Returning to school after COVID-19 closures: Who is missing in Malawi?

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ABSTRACT

During the early stages of the COVID-19 pandemic, almost all countries implemented school closures to prevent disease transmission. However, prolonged closures can put children at risk of leaving school permanently, a decision that can reduce their long-term potential and income. This study investigated the extent to which the COVID-19 pandemic and associated school closures reduced school attendance in Malawi, a low-income African country. We used longitudinal data from a cohort of adolescents interviewed before (2017/18; at age 10–16) and after (2021; at age 13–20) the pandemic school closures. Of those students who had been attending school prior to school closures, we find that 86% returned when schools re-opened. Dropouts were more pronounced among older girls: over 30% of those aged 17–19 did not return to school. This resulted in further lowering the gender parity index to the greater disadvantage of girls. We also found that students already lagging behind in school were more likely to dropout. Thus, our data suggest that the COVID-19 pandemic has magnified gender inequalities in schooling, at least partially erasing recent progress towards inclusive education. Urgent investments are needed to find and re-enroll lost students now, and to create more resilient and adaptable educational systems before the next pandemic or other negative shock arrives.

1. Introduction

The COVID-19 pandemic forced 190 countries to close schools, disrupting the education of 1.6 billion students (United Nations, 2020). One simulation estimated that the combination of shuttered schools and increased poverty due to the pandemic will push 11 million children out of school permanently, two thirds of whom will be adolescents aged 12–17 (Azevedo et al., 2021). This could have a profound impact as adolescents transition into adulthood: students who dropout are likely on average to face lower lifetime earnings, greater risk of early marriage and pregnancy, and worse health and increased mortality among their children (Wodon et al., 2018).

1.1. Pathways from COVID-19 to school dropout

The world has rarely experienced a school closure of this duration or scale, and there is little research on how prolonged closures affect school dropout. As discussed below, there is emerging evidence that the

pandemic has exacerbated structural risk factors - including poverty, pregnancy and child marriage - previously linked to school dropout.

Globally the pandemic has created an economic crisis and plunged a large number of families into extreme poverty; this is particularly true in low-income countries (LICs) (UNICEF et al., 2020; Egger et al., 2021). When schools reopened, many families in LICs could no longer afford school fees that are widespread for middle and secondary schooling. Study respondents from Kenya (Presidential Policy and Strategy Unit Kenya and Population Council, 2021); Malawi (Kadzamira et al., 2021); Ghana, Sierra Leone and Liberia (McManus et al., 2021) all report that their inability to pay school fees was a key barrier leading to dropout during the COVID-19 pandemic. Financial pressures can also push adolescents out of school because their labor is needed to support the family. During the pandemic, more adolescents reported engaging in paid work or shouldering greater domestic work and childcare so that older family members were able to earn income (UNESCO, 2021).

The pandemic may also be accelerating major life-course transitions related to family formation. This is concerning given past evidence that

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early pregnancy and marriage can substantially derail education (UNESCO, 2017; Pizzol et al., 2018; Clark and Mathur, 2012; Grant and Hallman, 2008). During the current COVID-19 crisis, officials in Malawi reported a rise in teen pregnancies compared to a similar period in 2019 (Nyasa Times, 2020), and one in three girls said pregnancy was the reason they were not returning to school after the closures (Kadzamira et al., 2021). Similarly, in Kenya, officials reported a 40% increase in teen pregnancies during a three-month school closure (Aidoo, 2020). A longitudinal study compared girls who were expected to complete secondary school just before the pandemic (2019) to those expected to complete schooling just after the pandemic (2021). They found that Kenyan girls who experienced COVID-19 closures were twice as likely to report a pregnancy and three times as likely to dropout (Zulaika et al., 2022).

