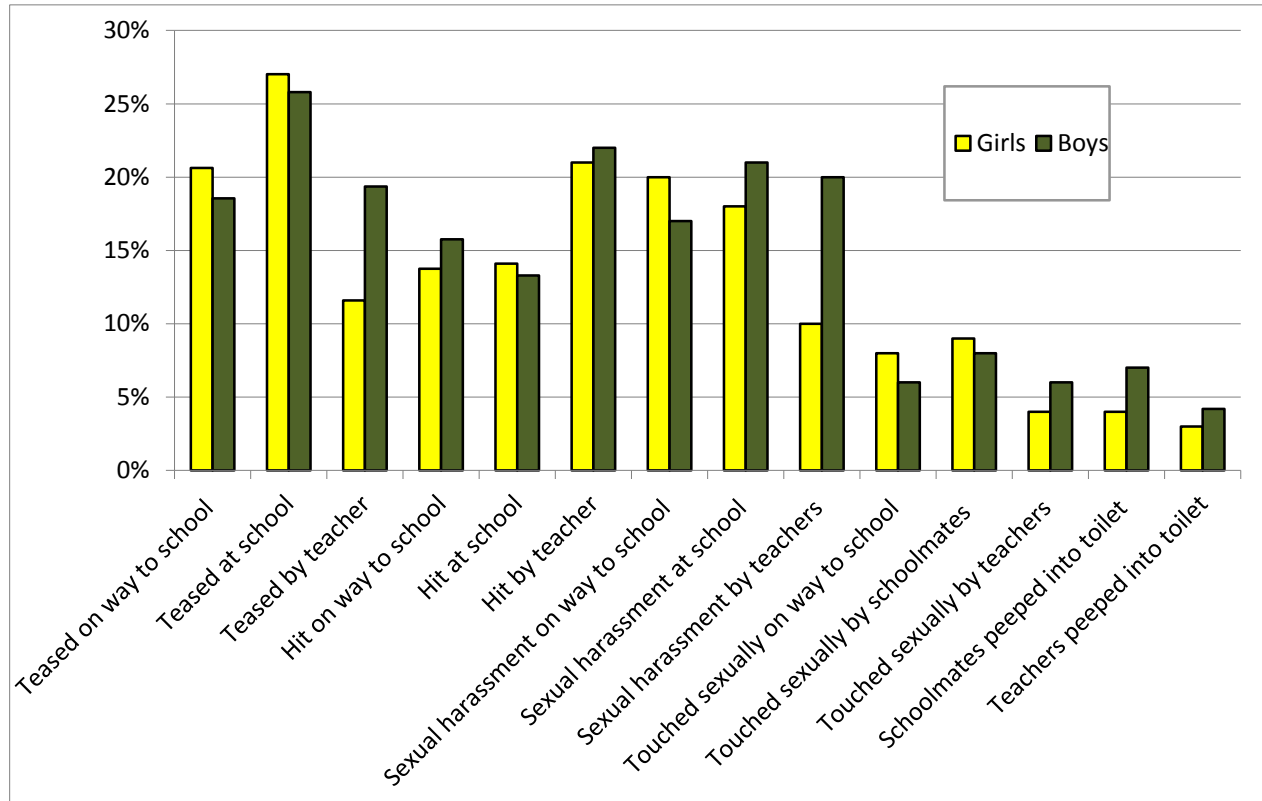
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Tables and Figures

Figure 1. Proportion of students reporting school-related harassment, physical violence, or sexual violence in the current school year at baseline, by sex, Malawi Schooling and Adolescent Study, 2007 (n = 829 girls, 857 boys).



† p < 0.10; * p < 0.05; ** p < 0.01; ***p < 0.001

Table 1. The proportion of respondents who were able to read two sentences in English, were enrolled in school, were married, and had given birth (become a father), by sex and study round, Malawi Schooling and Adolescent Study, 2007-2009 (n = 869 girls, 884 boys).

	Read two sentences in English			Attending school			Ever married			Ever gave birth/ had a child		
	Girls	Boys		Girls	Boys		Girls	Boys		Girls	Boys	
Round 1	74%	67%	**	100%	100%		0.2%	0.0%		1%	1%	
Round 3	78%	80%		56%	78%	***	29%	1.8%	***	22%	4%	***

† p < 0.10; * p < 0.05; ** p < 0.01; ***p < 0.001

Table 2. Odds ratios from bivariate logistic regression models estimating the association between student experiences of school-related harassment and violence at baseline (2007) and four outcomes at round 3 (2009): reading in English, school dropout, and transition to first marriage and first birth, Malawi Schooling and Adolescent Study (n = 829 girls, 857 boys)

