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The COVID-19 pandemic and children's engagement with learning in rural Sierra Leone

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ABSTRACT

The COVID-19 pandemic caused worldwide educational disruption. This paper addresses a gap in the literature relating to the impact of the pandemic on learning experiences of children in rural communities in the Global South, particularly in earlier years of schooling. Children in these communities are at considerable disadvantage in comparison to their urban peers due to poor school infrastructure and challenges in recruitment and retention of teachers. Drawing on a mixed-methods study of primary school children, their teachers and families in rural Sierra Leone, both during and immediately after school closures, the paper highlights how primary schools and their communities responded to the pandemic and how this influenced children's engagement with their learning. While national planning focused on pandemic control measures and provision of some remote learning support, findings highlight challenges for poor rural communities in accessing basic learning supports and the consequent disruption to children's education.

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Introduction

The COVID-19 pandemic disrupted everyday life, with many countries closing schools and implementing restrictions on social gatherings and travel. School closures affected approximately 1.5 billion children worldwide with emerging research since the start of the pandemic highlighting the impact, including the learning loss of students (Donnelly & Patrinos, 2022). In addition, the pandemic brought formal education into children's homes, with expectations of active family involvement in their learning (Hoskins et al., 2022). Literature highlights, however, uneven access to 'remote' learning among children both within and across countries (Blaskó et al., 2022; Darmody et al., 2021; Donegan et al., 2022).

Although challenges related to continued learning were shared globally, children and young people in the Global South were disproportionately impacted (Favara et al., 2022;

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Haffejee et al., 2022; Ellanki et al., 2021). In some instances, children had access to online learning, while others had disparate access to technology, especially those in rural communities (Uwizeyimana, 2022; Nhongo & Siziba, 2022). School closures had a particularly negative impact on girls, undercutting gains made in recent years (Rafaeli & Hutchinson, 2020). This included learning loss (Ford et al., 2021), concerns over early school dropout due to financial constraints, and increased risk of pregnancy and sexual exploitation (Goulds et al., 2020). Disruption to children's lives, however, was found to be mediated by strong community supports (Jamieson & van Blerk, 2021) and continued contact with teachers (Wangdi & Rai, 2022; Wang et al., 2021). Research concerning children's schooling in the rural Global South needs to consider not only intersecting vulnerabilities that predominate in these areas generally – including extreme poverty and low levels of inter-generational education – but also the additional impact of rurality that places these children at a disadvantage compared to their urban peers (Motsa, 2021; Portela & Atherton, 2020; Crivello & Boyden, 2014). This includes poor school infrastructure and challenges in recruiting and retaining qualified teachers (Tao, 2014).

Existing research on the pandemic's impact on schooling in the rural Global South mostly focuses on teachers' experiences (Aiello et al., 2023; Yorke et al., 2021; Yulianti & Mukminin, 2021) rather than on children and their wider communities. This absence of focus on children's experiences coincides with a more general absence of literature in the Global South on children in the earlier years of schooling. This paper addresses this gap by focusing on experiences of primary school children, their teachers and families, in rural communities in northern Sierra Leone, a country with significant history of educational disruption due to a brutal civil war (1990–2002) and a devastating Ebola epidemic (2014–2016). It draws on a longitudinal mixed-methods study (2017–2021), incorporating both survey and ethnographic immersion, focusing on data collected when schools closed and shortly after reopening. In so doing the paper considers how primary schools and their communities in one rural district responded to the pandemic and how this influenced children's engagement with their learning.

Impact of COVID-19 on children's engagement with learning in the rural Global South

Emerging research on learning support practices during the pandemic within the rural Global South highlights the provision of remote learning with 'low-tech', such as radio lessons (Ebubedike et al., 2022; Angrist et al., 2022), or 'no-tech' – self-study and paper-based homework sheets for example – (Beche, 2020; Olanrewaju et al., 2021; Jones et al., 2021), predominately used. Where online instruction was available, it was more often only in urban areas (Sarkar et al., 2022; Singh et al., 2021). For some children, low-tech solutions were hard to access due to their remoteness and poverty (Motsa, 2021; Asadullah & Bhattacharjee, 2022; Yorke et al., 2021), with some being left without instruction of any kind (Karki, 2021). Some literature points to particular impacts on girls through increased domestic work and limited study time (Makino et al., 2023) as well as concerns over the use of technology. Damani et al. (2022) for example found caregivers expressed concerns over girls having phone contact with male teachers, considering radio lessons to be the safest option. In such instances girls in rural areas are not only disadvantaged through their remote location, but also by gendered norms

about appropriate behaviour. Much of this literature however is focused on girls in secondary school rather than in primary school.