Similarly, the prospects for continued school enrollment fall once girls are married (Lloyd and Mensch, 2008; Gender Report, 2020; Psaki, 2016). Globally, UNICEF estimated that the COVID pandemic will spur an additional 10 million child marriages before the end of the decade (UNICEF, 2021). A second projection estimated that child marriages could climb by almost 5 million due to COVID in just five countries with the largest burdens of child marriage. This projection incorporated five pathways, including the direct educational interruption, household economic shocks (particularly in countries with bride price traditions, such as Malawi), and increased pregnancy risk (Yukich et al., 2021). Because early pregnancy and marriage are more likely to affect girls, the United Nations and others have issued dire warnings about the gendered impacts of school closures due to COVID-19 (United Nations, 2020; Averting a lost COVID generation, 2020).

Despite compelling evidence that COVID-19 is impacting poverty, pregnancy and marriage and leading to school dropout, there is also a great deal of uncertainty. How the pandemic ultimately influences these risk factors – and thus school dropout – depends on the unique conditions (eg, culture, economy, and social policies) in each country. For example, the evidence on whether COVID-19 is exacerbating child labor has been mixed: a study in Jordan reported a steep jump in paid work among older boys (Jones et al., 2021), while a study in Ethiopia found adolescents lost paid work during the pandemic (Baird et al., 2020). Moreover, some governments proactively put in place measures to prevent child marriages and early pregnancies, which may have tempered some of the key risk factors and consequences (UNESCO, 2021).

1.2. Evidence to date

A recent study estimated that 6% of students globally had dropped out due to the COVID-19 pandemic, with girls disproportionately impacted (Flor et al., 2022). However, the extent of school dropout appears to vary greatly between countries (Moscoviz and Evans, 2022). Studies in Senegal and Ghana reported little dropout (Mbaye et al., 2021; Abreh et al., 2021). Likewise, a study that focused specifically on girls' schooling in Ghana, Sierra Leone, and Liberia found low school dropout after COVID-19 closures, despite the latter two countries having experienced large dropouts after the Ebola epidemic (McManus et al., 2021). In contrast, studies from a number of other African countries show substantial dropout. A panel study in Nigeria (with follow-up by phone) found that the COVID-19 lockdown reduced the probability of school attendance by 7 percentage points among all children age 5–18, with larger impacts (11 percentage points) among adolescents age 15–18 years (Dessy et al., 2021). Likewise, 16% of girls and 8% of boys (aged 10–19 years) in Kenya did not re-enroll when schools opened in January, 2021. The leading reasons for not returning were a lack of funds for school fees, pregnancy and opting to work instead (Presidential Policy and Strategy Unit Kenya and Population Council, 2021). The Kenyan study lacks data from before the pandemic, however, making it hard to gage whether there was substantial dropout due to COVID-19. Finally, a longitudinal study asked South African adults about children

aged 7–17 years old in their households. Respondents were more likely to report that at least one child was out of school in April, 2021 (10.1% of households) as compared to November, 2020 (5.3%) or 2018 (3.1%) (Shepherd and Mohohlwane, 2021).

1.3. Generating new evidence from Malawi

The diversity in findings from across sub-Saharan Africa highlight the importance of using local data to inform action. We begin to fill this gap by analyzing data from an existing adolescent cohort study in Malawi. We have longitudinal data on almost 2000 adolescents, surveyed a few years before the pandemic (2017/18) and again in 2021. Malawi has almost 7.8 million school-aged children (UNESCO, 2021). Due to the COVID-19 pandemic, schools closed on March 23, 2020 (Statement by Minister of Education, 2021); there was a phased re-opening from September to October 2020. In late January 2021, however, they closed again for about five weeks. In all, schools were fully or partially closed for 26 weeks (not including about 9 weeks of scheduled holidays in April and in July-September, increasing the total duration of time out of school) (UNESCO, 2021). When re-opened, many schools staggered classes to reduce class sizes, which also meant reduced class time for each learner. Using these available data, we seek to answer the following: 1) Did the COVID-19 pandemic reduce school attendance and increase risk factors in those aged 13–16? 2) Did the COVID-19 pandemic increase gender inequity in schooling? and 3) Who were the students at greatest risk of dropping out?

