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## Intersecting barriers to adolescents' educational access during COVID-19: Exploring the role of gender, disability and poverty

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### ABSTRACT

This article explores the social determinants of adolescents' access to education during the COVID-19 pandemic in three diverse urban contexts in Bangladesh, Ethiopia and Jordan. It provides novel empirical data from the Gender and Adolescence: Global Evidence longitudinal study, drawing on phone surveys (4441), qualitative interviews with adolescents aged 12–19 years (500), and key informant interviews conducted between April and October 2020. Findings highlight that the pandemic is compounding pre-existing vulnerabilities to educational disadvantage, and that gender, poverty and disability are intersecting to deepen social inequalities. The paper concludes by reflecting on policy implications for inclusive distance education in emergencies.

### 1. Introduction

There are estimated to be 1 billion adolescents (aged 10–19 years) globally, most of whom live in low- and middle-income countries (LMICs) (Patton et al., 2016). There is increasing recognition that adolescence constitutes a critical intervention window, given the far-reaching physical, cognitive and socio-emotional changes that occur; and missed educational opportunities can have consequences throughout the life course and for subsequent generations (GAGE consortium, 2019). With the closure of educational institutions during the COVID-19 pandemic resulting in an unprecedented disruption to young people's schooling across the globe (UNESCO, 2020a, 2020b; Favara et al., 2021), there is an urgent need to understand the effects on their academic and broader psychosocial wellbeing, as well as the barriers facing diverse social groups in accessing distance learning options (UNICEF, 2020a).

This paper's novel contribution to emerging findings on education disadvantage during the COVID-19 pandemic is its exploration of the role of gender, disability and poverty in shaping adolescents' access to

education in the context of COVID-19 in three diverse contexts: urban Bangladesh, Ethiopia and Jordan. It provides unique empirical data from the Gender and Adolescence: Global Evidence (GAGE) longitudinal research study, drawing on phone surveys (4441) and virtual qualitative interviews with adolescents aged 12–19 years (500), as well as key informant interviews with service providers (60) conducted between April and October 2020.

The paper begins by reviewing the literature on educational access during COVID-19, with a focus on the challenges presented by pre-existing socioeconomic inequalities in LMICs. It then presents the research methodology and results, which highlight that the pandemic is compounding pre-existing vulnerabilities to educational disadvantage in LMICs, and that gender, poverty and disability are intersecting to deepen social inequalities. The paper concludes by reflecting on the implications of the findings for inclusive distance education in emergencies in such contexts.

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## 2. Background

The COVID-19 pandemic has led to an education emergency of unprecedented global scale.

At its peak, more than 190 countries had temporarily closed schools, in an attempt to curb the spread of the virus, affecting an estimated 91 % of students worldwide or around 1.6 billion children, who were out of school as a result (UNESCO, 2020a, 2020b). Evidence shows that school closures, a response to mitigate the spread of COVID-19, have detrimental effects on children's educational outcomes and further reinforce existing educational and health-related inequalities that already existed before the pandemic. For example, based on UNICEF analyses for five low- and middle-income countries using data from the Multiple Indicator Cluster Surveys 6 (MICS6), it was found that missing school is associated with immediate reductions in foundational skills (i.e. literacy and numeracy). In this analysis, children aged 9–11 who were out of school at the time of the survey (but in school in the previous year) were between 11 and 43 percentage points less likely to develop foundational reading skills than children staying in school; and children 12–14 were between 5 and 54 percentage points behind those enrolled (Conto, et al., 2020). Moreover, school closures expose students to health and nutrition risks and reinforces gender inequality (Borkowski, et al., 2020). Hundreds of millions of children who rely on schools for free or low-price meals throughout the year have faced food insecurity, while girls have been at greater risk of gender-based violence and child marriage (Memon, et al., 2020). Similarly to what has been observed in fragile contexts, without the protective factors of attending school, children become exposed to greater risks and their need for psychosocial support becomes more urgent (Caarls, et al., 2021).

Emerging cross-country data from longitudinal research is beginning to foretell the scale of the crisis for young people's current and future experiences of poverty. For example, contrasting large-scale phone survey data from 2020 with comparable cohort data from 2016 in Peru, India, Vietnam and Ethiopia, Favara et al. (2021) find that previous relative gains in wellbeing reported by adolescents and youth have disappeared since the pandemic, with significant losses in learning and increases in school dropout rates across the countries studied which historically have led to higher rates of poverty among this cohort (Favara 2021). However, preexisting socioeconomic inequalities amplify the vulnerability of young people in various ways to poverty and subsequently school attrition, presenting challenges for developing interim education strategies that ensure no one is left behind.