The emerging literature from the rural Global South has also highlighted the importance of continued contact with teachers during school closures either in person or through technology. In Bhutan, as many children lacked internet access, Wangdi and Rai (2022) found teachers often personally delivered printed learning materials to students in remote locations to support their continued learning. Where online learning was available, such as in Wang et al's (2021) study in rural China, it was teachers' interaction with students online – through direct instruction and feedback, rather than recordings alone – which influenced the quality of learning.

In this paper we explore the extent to which these patterns are mirrored in rural Sierra Leone, a country with experience of school closures and remote learning during the Ebola epidemic. The impact of continued contact with teachers must be understood in the context of lower levels of formal education of caregivers, and the significant role of siblings in the education of younger children at home more generally in the Global South (Portela & Atherton, 2020).

School disruption in Sierra Leone: COVID-19 and Ebola

Sierra Leone had one of the world's lowest reported COVID-19 infection and death rates (WHO, 2022). Previously, the country dealt with a devastating Ebola virus epidemic resulting in school closures, in a country already recovering from widespread educational disruption during a civil war from 1990–2002 (Novelli & Higgins, 2017). In the post-war years efforts had been made to rebuild the education system and ensure access to primary schooling for all children, particularly those from poor, rural communities who would have previously been excluded (Smith Ellison, 2014).

Sierra Leone's experience with Ebola is a contextual feature of relevance to this paper given its prior experience of dealing with remote learning at a time of a national health crisis. Ebola was first identified in May 2014, followed by school closures from July 2014 to April 2015 affecting 1.5 million children (Folan, 2015). A subsequent national plan, recognising the country was unprepared for further outbreaks, outlined steps towards a country-wide emergency preparedness and response plan (MEST, 2018). This strategic thinking may have influenced the country's infection prevention practices during the COVID-19 pandemic. For example, schools were ordered to close on March 31st 2020 – a more rapid response than during Ebola. While this contributed to infection control measures, and the number of deaths in Sierra Leone was relatively low, the socio-economic and educational impact is evident. Poverty increased, especially among the urban poor in Freetown (the capital city) (Government of Sierra Leone, 2022; World Bank Group, 2021), with significant disruption to education due to eight months of school closures, from March to October, impacting 2.4 million children (Save the Children, 2021). Preliminary reports also highlight an urban–rural divide in how the pandemic affected children's engagement with learning. While distance learning was made available, it was not easily accessible to poorer communities or those in rural areas (Save the Children, 2021).

Methods

This paper draws on data from a longitudinal mixed-methods study of children's school and community lives (focusing on literacy, wellbeing and gender equality) undertaken between 2017–2021 in a rural region in northern Sierra Leone, one of the poorest in the country (UNDP, 2019). The district (approximate population of 530,000) is extremely rural; only 6.3% of households have access to electricity (compared to 22.7% nationally) and only 3.2% have the internet (13.9% nationally) (GDL, 2022). Most families undertake agricultural work, with other sources of livelihood being petty trading, gold and chromite mining.

One hundred primary schools in 100 communities – rural villages and towns of approximately 300–1000 people each – in the district were randomly selected for a randomised controlled trial (RCT) on the effectiveness of an education intervention coordinated by an NGO. Of the 100 communities, twenty-five were randomly allocated to a control group and seventy-five to one of three intervention groups.

Children attend primary school in Sierra Leone between the ages of 6–12. The study tracked a total sample of 3118 children (43% female) as they transitioned through the first three years of primary school from Class 1 (age 6) to Class 3 (age 8). Survey data was collected each year by fieldworkers from a local research organisation and administered in person during the school term in one of the four languages spoken throughout the district (Krio, Themne, Limba or Kuranko). Training was designed and delivered by the university research team, and translation of the survey from English was undertaken by bilingual native speakers. The survey included questions on demographics, experiences of gender equality, wellbeing and literacy. In addition, qualitative in-depth ethnographic immersion occurred in four case study schools and their communities (representing one 'control' and three further schools, each representing three 'arms' of the wider trial) providing contextual understanding of socio-cultural dynamics underpinning children's everyday lives at home and in school. Fieldwork occurred on an annual basis for 4–6 weeks in each field site with university researchers working alongside local in-country researchers to facilitate local language interpretation. These case studies (referred to by their pseudonyms) reflect the demographics within the district in terms of the diversity of language, level of rurality and proximity to the main town (approximate population 40,000). *Mabonowa* is a relatively large village in a hilly area where both subsistence farming and mining are common sources of income. The main language is Kuranko. *Naytikiwo* is a small town and the largest settlement in the area. The main language is Themne with farming and trading the main source of income. *Karanba* is a relatively large village. The main language is Themne, with both farming and mining common sources of income for families. *Tarako* is a small village not far from a relatively big town. The main source of income is subsistence farming and the main language in the village is Limba.