2. Methods

2.1. Setting

Malawi is a low-income country where compulsory primary schooling begins at age 6. While primary schools are free (though families must purchase uniforms and supplies, incur any costs of transportation, and sometimes make "voluntary contributions"), secondary schools (grades 9–12) are not. According to UNESCO statistics, approximately 75% of all 15-year-olds are still in primary school (Baird et al., 2020). An estimated 47% of students complete primary schooling and 14% complete secondary education (Baird et al., 2020). Half of all girls marry before age 18 and median age at first birth for girls is 19 (National Statistical Office NSO Malawi and ICF, 2017) – both of these factors have been cited by the Malawian Ministry of Education as threats to continued schooling (Ministry of Education Science and Technology, 2019).

The first case of COVID-19 in Malawi was diagnosed on April 2, 2020, about two weeks after the country had declared a State of Disaster and closed schools (Statement by Minister of Education, 2021; Baulch et al., 2021). However, Malawi recorded only 6,471 confirmed cases in 2020 (UNESCO, 2017). Many preventive measures were scaled back in September 2020, including a phased re-opening of schools. Malawi then experienced its first spike in cases at the beginning of 2021 and declared a second State of Disaster. Schools were once again closed, this time for five weeks. By the beginning of April, when the second wave of data collection began for this study, Malawi had recorded 33,551 cases and 1, 117 deaths due to COVID-19 (WHO, 2021).

2.2. Data and Sample

The present study is conducted as part of the broader Malawi Longitudinal Study of Families and Health (MLSFH) (Kohler et al., 2015), which covers a population-based sample from three districts in rural Malawi: Balaka (in southern Malawi), Mchinji (in central Malawi) and Rumphi (in northern Malawi). All three districts are predominately rural and agricultural. The Northern region has the highest net attendance ratio for both primary and secondary schooling; adults in the North also have the highest schooling attainment and are least likely to be working

in agriculture (35% of men in Rumphi as compared to 77% in Mchinji). While the median age of first marriage is 18 for females in all three districts, Mchinji has highest percentage of women 15–19 years old who have begun childbearing (40% compared to 32–34% in the other two districts). Finally, Balaka has a larger proportion of children who have lost at least one parent (15% compared to 8–9% in the other districts) (National Statistical Office NSO Malawi and ICF, 2017).

This study follows a cohort of adolescents selected from the household rosters of the 2008 and 2010 waves of the MLSFH. These adolescents were household members of original MLSFH respondents. A total of 2061 respondents aged between 10 and 16 years were interviewed during the first survey wave, which was carried out in 2017/18. Of these 2061 adolescents, 1878 (or more than 90%) were then interviewed in the second wave in April-June 2021, yielding an attrition rate of 8.9%. Attrition was slightly more concentrated among girls and among respondents living in Balaka and was due primarily to moving out of the catchment area. Respondents lost to attrition also had lower school enrollment rates (83%) at wave 1 than adolescents interviewed at both waves (92%). Respondents were interviewed privately at their homes by trained interviewers who spoke their local language. Institutional Review Board (IRB) approval for the study was obtained from Stony Brook University IRB and Malawi's National Health Science Research Committee (NHSRC).

Both survey waves provide a rich array of data on respondents' sociodemographic, schooling and cognitive skills, relationship and sexual history, health behaviors, experiences of adversities in childhood, as well as mental and physical health. The second wave includes a special section on the impact of the COVID-19 pandemic on adolescents and their families. Several questions in this section focused specifically on schooling. Notably, adolescents were asked if they were attending school before the pandemic; if they experienced school closures during the pandemic; and whether they re-enrolled in school when closured ended ("When your school reopened, did you go back?").

2.3. Bivariate descriptive analyses

First, we examine school enrollment and dropout for all respondents. We calculate the gender parity index (GPI) for enrollment as the ratio of female to male attendance in each age group. A GPI of one indicates equality; a GPI less than one indicates that fewer girls than boys attend school.