These existing inequalities have been exacerbated by COVID-19, given the widespread use of technology for remote learning, when in most LMICs the access to technology needed to facilitate remote learning is uneven and education systems were unprepared in terms of supporting teachers and caregivers to facilitate the safe use of technology for learning (Dressen, et al., 2020). UNICEF (2020a) highlights the need to build hybrid learning systems that can cope with emergencies such as COVID-19 and assist states to forestall these consequences for young people's trajectories.

Research with ministries of education on their response to COVID-19 has found that lower-income countries have faced the biggest challenges in delivering remote learning, including being the least likely to have teachers tracking students' learning (UNICEF, 2020a). In Ethiopia, only 1 in 10 students involved in Young Lives cohort phone survey research have had contact with teachers during the pandemic (Favara et al., 2021). Instead, low-tech solutions such as self-study are often relied upon by schools; for example, in Kenya, Bellerose et al. (2020) find that the main mode of study during Covid-19 for girls in urban areas was to read materials and books on their own, or to listen to television and radio programmes. Yet even access to time to self-study is moderated by other inequalities. Consistently studies have found that girls in lower- and middle-income countries have experienced decreased agency over their time use and increased responsibilities at home, leading them to have less time to devote to schoolwork (UNESCO, 2020a, 2020b; Favara

et al., 2021; Bellerose et al., 2020). Research by CARE (2020) in Mali finds that protection risks to girls along with economic hardship can reduce their hopes, as well as their likelihood, of ever returning to school, with 7% of girls (compared to 1% of boys) saying they expected never to return after schools reopened.

Online platforms and TV were reportedly the most used remote learning methods, offered in 87 per cent of countries; yet it should be observed that subsidized or free Internet access is less common in low- and lower-middle-income countries (UNICEF 2020a). Taking into account the limited access to technology for children in conflict zones, rural areas and those from poorer households, these figures suggest that reliance on technology enabled distance learning may further disadvantage these children (UNICEF 2020a). Research by Matthias et al. (2020) on the impact of Covid-19 on disadvantaged groups in India, including people with disabilities and families headed by widows, finds that classes are being run by teachers via WhatsApp but that already-disadvantaged families who lack smart phones or access to other technology are unable to help their children to participate in these sessions. Amaro et al. (2020) also find that girls face challenges in developing information, communications and technology (ICT) skills both at home and at school because they are more likely to lack access to devices; this may impair their engagement with distance learning.

The Global Education Monitoring Report (Global Education Monitoring Report (GEMR) Team, 2020) on the impact of COVID-19 finds that 40 % of low and lower-middle income countries have not put plans in place to support learners at risk of exclusion, such as children and adolescents from the poorest families and those with disabilities (Global Education Monitoring Report (GEMR) Team, 2020). UNICEF (2020c) observe that in the absence of adequate IT resources and access to assistive devices, schools may be unable to accommodate the specific needs of young people with disabilities in their distance learning programming. Reliance on families who themselves are experiencing hardship during Covid-19 and lack the time resources to devote to supporting their learning may also fail to deliver inclusion for young people with disabilities. During the Ebola crisis in Sierra Leone, exclusion based on disability intersected with poverty; while there were radio broadcasts of educational content to enable learning to continue from home, the poorest households could not afford batteries and radios (Risso-Gill and Finnegan, 2015). Because children with disabilities were not seen as worthy of investing resources in, adaptations to enable them to benefit from these broadcasts, especially for adolescents with hearing impairments, were not prioritised (Humanity and Inclusion, 2016).

Although it is recognised that distance learning intersects with poverty and can exacerbate existing inequalities, there has been limited work on how to implement distance learning strategies that takes these linkages into account properly. Existing research on distance learning underlines the need to promote linkages and continuities between different modes of learning to ensure that students are not 'left behind' by a lack of access to particular formats - for example, due to gaps in access to technology that allows them to connect with teachers (Creed and Morpeth, 2014). However, this work does not address the ways that pre-existing dynamics of exclusion shape young people's access, for example, to support from family members who have the skills to help them to use distance learning materials as part of self-study. Recent research by UNICEF (2020b) in response to the Covid-19 pandemic explores the use of low- and no-tech modalities to promote distance learning, finding that whilst such modalities may help to overcome practical socioeconomic barriers to learning, they are only effective if paired with interventions that promote support by families and communities for the participation of marginalized groups.