Fieldwork included semi-structured interviews with case study children and families, school staff and village chiefs, in addition to co-participatory group work with children in case-study classrooms, alongside observations of class and school life. Due to international COVID-19 travel restrictions, qualitative data collected in 2020 was undertaken

solely by the in-country fieldworkers. Detailed guides and remote training were provided by the university research team.

The research followed ethical procedures approved by the University Human Ethics Research Committee and the Ministries of Education and of Social Welfare of Sierra Leone. Before research began, all participants were informed about the purpose of the study and had an option to opt out. For children, parental consent was secured, followed by assent from the children themselves. Furthermore, all participants had the right to withdraw from the study at any point and were asked to reconfirm their consent each year. All participants are anonymous, and pseudonyms are used throughout this paper.

The specific data for this paper is made up of two phases of data collection undertaken to understand the impacts of the COVID-19 pandemic on local communities. Phase 1 took place in June and July 2020 during lockdown, made up of a telephone survey with seventy-seven headteachers (out of a possible total of 100) and interviews with four headteachers, one from each case-study school. Our focus in this phase was on capturing immediate responses to school closures and follow-on supports for children's continued learning.

Phase 2 took place in November 2020 after schools reopened. A survey of Class 3 children (aged 8–9, $n = 2184$) from 100 primary schools asked questions about experiences at home and formal learning during school closures, in addition to questions asked each year on demographics, experiences of gender equality and wellbeing. In-depth interviews were also conducted within the four case-study communities (Table 1), including one-to-one interviews with headteachers, teachers, case-study children and their caregivers as well as focus groups discussions (FGD) with community elders and children from Classes 3 (age 8) and 6 (age 12). Interviews with caregivers and children focused on the pandemic's impact on family life, as well as children's activities during this time. These interviews formed part of an ongoing in-depth exploration with 16 families across the multiple years of the study; combined they provide a vivid picture of everyday life in these communities, both pre- and post-pandemic. Interviews with teachers focused on their experiences as rural educators and how they supported children's continued learning. FGD added further context regarding school and community responses to the pandemic.

Given the context of the research, a core challenge was gaining trust and building relationships with local communities. A pilot period of four weeks in the country getting to know the district in the year preceding the trial facilitated this. In addition we ensured continuity with the local fieldworkers across the three

Table 1. November 2020 sample from survey and case study interviews.

	Principal	Teachers	Children	Caregivers	Focus groups - Elders	Focus groups - Class 3 (age 8)	Focus groups - Class 6 (age 12)
Survey total (n)			2184				
Case study interviews total (n)	4	4	14	16	4	4	4
Community Mabonoma (I1)	1	1	4	4	1	1	1
Naytikiwo (I2)	1	1	4	4	1	1	1
Karanba (I3)	1	1	4	4	1	1	1
Tarako (control)	1	1	2	4	1	1	1

years of the study. Due to the COVID-19 travel restrictions and the inability of the research team to carry out direct fieldwork in 2020, the assistance of in-country fieldworkers for the qualitative data collection at this time was invaluable. However the presence of the university research team would have built on the long-term relationships developed with participants in previous years. Due to knowledge of family and community dynamics, this would have provided important observation of nuances in discussions of responses to the pandemic, recognising the differences in resources available within communities and between families. Nevertheless, a strength of the paper is the focus on community and family life both during the pandemic, and the period immediately following schools reopening.

Contextualising the field site

The research team's prior immersion in the district in earlier phases of the research provides important contextual information of relevance to subsequent responses to the COVID-19 pandemic. Everyday life in the region is characterised by endemic poverty, gender inequality and structural barriers to education, all of which have been exacerbated by the pandemic. Families face challenges in food security and school costs (despite officially free primary education) (Samonova, Devine, Sugrue, Capistrano, Sloan, & Symonds, 2021), and children, as central actors in the family economy, contribute directly to family survival strategies. Such work is highly gendered – girls undertake more domestic work, and boys work more in farms.