Next, we focus on respondents between the ages of 13 and 16 at each wave. This age group is a crucial denominator to study the impact of COVID-19 school closures on school enrollment, as adolescents of this age group may be at risk of dropping out of either primary and secondary school. It is also an age group for which we have data at both baseline and follow-up. Descriptive analyses compare respondents' school enrollment, sexual debut (binary indicator denoting whether the respondent ever had sex), marriage (binary indicator denoting whether the respondent was ever married/living as if married) and pregnancy history (binary indicator denoting whether the respondent was ever pregnant) between the 2017/18 and 2021 data collection waves. The age distribution of respondents in this age group changed significantly between the two survey waves, with more 16 as compared to 13 year olds at wave two. Thus, we provide estimates using the age distribution at the second wave as the standard age distribution.

2.4. Multivariate descriptive analyses

We use multivariate analyses to further explore the predictive power of selected sociodemographic predictors measured at baseline on school re-enrollments measured at follow-up. To examine this dichotomous outcome, we rely on logistic regression models with standard errors clustered by early-childhood caregiver and present results stratified by respondents' gender. Estimates are provided as odds ratios.

Sociodemographic predictors include respondents' age, gender,

socioeconomic status, school progress, caregiver schooling, orphanhood status, and region of residence. Socioeconomic status was measured using a standardized index of 21 durable assets owned by the adolescents' households; this measure was reported by respondents themselves at wave 2. Respondents' school progress was measured using a dichotomous variable denoting whether the respondent was lagging two or more years behind in school compared to an adolescent of the same age who would have begun school at age 6 without ever repeating a grade. Orphanhood status is measured using dichotomous variables denoting whether the respondent's biological mother and/or father was alive at wave 2 of the survey. Caregiver schooling is a binary variable denoting whether the respondents' primary caregiver (mostly the biological mother) completed primary school.

We estimated an additional model to explore the role of respondents' marital and parental status on school re-enrollment. Since these are measured at follow-up, we do not know whether these transitions happened before or after the school closures. Thus, marital and parental status could be construed as control variables, as possibly mediating pathways linking school closures to school reenrollment, or as consequences of school dropout - with no ability to differentiate with our present data. Respondents' marital and parental statuses were measured as dichotomous variables denoting whether the respondent was married or had a child at wave 2 of the survey.

Our analytic sample for these analyses draws on the 1396 respondents (out of 1878) who reported that they were enrolled in school immediately before the pandemic and experienced closures. Less than 3% of respondents had missing values on predictors of interest; there are no missing values on the dependent variable. We handled missing values using multiple imputations; results are substantively identical when using listwise deletions as an alternative approach.

3. Results

3.1. Did the COVID-19 pandemic increase dropout and gender inequity in schooling?

Using data from 2021, we explore enrollment prior to and after the COVID-19 school closures. Of the 1878 respondents interviewed for the second wave of the study, 1396 declared they were enrolled in school immediately before the pandemic and experienced a school closure. Only 78% of students returned to school when it re-opened. Prior to the closures, boys were more likely to be attending school. This primarily reflected a gender gap among 17–19 year olds: 62% of girls but 73% of boys reported being in school (Table 1). Among this same age group,

Table 1

School reenrollment after closure due to COVID in ACE2, by reported age and gender.

	All	Girls	Boys	Gender Parity Index
Before the COVID-19 pandemic, were you attending school?	**N = 1878**	**N = 963**	**N = 915**	
13–16 years old	88%	90%	87%	1.03
17–19 years old	67%	62%	73%	0.85
All	76%	72%	79%	0.91
When your school re-opened, did you go back?	**N = 1407**	**N = 650**	**N = 757**	
13–16 years old	93%	93%	92%	1.01
17–19 years old	78%	69%	85%	0.81
All	86%	82%	89%	0.92
Are you attending school now?	**N = 1878**	**N = 963**	**N = 915**	
13–16 years old	80%	80%	80%	1.00
17–19 years old	46%	36%	57%	0.63
All	64%	58%	70%	0.83

Note: the gender parity index refers to the ratio of girls to boys enrolled in school for each age group

only 69% of girls returned to school after the national closures compared to 85% of boys. This resulted in further lowering the GPI among those attending school. At the time of data collection, the GPI was 0.63 as compared to 0.85 in the same cohort before the pandemic.