## 3. Methods

To address the article's central research question as to how and what extent gender, disability and other pre-existing social inequalities, such as poverty, shaped adolescent access to education during the covid-19

pandemic, the paper draws on mixed-methods data including phone surveys with 4441 adolescents living in urban areas in Ethiopia, Bangladesh, and Jordan, conducted in May through July 2020. The quantitative data is complemented by in-depth qualitative interviews with 500 girls and boys carried out between April and October 2020, who are part of the GAGE longitudinal research sample to explore in more depth the ways in which gender, disability and poverty shaped adolescents' education experiences during the pandemic. Adolescent perspectives are triangulated with findings from 60 key informant interviews with community leaders and service providers regarding their understanding of context-specific barriers to distance education. This paper focuses on three diverse urban settings to explore the impact of the pandemic and its related social restriction measures—varying by country—in areas with relatively high population density.

The quantitative data is drawn from the GAGE COVID-19 Phone Survey, conducted between March and July 2020 in Ethiopia, Bangladesh and Jordan (see Table 1). The phone survey poses questions on adolescent life during the pandemic on a variety of topics, including a set of 22 questions surrounding education and learning during school closures (see Baird et al., 2020a and 2020b). In each country, surveys were conducted with a sample of households who are part of GAGE's ongoing longitudinal survey of adolescents and their adult female caregivers. The GAGE study follows boys and girls in two cohorts – younger adolescents aged 10–12 and older adolescents aged 15–17 at baseline – over time in each setting, as well as a purposely-selected sample of adolescents from particularly vulnerable subgroups, including adolescents with disabilities and those married as children (for additional details on the sampling strategy for each country setting, see Jones et al., 2018). Baseline was conducted in 2017 in Ethiopia and Bangladesh and 2018–2019 in Jordan. At the time of the COVID-19 survey, the majority of surveyed adolescents across settings were aged 12–20 years old.

**Table 1**  
Characteristics of sample in each country setting.

Sample:	Ethiopia: Debre Tabor, Dire Dawa, and Batu	Bangladesh: Dhaka	Jordan <sup>1</sup> : host communities
Male	978	291	838
Female	1078	310	936
Age 15 and older	1518	327	839
Age 10–14	538	274	935
Pre-pandemic upper 50 % assets*	950	268	798
Pre-pandemic lower 50 % assets*	889	326	976
In school pre-pandemic <sup>‡</sup>	1463	375	1282
Out of school pre-pandemic <sup>‡</sup>	593	226	492
Adolescents with disabilities	197	–	352
Married, female adolescents (age 15 and older)	186	48	112
<i>Total</i>	<i>2056</i>	<i>601</i>	<i>1774</i>

Notes.

\* Pre-pandemic asset index is based on a measure of assets standardised to each setting drawn from the prior survey for each setting: 2017 baseline survey in Dhaka, 2018–2019 baseline survey in Jordan, and 2019 midline follow-up survey in Ethiopia.

<sup>1</sup> Note: At baseline, 2460 adolescents reported living in Jordanian host communities (2018–2019). At the time of the COVID-19 survey, 72.1 % of these adolescents who lived in host communities at baseline were surveyed; however, a small percentage reported moving to a refugee camp, informal tented settlement, or another country at the time of the COVID-19 survey (64 adolescents, or 2.6 % of the Host sample). Finally, several adolescents in the survey reported moving into a Host community from a refugee camp or informal tented settlement by the COVID-19 survey (66 adolescents total). For more detail on the sampling across all contexts see Jones et al., 2018.

<sup>‡</sup> Pre-pandemic school enrolment status is based on formal school enrolment as of March 2020.