While school attendance is increasing for both boys and girls, the average number of years of education for women aged 20 years old in the region is 2.06 compared to 4.51 for men, lower than the national average of 3.4 for women and 5.59 for men (GDL, 2022). Our research in the years prior to the pandemic noted the high priority placed by families on educating children, particularly girls, as a route out of poverty (Devine, Samonova, et al., 2021). Given the importance of education and schooling to families, many parents spoke of reducing children's workloads at home when at school to give them more time to study. However, evident is a disconnect between high aspirations for girls' education and actual expectations of girls' capacities to do well in school. While their education is valued, girls are not seen as 'brilliant' (a local term used to denote cleverness and natural ability in learning) as boys (Devine, Bolotta, et al., 2021). Our research also highlighted challenging conditions in schools; overcrowding is common, with high classroom numbers (on average 32 children per class and up to 70 in some classes observed), and staffed by underpaid and underqualified teachers (Samonova, Devine, Sugrue, Capistrano, Sloan, Symonds, & Smith, 2021). Many schools are 'unapproved' – not in receipt of state funding, instead relying on school fees and community contributions (Sugrue et al., 2022). Of the 100 schools involved in the study, a third were approved and a quarter were awaiting approval for state funding.

These lived realities of poverty, high aspirations for educating children and poor education infrastructure set the context for framing responses to the pandemic when schools closed in late March 2020. In this paper we draw on data collected during and immediately after the period when schools were closed to address two questions:

Table 2. Responses from headteachers' survey.

How prepared were you and your team to deal with interruption of classes and to support pupils?			Do you think the experience with school closures during the Ebola crisis helped you and the school to be more prepared to deal with this current school closure?		
	n	%	n	%	
Not prepared at all	12	15.6%	No, it did not help	14	18.2%
A little prepared	44	57.1%	Yes, it helped a little	45	58.4%
Somewhat prepared	18	23.4%			
Very prepared	2	2.6%	Yes, it helped a lot	17	22.1%
Don't know	1	1.3%	Don't know	1	1.3%
Total	77	100	Total	77	100

- (1) How did schools and communities respond to the pandemic?
- (2) What was the impact on children's engagement with their learning?

Schools and communities' response to pandemic

Phase 1 of our study indicated a rapid response to pandemic measures from school leaders in terms of school closures. By NaN Invalid Date, seventy-six out of seventy-seven schools who responded were closed, with the final school closing shortly after. Headteachers reported that their previous experience with Ebola helped them feel prepared for COVID-19 (Table 2); the majority (80.5%) reported they felt 'somewhat' or a 'little' prepared; 58.4% stated that experience with the school closures during Ebola helped prepare them 'a little'; and 22.1% stated it helped 'a lot'. Furthermore, the majority (89.6%) reported that they themselves or their teachers kept in contact at least once a week with children or their parents, and 81.8% stated that children were receiving homework on reading and writing.

There were, however, variations in responses among schools with uncertainty over the level of supports available, with such supports directed solely at 'approved' schools:

We were told the government wants to give subsidy to all approved schools; we've not yet received that. [...] the only thing is that we received our monthly salary from the government. (Headteacher, Mabonowa)

Given a third of schools in the study were 'approved', this left most schools without clear guidance or support. Furthermore, headteachers reported concerns over children spending more time working on farms and on household chores, with 'little time with their books', reinforced through the lack of caregiver literacy and capacities to help them with their studies at home. This is reflected in the comment of one headteacher who stated: 'It is difficult to study while they are at home – their only place of learning is in school' (Headteacher, Mabonowa). Particular concerns were expressed about increased responsibilities for girls:

Girls have more responsibilities at home. Girls have to do household chores, cook and go to the farm. While boys will be sitting at home playing. (Headteacher, Naytikiwo)

Headteachers' concerns reflect the lack of guidance for schools during the closures, in contrast to the clear guidance on pandemic control measures in the wider community. Our follow-up research in communities in Phase 2 indicated that most participants viewed Ebola as more deadly than COVID-19 due to the higher death toll, yet recognised

similarities in the management of the two outbreaks. In both instances restrictions on movement and hygiene measures were strictly implemented:

A doctor and some people tested positive for corona. They took them for treatment and they were all brought back safe. . . . If it were Ebola we wouldn't have seen them anymore. The similarities were that they both perform hand washing, use of face masks, lockdown and no public gathering is allowed. (Abubaker's Mother, Naytikiwo)