To examine how much of the school dropout may be due to COVID-19, we compare school enrollment among adolescents who were 13–16 years old in the 2017/18 wave to those who were 13–16 years old in the 2021 wave of data collection. Unfortunately, we do not have data to compare pre- and post-pandemic enrollment for the 17–19 year old age group. Table 2 shows age-standardized school enrollment; it also shows age-standardized sexual debut, pregnancy and marriage rates. School enrollment among 13–16 year olds decreased from 85% to 80% between the 2017/18 wave and the 2021 wave of data collection. Interestingly, the decrease was more pronounced for boys (88–80%) than for girls (81–80%), which eliminated the previous gender gap in school enrollment among this age range. Adding standard errors to these age-standardized estimates (Rothman et al., 2008), we find no significant decline in enrollment rates between survey waves for girls (t = 0.27, p > 0.05), whereas there is a statistically significant decline for boys (t = 3.40, p < 0.001).

We also examined whether hypothesized risk factors (sexual debut, pregnancy, and marriage) differed from pre-pandemic rates. There was a substantial dip (from 37% to 28%) in the proportion reporting sexual debut (Table 2). While respondents reported that they were very (27%) or a little (15%) worried about being forced to marry during the COVID pandemic, we did not see differences in child marriage or pregnancy among girls in mid-adolescence.

3.2. Who were the students at greatest risk of dropping out?

We explored the sociodemographic predictors of reenrolling in school following the pandemic-related school closure. As Table 3 shows, the students who were already behind in grade progression were the least likely to re-enroll when schools opened again (Model 1, OR 0.48). Paternal, though not maternal, orphanhood was significantly associated with school reenrollment in the combined sample (OR 1.95). Girls were less likely to re-enroll when controlling for relevant sociodemographic variables measured at baseline (Model 1, OR 0.48). However, gender differences in rates of re-enrollment are not significant if we control for marriage and childbearing measured at follow-up (Model 4, OR 1.00). This is because early marriage and childbearing are strong predictors of dropout, and are almost entirely concentrated among female respondents. Respondents were very unlikely to return to school if they had children (Model 4, OR 0.03) or were married/cohabitating (Model 4, OR 0.12). Among 17–19 year old girls who were in school prior to the pandemic, only 10 of the 52 girls who reported that they were now married/cohabitating returned to school after the closures.

4. Discussion

There have been dire predictions about the scale of school dropout due to the COVID-19 pandemic, alongside concern that girls would be

Table 2
Age-standardized school enrollment and pregnancy rates of 13-to-16-year-old respondents at wave 1 (2017/18) and wave 2 (2021), by gender.

	Both Sexes		Boys		Girls	
	ACE1	ACE2	ACE1	ACE2	ACE1	ACE2
	n = 1341	n = 914	n = 689	n = 414	n = 653	n = 500
School Enrollment	85%	80%	88%	80%	81%	80%
Sexual Debut	37%	28%	42%	35%	33%	19%
Pregnant	–	–	–	–	1.1%	1.6%
Married	–	–	–	–	4.7%	3.6%

Table 3
Variable distribution and logistic regression of reenrolling in school after school closure due to COVID.

	Mean/ Percentage	*Model 1* Both Sexes	*Model 2* Boys Only	*Model 3* Girls Only	*Model 4* Both Sexes
Age	16.15 (SD=1.73)	0.64 * **	0.71 * **	0.57 * **	0.74 * **
Female	46% (N = 645)	0.48 * **			1.00
SES (score)	2.61 (SD=2.03)	1.09	1.08	1.08	1.12
Maternal Orphan	4% (N = 52)	1.09	0.79	1.11	1.17
Paternal Orphan	10% (N = 136)	1.95 *	3.28	1.48	2.00
Lagging at school	60% (N = 838)	0.43 * **	0.35 * *	0.49 * *	0.31 * **
Caregiver Schooling	26% (N = 349)	1.28	1.11	1.52	1.01
Mchinji (Central)	33% (N = 457)	1.00	1.00	1.00	1.00
Balaka (South)	28% (N = 390)	0.56 * *	0.44 * *	0.72	0.53 * *
Rumphi North)	39% (N = 549)	1.71 *	1.59	1.96 *	1.72 *
Married	5% (N = 73)				0.12 * **
Has a child	4% (N = 58)				0.03 * **
N	1396	1396	751	645	1396