GAGE partners in each country administered the survey over the phone or through virtual sessions. In Ethiopia, where baseline surveys were conducted in 2017 and Round 2 surveys were conducted in 2019, surveys were conducted with 2056 adolescents in the urban areas of Debre Tabor, Dire Dawa and Batu – an 83 % response rate. In Bangladesh, baseline surveys were conducted in 2017. The COVID-19 Phone Survey includes 601 adolescents living in two peri-urban slum areas and one low-income settlement in Dhaka – a 77 % response rate for this sample. Finally, the Jordan survey includes 1774 adolescents, including Syrian and Palestinian refugees living in urban host communities as well as Jordanian adolescents living in similar urban settings. This is a response rate of 69.5 % for this sample following baseline conducted in 2018–2019, but also includes a small number of additional adolescents who moved into Host communities from refugee camps or tented settlements during the time between the baseline survey and the COVID-19 survey. While these response rates are somewhat lower than rates might be for an in-person survey, it is worth noting that data collected at baseline—or midline in Ethiopia—shows high household access to mobile phones in each of these settings (99 % in urban, Jordanian host communities, 97 % in Dhaka, Bangladesh, and 95 % in urban Ethiopia). Although we acknowledge that the virtual nature of the COVID-19 survey means that the survey may miss those adolescents from households with the very lowest levels of connectivity via internet or mobile phones, overall, the group of adolescents who were reached for virtual interviews at the time of the COVID-19 survey were largely similar to the baseline sample on observable characteristics, except that the COVID-19 survey was more likely to reach younger adolescents than their peers in the older cohort.

Within each sample, we provide descriptive statistics overall and for various subgroups, including male and female adolescents, older and younger adolescents, and those with and without disabilities, and test for statistically significant differences in responses. All differences discussed in the results section are statistically significant at the  $p < 0.05$  level. We exploit the longitudinal nature of the GAGE study by exploring differences in access to virtual education within subgroups identified via baseline data, including pre-pandemic school enrollment status, disability status, and pre-pandemic household wealth. For each setting, we rely on a standardised asset index drawn from the most recent survey prior to the COVID-19 Phone Survey as a proxy measure of pre-pandemic household wealth (following the commonly-used methods of Filmer and Pritchett, 2001); we then compare adolescents from households with above-median household assets (i.e., those with higher baseline resources) to those with below-median household assets (i.e., those with lower baseline resources) within each setting. We also utilize prior data on adolescent disability; adolescents with disability were both purposely sampled within each setting and further identified in baseline surveys using responses from adolescents themselves and/or their primary female caregivers to the Washington Group (WG) on Disability Statistics: Recommended Short Set of Questions on Disability. In Dhaka, Bangladesh and in urban Ethiopia, we use sample weights to ensure that our findings are representative of the population of adolescents living in these specific communities.

The survey findings were complemented by qualitative research carried out through telephone interviews between April and July 2020 with 151 adolescent girls and 139 adolescent boys (see Table 2). In each country, in line with the 'leave no one behind' 2030 Agenda for Sustainable Development, we included young people from particularly marginalized groups – namely adolescent girls married as children, working and out-of-school adolescents, adolescents with disabilities, and adolescents from urban slums. In-depth interviews were also conducted with 83 key informants involved in service provision and in local and district governments. Researchers were selected from partner organisations in the respective countries who had built up prior relationships with participants in the GAGE research. They carried out the telephone interviews in local languages, drawing on a virtual qualitative research toolkit developed by GAGE (see Małachowska et al., 2020). The

**Table 2**  
Qualitative research sample size and distribution by country.

Country	Younger girls	Younger boys	Older girls	Older boys	Married girls	Adolescents with disabilities	Sub-total adolescents	Key informants
Jordan	21	17	47	25	(15)	(20)	110	45
Ethiopia	23	23	40	39	(10)	(10)	125	30
Bangladesh	5	3	15	7	(6)	(5)	30	8
Total	49	43	102	96	(31)	(35)	265	83

interviews were transcribed, translated and coded thematically according to a thematic coding book using the software package MAXQDA. Debriefing sessions which discussed emerging findings during the data collection phase were used to ensure that codes also captured country-specific issues. During qualitative data analysis, care was taken to identify cross-cutting themes while also allowing space for unique voices to emerge that were more specific to individual experiences. Ethics approvals were secured locally and internationally.

**4. Results**

This section discusses existing inequalities in formal educational enrolment among our sample prior to COVID-19, before focusing on the factors that shape uptake of distance education and support for it from family, teachers and other service providers. We pay particular attention to gender, disability and socioeconomic inequalities.