In focus groups with community Elders, direct comparisons with Ebola were made, highlighting the wider learning in dealing with COVID-19:

During Ebola the country was inexperienced to fight a disease of that nature for the first time. Before everyone could accept the reality of the virus, it had spread all over the country - that was the reason why it recorded more deaths. . . . [for COVID-19] knowledge of Ebola was already there and measures were put in place and people accepted them - that is why it is not as deadly as Ebola. (Elders FGD, Karanba)

The COVID-19 lockdown was intensely enforced using fines and curfews. Despite similarities, participants thought the enforcement of restrictions was stronger than during Ebola. One participant states she was able to attend her farm during Ebola but was restricted during COVID-19, as well as being 'nearly beaten' by the taskforce enforcing restrictions (Jaward's mother, Tarako).

These experiences highlight the learning from the Ebola pandemic on management of the current crisis. However, the rurality of the region influenced how these messages were received. In the absence of widespread communication technology, community leaders played an important role in communicating government messages and 'sensitising the community about how the pandemic can kill, how it must be prevented and how it would be contained' using hygiene measures (Sabatu's Mother, Tarako).

Lockdowns and movement restrictions limited abilities of families to earn money and sell their agricultural produce, leading to increased poverty in case-study communities:

The restriction on movement made it very difficult to get daily bread. The lockdown affected us a lot . . . we were unable to go to our farms and gold mining sites. We were unable to get food during the lockdown and had a shortage of rice. We were mostly sleeping hungry. (Tamba's Mother, Mabanowa)

There were varying levels of support received by families from relatives in other communities. Two families in Naytikiwo village had different experiences: Marie's father is disabled and received support from his brothers in larger towns, while Abubaker's mother reported reduced support from her family members:

I used to get support from my brothers. . . . Even though they are also affected by coronavirus, with the little they have they support me because they know I am a disabled person. If these two guys did not support me, my family will be living on God's grace. (Marie's Father, Naytikiwo)

One of the worst things that happened is I no longer get assistance from my brothers and sisters in bigger towns. They are also victims of coronavirus. Another bad thing is when you have children of ages 1-15 and you are locked down with no food at home. Those times were my worst times. My children used to eat three times a day but now they only eat one time a day. (Abubaker's Mother, Naytikiwo)

Community responses were informed not only by experience with Ebola and the rapidity of enforced restrictions, but also by the prolonged nature of restrictions and the resultant impact on livelihood strategies and increased poverty. Evident was a lack of clarity over supports available for schools to continue with children's learning while schools themselves remained closed.

Impact of school closures on children's engagement with their learning

While the government provided national remote learning programmes using TV and radio, these were not easily accessible to children in the rural study region. Most children in the 100 study communities did not have access to activities for continued learning (Table 3) – only 24% of children reported they listened to radio lessons and 28% reported they met with their teacher to do schoolwork.

When schools first closed, headteachers reported that while they could easily contact families who lived in their local communities, they had significant difficulties in contacting those living outside their locality. Due to limited phone coverage, bad roads and significant distances from one village to another due to the rurality of the region, headteachers were not able to reach all families. In such instances there was no contact with children during the period of school closures:

Some children are not in the same community and it's difficult to reach out to them or their parents. For those in the same community, I sometimes visit them at home though some parents are not allowing visitors at their houses. . . . There might be some pupils that are listening to radio but not to my knowledge. We are not engaged in any form of learning. (Headteacher, Taroko)

Our subsequent fieldwork with case-study families, once restrictions were lifted, confirmed out of the sixteen families in the case studies, only six reported using radio lessons. This low uptake was attributed to not owning radios or poor signal issues in the area:

I was studying by myself. I was not listening to the radio teaching programme because I don't have a radio. I was studying my old notes that I was taught with when school was open. (Sia, F, Mabonowa)

Use of radio lessons were facilitated by an NGO in seventy-five intervention communities of the 100 study communities. This included training teachers to use radio lessons to prepare their own lessons to deliver to small groups. Yet this also created challenges. As class sizes were normally large, in some cases up to 70 students in a case-study school (Samonova, Devine, Sugrue, Capistrano, Sloan, Symonds, & Smith, 2021), the

Table 3. Children's learning activities during school closures.