	READ TWO ENGLISH SENTENCES		DROP OUT OF SCHOOL		FIRST MARRIAGE		FIRST BIRTH	
GIRLS (n = 829)								
<i>Students report ever having experienced each behavior this school year:</i>								
Teased or upset (ref = no)	1.48	*	1.21		1.42	*	1.37	†
Slapped, punched, whipped (ref = no)	0.98		1.11		1.23		1.20	
Sexual comments made to you (ref = no)	1.16		1.20		1.30		1.39	†
Touched, pinched on breasts, genitalia (ref = no)	0.69		1.43	†	1.76	**	1.93	**
Peeped at in toilet (ref = no)	0.44	*	1.70	†	1.83	*	1.42	
BOYS (n = 857)								
<i>Students report ever having experienced each behavior this school year:</i>								
Teased or upset (ref = no)	1.15		1.14		--		--	
Slapped, punched, whipped (ref = no)	1.22		1.21		--		--	
Sexual comments made to you (ref = no)	1.69	**	0.82		--		--	
Touched, pinched on breasts, genitalia (ref = no)	0.54	**	0.93		--		--	
Peeped at in toilet (ref = no)	0.62	†	0.76		--		--	

† p < 0.10; * p < 0.05; ** p < 0.01; ***p < 0.001

Note: Transition to first marriage and fatherhood for boys is not included in the models because these events were much less common for males than females in the study sample. By round 3 (2009), only 2% of males had been married (compared to 29% of females), and only 4% of males had become fathers (compared to 22% of females giving birth).

Table 3a. Odds ratios from multivariable logistic regression models estimating the association between female student experiences of school-related harassment and violence at baseline (2007) and four outcomes at round 3 (2009): reading in English, school dropout, and transition to first marriage and first birth, Malawi Schooling and Adolescent Study (n = 829 girls)

	READ TWO ENGLISH SENTENCES		DROP OUT OF SCHOOL		FIRST MARRIAGE		FIRST BIRTH
<i>Students report ever having experienced each behavior this school year:</i>							
Teased or upset (ref = no)	1.66	*	1.11		1.24		1.17
Slapped, punched, whipped (ref = no)	0.93		0.96		1.00		0.96
Sexual comments made to you (ref = no)	1.11		1.09		1.08		1.14
Touched, pinched on breasts, genitalia (ref = no)	0.63	†	1.25		1.49	†	1.68
Peeped at in toilet (ref = no)	0.45	*	1.57		1.53		1.19
Age at baseline (ref = 14)							
15	1.15		1.21		1.15		1.34
16	1.41		1.4	†	1.38		1.78
Ethnic group (ref = Chewa)							
Yao	1.11		0.99		1.29		1.74
Lomwe	1.81	*	0.89		0.83		1.01
Other	1.49		0.93		0.63		1.62
Working in last 12 months (ref = no)							
Mother completed primary school	1.03		1.09		1.04		0.98
Father completed primary school	1.86	*	0.62	*	0.56	*	0.84
Household wealth	1.14		1.06		1.25		1.42
	1.00		0.94	*	0.94	*	0.96
LR chi ²	32.32		22.16		38.41		29.33
Pseudo R ²	0.04		0.02		0.04		0.03

† p < 0.10; * p < 0.05; ** p < 0.01; ***p < 0.001

Table 3b. Odds ratios from multivariable logistic regression models estimating the association between male student experiences of school-related harassment and violence at baseline (2007) and two outcomes at round 3 (2009): reading in English and school dropout, Malawi Schooling and Adolescent Study (n = 857 boys)

	READ TWO ENGLISH SENTENCES		DROP OUT OF SCHOOL	
<i>Students report ever having experienced each behavior this school year:</i>				
Teased or upset (ref = no)	1.03		1.18	
Slapped, punched, whipped (ref = no)	1.28		1.28	
Sexual comments made to you (ref = no)	1.94	**	0.8	
Touched, pinched on breasts, genitalia (ref = no)	0.40	**	0.93	
Peeped at in toilet (ref = no)	0.68		0.66	
Age at baseline (ref = 14)				
15	1.77	**	1.35	
16	1.43		1.43	†
Ethnic group (ref = Chewa)				
Yao	0.64	†	0.93	
Lomwe	0.76		0.71	
Other	0.70		0.55	
Working in last 12 months (ref = no)	0.82		1.37	†
Mother completed primary school	1.70		1.16	
Father completed primary school	1.10		0.71	
Household wealth	1.07	†	0.94	†
LR chi2	44.04		24.93	
Pseudo R2	0.05		0.03	

† p < 0.10; * p < 0.05; ** p < 0.01; ***p < 0.001

Note: Transition to first marriage and fatherhood is not included in the models because these events were much less common for males than females in the study sample. By round 3 (2009), only 2% of males had been married (compared to 29% of females), and only 4% of males had become fathers (compared to 22% of females giving birth).