**4.1. Enrolment in formal schooling prior to COVID-19**

To contextualise our findings on adolescents’ distance education experiences during the pandemic and how these were mediated by social and gender inequalities, we begin with a brief discussion of the patterning of enrolment in formal schooling prior to the onset of COVID-19 (see Table 3). In the Dhaka (Bangladesh) sample, 68 % of adolescents were enrolled in either formal school or participated in an informal or non-formal education programme before the COVID-19 pandemic led to nationwide school closures in early 2020 (March 17, 2020), and schools remain closed as of early December 2020. While there are no significant differences by gender, younger adolescents are 30 percentage points more likely to have been enrolled than older adolescents (81 % and 52 % respectively). School enrolment pre-COVID-19 is also associated with

**Table 3**  
Formal School Enrollment Prior to Pandemic (March 2020) by Subgroup.

	Jordan	Ethiopia			Dhaka, Bangladesh
		Dire Dawa	Debre Tabor	Batu	
Younger cohort (age 10–14)	94 %	92 %	65 %	–	81 %
Younger males	92 %*	91 %	54 %*	–	78 %
Younger females	95 %*	93 %	75 %*	–	84 %
Older cohort (age 15+)	48 %	78 %	62 %	78 %	52 %
Older males	48 %	80 %	51 %*	81 %	49 %
Older females	49 %	76 %	69 %*	76 %	54 %
Older married girls (age 15+)	1 %*	20 %*			17 %*
Older unmarried girls (age 15+)	65 %*	83 %*			68 %*
Adolescents with disabilities	75 %	74 %			–
Adolescents without disabilities	72 %	74 %			–
Baseline below-median wealth	64 %*	72 %			62 %*
Baseline above-median wealth	82 %*	76 %			75 %*

Note: \* indicates statistically significant difference between prior formal school enrollment rate across subgroups at p < 0.05.

marital and socioeconomic vulnerability status. Among the older female cohort only, married girls are much less likely to be enrolled than unmarried girls (17 % versus 68 %). Moreover, adolescents from households with below-median pre-pandemic assets are 14 percentage points less likely to be enrolled than those households with above-median pre-pandemic assets in their community (61 % versus 75 %) as determined using the methods of Filmer and Pritchett (2001). Qualitative data echoes this finding, highlighting that not being enrolled in school is associated with opportunity costs to learning that households cannot cover. A 13-year-old out-of-school girl from site 3 explained:

*It hasn't even been a year yet [that I quit school]. My mother wasn't able to go to work, so my father was working alone, and my two other younger sisters are also studying... that's why. I left because of financial crisis... and I started working in garments [factory]. In my free time I sometimes read my sister's textbooks.*

In Ethiopia, 75 % of adolescents in the sample were enrolled in some type of schooling (formal or informal) before COVID-19, with younger adolescents (77 %) more likely to be enrolled than older adolescents (70 %), and older adolescents in Batu (80 %) and Dire Dawa (78 %) significantly more likely to be enrolled than those in Debre Tabor (62 %).

In Jordan, prior to the pandemic, 95 % of younger adolescents were enrolled in formal education compared to 54 % of older adolescents. While schools briefly opened in September, they quickly re-closed and remain closed as of early December 2020.

**4.2. Distance education uptake**

Our findings show that during school closures brought about by the pandemic, adolescents in all three contexts sought to engage to varying degrees with distance education options, but that there were significant barriers to uptake in practice.

The GAGE COVID-19 survey asks students who were enrolled in formal schooling immediately prior to the pandemic to identify the main activity—if any—they are engaging in to continue learning while schools are closed (see Table 4). Across settings, the vast majority of students were engaging in at least some form of learning during school closures, with methods of learning ranging from using resources provided by the Ministry of Education (MOE) in each country online or over the television or radio, doing assignments set by the student’s own school, or engaging in more self-directed study using their own books or using other online resources. Notably, students report continuing to learn during school closures at high rates across settings and subgroups despite relatively low percentages of students reporting that formal schools are providing any support for learning during the pandemic: 70 % of students in Jordan, 25 % of students in Ethiopia, and just 15 % of students in Bangladesh.

In Bangladesh, almost all previously enrolled formal school students (97 %) reported continuing their learning during school closures using any method, with no statistically significant differences by gender, age or pre-pandemic household wealth. Home study poses difficulties for many adolescents, however; they lament the loss of traditional in-school teaching and learning. An 11-year-old girl explained her desire to continue to study notwithstanding the difficulties, ‘Yes [I am continuing to study]. I study Bangla, Mathematics and Science. [Of course the lockdown will] have a negative impact but there’s nothing we can do about it now.