		Total		Boys		Girls		
		n	%	n	%	n	%	
When school was closed did you . . .	Listen to school lessons on the radio?	Yes	529	24.2%	284	24.7%	245	23.6%
	No	1655	75.8%	864	75.3%	791	76.4%	
Meet your teacher to do school work?	Yes	600	27.5%	316	27.5%	284	27.4%	
	No	1584	72.5%	832	72.5%	752	72.6%	
Do schoolwork at home?	Yes	1710	78.3%	881	76.7%	829	80.1%	
	No	473	21.7%	267	23.3%	206	19.9%	

requirement for small groups of no more than 20 children owing to pandemic restrictions meant these continued lessons were not available to many children. While teachers appreciated the initiative, it posed ethical challenges for them in terms of inequality of access through the restrictions on participation:

It really helps some pupils, though . . . assuming you have more than 50 pupils per class and just 20 were selected that will create unhappiness in you as the teacher. We raised those concerns, that it should be inclusive of all children in school, the ones left out will be sitting at home doing nothing and they will be lacking while their colleagues will be gaining something during those classes. (Teacher, Naytikiwo)

For children without access to NGO support, their experiences are more likely representative of what was available to other rural communities in Sierra Leone. In the absence of such targeted support, many children would have little access to extra support in learning from teachers. Some families in Tarako, the control case-study community, reported children taking extra lessons organised within their community rather than through an NGO or school highlighting the resilience and determination to provide support in the absence of any other. Only one of the case-study families in Tarako (Sabatu’s family) reported having access to a radio so their children could use the lessons for studying – her father states that children were ‘able to read their notes and do some mathematics’ using the radio programme.

Studying at home was the most common learning activity undertaken during the lockdown. Most children (78.3%) across the 100 schools reported studying at home (Table 3), with 41.1% reporting that studying at home was the only educational activity they undertook during this time. Our in-depth work with case study families highlights who helped children in their studying at home and the importance of contextual factors such as levels of family education (Table 4).

Almost all case-study children reported studying at home, with fourteen out of sixteen children having someone to help them. Mostly this was an older sibling, with other family members helping to a lesser extent. Evident is the impact that caregiver experience with formal education had on whether adults helped children study; as seen in Table 4, it was mostly those families where an adult had experience with secondary education. Lamin’s family (Karanba, family 3) were the exception in this respect. Lamin’s experience of learning at home was a common one found across case study communities. He felt school closures negatively impacted his education as they resulted in learning loss. Despite not attending school herself as a child, Lamin’s mother helped

Table 4. Overview of case study families activities to support children’s learning during school closure.

Community	Mabonoma				Naytikiwo				Karanba				Tarako			
Case study family number	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Gender of child	M	M	F	F	F	F	M	M	F	M	M	F	F	F	F	M
Mother’s education					P				S	S						
Father’s education			S	P		P			C	S						S
Elder’s education										P						
Siblings help with homework	•	•			•	•	•	•	•	•	•	•				•
Parents help with homework			•						•	•						•
Other family members help with homework										•						•

Education key: P = primary, S = secondary, C = college.

her children study at home, although she could not do so regularly due to her housework demands:

I gathered them together at home and wrote for each of them and taught them. At times we taught them the alphabet, sometimes we did spellings. (Lamin's Mother, Karanba)

As seen in other families in the Global South pre-pandemic (Portela & Atherton, 2020), siblings were vital in supporting remote learning during the pandemic in the case-study communities. Idrissa's father (Naytikiwo) states his daughter would not have been able to study at home without her brother's support, and Sabatu's father (Tarako) stated 'those in higher levels always helped the younger ones with their schoolwork and helped the kids improve a lot'.

Questions also arise over the quality of learning materials available to children during school closures. Of the 16 children in the case studies, 10 children reported having resources to study with, however these were often old school notes of poor quality. Marie (Naytikiwo, child) states she used 'the same old book I was using at school' rather than textbooks.

Impact of school closures on girls' engagement with learning

In our study across all case-study communities, parents, children and teachers worried about the impact of school closures on children's education, independently of their gender. Parents and teachers were concerned with children being out of school and forgetting what they learnt:

When schools are open and children are going to school they can always memorise what they are taught - the sooner schools close for a long time will make them forget what they have been taught. (Fatmata's Mother, Naytikiwo)

There was no access to education. Most things they were taught were difficult for them to memorise. Even if they are just doing one subject in school they needed to teach that every day, but during the school closure period they lost most of the things they were taught in school. (Teacher, Naytikiwo)

Concerns over potentially negative impacts of school closures on girls' education in the Global South (Rafaeli & Hutchinson, 2020) are mirrored in concerns noted by headteachers in our research about an increase in girls' work at home once schools closed. Drawing on survey data collected at three time points – pre, during and post pandemic – [Figure 1](#) shows the percentage of boys and girls undertaking domestic work at least once a day. It shows for girls, daily work at home increased in the time point after schools reopened (November 2020). Case-study interviews confirm this increase where most girls reported doing more household tasks during school closures.