*p < 0.05, * *p < 0.01, * **p < 0.001; estimates are odds ratios; standard errors are clustered by early-childhood caregiver; missing values on predictors were handled using multiple imputation.

disproportionately impacted (UNESCO, 2020). Descriptive evidence from the current study suggests that the pandemic has led to dropouts, with varying impacts by age and gender. Only 86% of those who had previously been in school returned after the school closures. Dropout was more pronounced among older students: we find only 78% of those 17–19 years returned to school, with girls 16 percentage points less likely than boys to return. However, we cannot causally attribute this to COVID-19, as there would have been some dropout due simply to aging across the time frame of school closures in Malawi (from the end of March to September, 2020 and then briefly again in early 2021) even if there were no pandemic. Thus, we took a second approach to gauge potential dropout: we examine enrollment in two cohorts, differing only on whether their data was captured pre- or post-pandemic. These adolescents came from the same communities, and often the same families. Among these adolescents (age 13–16 years), we found a five percentage points drop in enrollment between 2017/18 and 2021, with a steeper drop among boys (8%) compared to girls (1%).

Overall, our findings suggest that the pandemic has magnified gender gaps among older ages in Malawi. A substantial number of older adolescent girls (age 17–19) left school: over 30% did not return after the lock down as compared to 15% of boys. In 2019, Malawi's gender parity index was 1.03 (favoring girls slightly) for primary school and 0.83 (favoring boys substantially) for secondary school (School enrollment, gender parity index, 2021). Our estimates of enrollment prior to the pandemic roughly mirror these statistics. After the pandemic-associated school closures, however, the parity index dropped to 0.69 for older adolescents. This contrasts with another recent study from Malawi that found increased dropout, but no difference by gender (Kadzamira et al., 2021).

The picture that is emerging is one in which extent of dropout appears to be sensitive to the intersection of age, gender and underlying context. For example, our results are consistent with those in Kenya: adolescent girls failed to return to school after COVID closure at higher rates than boys (Presidential Policy and Strategy Unit Kenya and Population Council, 2021). However, a study in Nigeria reported that impact varied by context, with girls disadvantaged in a region with high

child-marriage rates, and boys more disadvantaged by the COVID pandemic in another region (Dessy et al., 2021). In other countries, such as Senegal and Ghana, little dropout has been reported for either gender (Mbaye et al., 2021; Abreh et al., 2021).

Sustained investment is education is clearly warranted after pandemic closures, and may be more effective with a focus on gender-specific barriers (Psaki, 2016). To date, the evidence on whether COVID-related school closures are increasing child marriages is mixed (UNESCO, 2021). We were able to examine changing trends among the younger cohort (13–16): neither pregnancy nor marriage increased, and rates of sexual debut actually dropped from 2017/18–2021. However, we cannot rule out that the risks are more substantial for older adolescents, for whom we do not have the same comparable data across time. As mentioned above, a separate study found school dropout increased during the height of the pandemic in Malawi, and that one girl in three cited pregnancy or marriage as the reason (Abreh et al., 2021). Moreover, a Nigerian study found that dropout increased with age, and noted stronger effects for girls in a region with higher child marriage rates (Dessy et al., 2021). Similarly, the Kenyan study that documented increased pregnancy and dropout focused on female students in their last two years of secondary school (Zulaika et al., 2022).