However, parents emphasised their preference for children, both boys and girls, to be at school and learning, rather than at home, which speaks to the importance placed on education throughout communities:

School closures and having my daughter at home had no benefit. Her attending school is the most important and beneficial thing rather than sitting at home doing house chores. (Ramatu's Mother, Mabonowa)

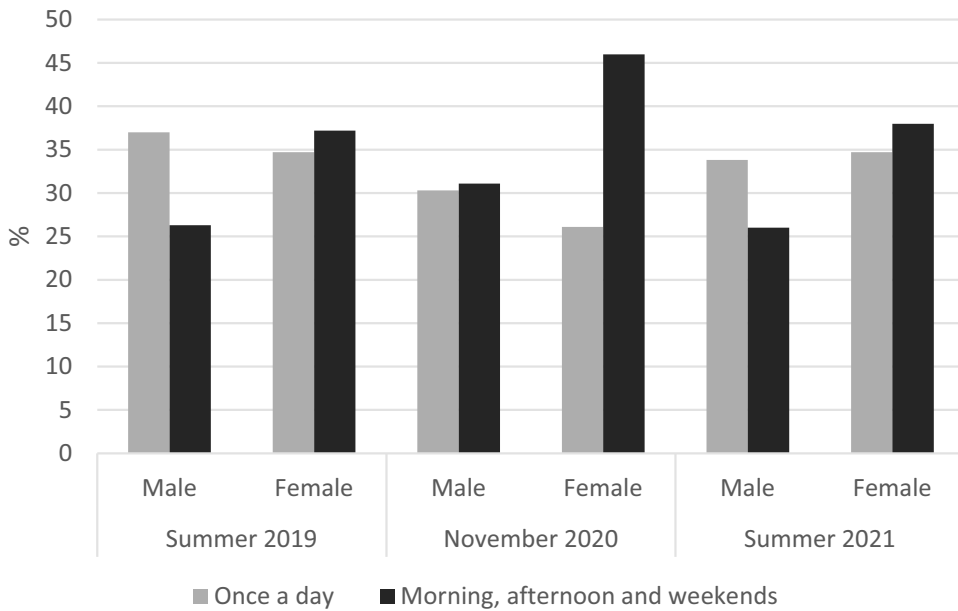


Figure 1. Children undertaking domestic work at least once a day.

You can't compare education to domestic work; education is more profitable than domestic work. If she goes to school, I am capable to do all domestic work. (Yannoh's Mother, Karanba)

Despite these insinuations, increases in girls' domestic work reflects the gendered norms prevalent in the communities where girls do more domestic work than boys. Teachers noted this as potentially interfering with their studies at home during lockdown. We see this in the comment of a teacher in Karanba who refers to the levels of engagement of boys and girls in his class on immediate return to school following lockdown, whereby girls 'were not studying when schools closed' as they 'have more domestic work to do than boys'.

It was not only increased domestic work at home influencing perceptions of girls' lesser engagement at school. Concerns over girls' learning speaks to a perception of boys as naturally more 'brilliant' than girls, and girls being less inclined to study. We see this from a headteacher who rates boys' performance as better than girls, referring to boys as more 'attentive' and 'committed' while girls are 'distracted':

Boys are more committed to their work and attentive and are always present in school. It is very different with girls, having lots of distraction on their minds, although we have some that perform well, the majority performance is low for girls. (Headteacher, Tarako)

The impact of school closures reinforced this deficit thinking about girls. Girls were deemed more likely to 'forget' what they had learned previously, as well as vulnerable to being, in the words of a headteacher in Karanba, 'easily misled by men'. There were concerns about pregnancy when out of school, an effect of the increase in teenage pregnancy during the Ebola pandemic (Risso-Gill & Finnegan, 2015):

The school closure was worrisome especially when I have girls above age 15. There were rumours of teenage pregnancies all around. This worries me so much. One of my children

was even impregnated during this long time of school closure. I am now left with taking care of both my daughter and the baby. (Marie's Father, Naytikiwo)

Some of them [girls], as you could see now, they grow faster, and most of them do not have patience as soon as holiday comes, they will be pretending as if they are big or matured, they will then engage themselves to sexual relationships – sometimes we see them becoming pregnant. (Headteacher, Tarako)

While the pandemic had a negative impact and resultant learning loss for most children, for girls there was a double loss. They were already struggling to be perceived as 'brilliant' compared to boys prior to lockdown (Devine, Bolotta, et al., 2021), and more so following schools reopening. Evident also was a persistent focus by adults on girls' risk of pregnancy during school closures.

Discussion and conclusions

This paper explored the impact of the COVID-19 pandemic on poor rural communities in Sierra Leone, particularly on children's learning during school closures. In doing so it contributes to growing literature on children's learning in the rural Global South and highlights the impact of the pandemic on children in the earlier years of primary schooling.

The focus on Sierra Leone also provides an interesting case due to its prior experience with the 2014–2016 Ebola epidemic. Learning from the Ebola crisis impacted the national response to COVID-19 though hygiene measures, strict implementation of school closures, lockdowns and compliance from communities. However, it shows limitations of this response with regards to children's continued learning in a rural area. Yorke et al. (2021) highlight the importance of local official support provided to schools during COVID-19 closures in Ethiopia. In our study in rural Sierra Leone, successful continuation of children's learning was supported by an NGO intervention for teachers, and to a lesser extent by government support where this was accessible. Supports were limited however; teacher training was only available to those communities in intervention groups so did not reach wide numbers of children, and unclear guidance for continued teaching and learning in approved schools left many children without instruction.

As with other studies in the Global South (Motsa, 2021), access to remote technology was limited. In addition, the key importance of continued teacher contact is highlighted in the literature (Wangdi & Rai, 2022; Wang et al., 2021). We confirm the importance of teacher contact and how, in the absence of targeted initiatives such as the NGO intervention, most rural children had little access to extra support in learning. This highlights the vulnerability of children in poorer remote parts of the world, being already at a disadvantage with poor school infrastructure, which is compounded by a lack of continued access to instruction and support from school leadership.

The impacts of the pandemic on children's learning were both mediated and constrained by contextual factors of rurality, poverty and low levels of intergenerational education. Not all families in the study communities were impacted the same way, mediated by family and community support structures, the capacity for parents and caregivers to support children's learning at home, and the presence of older children who

helped younger children to study at home. Children's learning at home was constrained by lack of resources, low levels of parental education and lack of access to technology.

Our research also contributes to growing literature on the role of older siblings in supporting children's formal learning in families with little history of schooling (Portela & Atherton, 2020), particularly 'first generation learners' or the first in their family to complete schooling. Older siblings were an important mediator of children's continued learning while at home during the pandemic, highlighting the importance of these intergenerational resources in times of crisis. Importantly, the capacity to support children's learning at home increases with the increased level of educational experience in the family. Such findings highlight the circular nature of educational 'flows', positioning children (typically older siblings) as important sources of educational support and 'capital' in their families, and ultimately providing a return to the family on adult investments in their schooling.

Internationally, there have been concerns that school closures would disproportionately impact girls in the Global South, drawing on experiences during Ebola (Risso-Gill & Finnegan, 2015; Goulds et al., 2020). Emerging studies on COVID-19 school closures highlighted factors affecting girls; however, much of this is focused on adolescents (Damani et al., 2022; Makino et al., 2023). During the pandemic, families in our study were keen for their children to return to school, conscious of the long-term risk to investments already made in their education. This paper adds to that literature by highlighting the impact on girls in primary schools. Our findings highlight how gendered expectations regarding girls' lower academic abilities become reinforced because of their absence from school. While all children's learning was considered impacted by school closures, girls' were especially so, giving rise to perceptions that girls would struggle more to catch up once schools had reopened.

While COVID-19 may not have had a substantial impact on overall incomes in the region (World Bank Group, 2021), it nevertheless provided challenges – particularly in education – to communities already struggling with the everyday reality of extreme poverty and rurality. In the future, there may be similar emergencies resulting in educational disruption. Our analysis highlights the need to ensure all children have access to sustainable methods of learning, especially in poorer, remote communities where children, particularly girls, face additional disadvantage. A key area of policy must be targeted support for teachers (and school principals) during such times of crisis. To be effective, however, this needs to be matched with the provision of resources – quality books, notes, access to teachers – at each local community to enable all children to participate and go some way to reducing disadvantage from school closures in the future.

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