UNESCO has highlighted the importance of support for students who are most likely to dropout (UNESCO 2021 report). We thus explore factors beyond gender and age. Our data suggest that the pandemic reinforced existing vulnerabilities: those who were already lagging behind in school were most likely to dropout. Students who were already performing poorly may no longer feel that education is worth the continued investment. Moreover, girls who were married or had children were very unlikely to return to school. Thus, the pandemic seemed to be the tipping point for those who were at the margins. A recent study evaluating the impact of the Ebola pandemic also noted a pronounced drop in secondary school enrollment specifically among those adolescents from poorer families, and concluded that the school closure had been "disproportionately detrimental to those on the margins" (Smith, 2021).

4.1. Strengths and Limitations

The current study drew on two waves of data collection, prior to and just after the COVID-19 pandemic shuttered schools, with almost 2000 adolescents. This longitudinal data allows for contribution to our understanding of whether school closures may be accelerating dropout among adolescents and to an examination of the gendered impacts. The original study focused on adolescents 10–16; we have no data on schooling for older adolescents prior to the pandemic. Reported dropout after school closures was substantial among those 17–19, however, and unlikely to be explained purely by maturation given the short time period. Moreover, dropout was mirrored in the longitudinal data. Here we have comparable data on those 13–16 in each wave, and a strength is that adolescents in each wave come from the same set of households and villages. We are still careful not to causally attribute any observed difference to COVID-19, as there may be other factors that have accelerated dropout over the period of 2017/18–2021.

Furthermore, school dropout is only one, very rough measure of COVID-19's impact on education. Since this study was designed for another purpose, we did not measure important indicators such as the quality of education, learning loss, or school completion. For example, Senegal and Ghana observed little dropout but documented higher rates of grade repetition (Mbaye et al., 2021; Abreh et al., 2021). As more data are collected, a more nuanced picture of the pandemic's impacts is sure to emerge.

Critically, it is not clear how widely our results can be generalized to other contexts. There may be considerably more dropout from countries with substantially higher COVID-19 burdens; longer school closures; and greater economic impact. In Malawi, there were only 1500 recorded COVID-19 deaths by the time data collection was complete (June, 2021)

– a relatively modest toll in a country of 18 million (WHO, 2021; Kohler et al., 2022). As a result, students experienced brief school closures compared to many countries. For comparison, UNICEF estimates that 168 million children globally were out of school for a full year due to lockdowns (UNICEF, 2021a); and classes still had not resumed for 77 million students after 18 months (UNICEF, 2021b). Finally, Malawi had no official lockdown (Verani et al., 2020). However 81% of households in Malawi reported that their income dropped due to the pandemic (Bundervoet et al., 2021). This is higher than the average in LMICs, and statistically similar to the proportion of households that reported suffered income losses in Nigeria and Uganda (Bundervoet et al., 2021; Josephson et al., 2021).

5. Conclusion

Prior to the pandemic, Malawi faced steep challenges with regard to inclusive education. Although school enrollment was high, only half of all students completed primary school. Our data suggests that the COVID-19 school closures have further reduced the number of children in school. Swift action is needed to identify out-of-school students and encourage re-enrollment; barring such action we will likely see permanent reductions in human potential. UNESCO and other organizations have begun to compile evidence on the best ways to re-engage students, for instance by eliminating school fees, ensuring pregnant and parenting students can return, personalizing outreach to re-engage students, and providing adequate educational funding (When schools shut: Gendered impacts of COVID-19 school closures, 2021). We encourage readers to consult their recommendations. Finally, this crisis underscores how vulnerable our educational systems – and thus our students – are to pandemic, and possibly other, threats. We cannot wait until the next pandemic or negative shock arrives to react. We must invest in creating resilient schools and students now (Lennox et al., 2021).

CRediT authorship contribution statement

Rachel Kidman: Funding acquisition, Supervision, Conceptualization, Methodology, Writing – original draft. **Etienne Breton:** Methodology, Formal analysis, Writing – review & editing. J**ere Behrman:** Methodology, Writing – review & editing. **Hans-Peter Kohler:** Funding acquisition, Supervision, Methodology, Writing – review & editing.

Conflicts of Interest

The authors declare no conflicts of interest.

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