**Table 4**  
Continuity of Learning During Shutdown – Primary Forms of Learning Among Students Enrolled in Formal Schooling Prior to Pandemic.

	Jordan	Ethiopia	Dhaka, Bangladesh
Student reports that their school is providing any support for learning during school closures	70.2 %	25.4 %	15.4 %
Student reports engaging in any form of learning during school closures	96.0 %	86.0 %	96.5 %
<i>Primary form of learning during school closures, as reported by student</i>			
Doing assignments provided by school	8.0 %	7.1 %	4.4 %
Self-study using own books at home	7.9 %	57.7 %	79.9 %
Using Ministry of Education (MOE) programming on TV or radio	28.1 %	8.2 %	7.3 %
Using MOE programming online	17.9 %	2.5 %	0.2 %
Online videos (not affiliated with MOE programming)	8.6 %	3.2 %	1.1 %
Using mobile learning apps	18.6 %	3.3 %	0.1 %
Any other online learning	6.4 %	4.0 %	3.4 %
Any other form of learning	0.5 %	0.1 %	0.2 %
No learning activities at all	4.0 %	14.0 %	3.5 %

Note: Table presents responses from adolescents who were enrolled in formal school immediately prior to the pandemic (March 2020), including 1282 adolescents in host communities in Jordan, 1463 adolescents in urban Ethiopia, and 374 adolescents in Dhaka, Bangladesh.

*People are unable to get out of their houses because of this coronavirus.*

Our findings show that among students previously enrolled in formal schools in Ethiopia, 86 % were trying to continue learning during the pandemic/closures. Notably, the percentage of students who reported engaging in any form of learning from home varied by subgroup; 92 % of boys reported continuing their learning at home using any method, compared to just 81 % of girls, and 91 % of younger adolescents reported engaging in any learning activities during school closures compared to just 84 % of older adolescents. Furthermore, adolescents from households with above-median assets were had a small but significant advantage in engaging in any learning activities during the pandemic (89 % of students with above-median household assets reported any learning activities during school closures, compared to 85 % of students from households with below-median assets at baseline).

Overall, 96 % of Jordanian adolescents in the sample reported engaging in any learning activities during school closures, with older girls slightly more likely to engage in any learning activities (99 %) compared to older boys (93 %) but no significant differences by baseline wealth or disability status.

#### 4.2.1. Distance education modalities by subgroup

In terms of the type of distance education that young people were able to access, there were significant variations both across contexts and within student subgroups across survey settings (see Table 5). In Jordan more adolescents were engaging with online education options, whereas in Bangladesh and Ethiopia, the most common approach was using existing school textbooks. This stark difference is likely due to the higher connectivity rates observed in Jordan; among Jordanian adolescents whose primary caregiver was also surveyed for the COVID-19 survey, 90 % of households reported that they were able to connect to the internet using any device, compared to just 56 % in Dhaka and 47 % in Ethiopia.

In response to the pandemic, Bangladesh's Ministry of Education began offering distance learning broadcasts via radio and on television over a state-owned television channel, *Sangsad TV* (Ria et al, 2020). School lessons take place daily in two-hour intervals and are meant to cater to diverse school levels. However, despite the availability of TV- and radio-based lessons early on in the pandemic, relatively few students in Dhaka reported using these offerings as their primary form of learning during school closures. Just 7% of adolescents in Bangladesh said that studying through the Ministry of Education's distance learning broadcasts via TV and radio as their primary form of learning, with

slightly higher rates among girls (11 %) than boys (4%). When factoring in age, young girls are the cohort most likely to access these TV- and radio-based distance learning programmes, with 13 % reporting that this was their primary form of learning during closures. Respondents mentioned the TV lessons were brief in duration, and difficult to follow due to a lack of interaction with educators as well as technical problems. A 16-year-old girl explained, *'When I watched math classes, I couldn't understand what was written on the board. They used a whiteboard for that ... and it is very hard to understand those writings.'*

Lack of steady internet access is common among students enrolled in formal schooling in Bangladesh and plays a part in the lack of uptake of online learning. Across the Dhaka sample, less than 1% reported that their primary form of learning was Ministry programmes online or engaging with mobile learning apps, and less than 5% reported any form of online learning as their primary method of studying during school closures, with no significant differences by gender, age or socioeconomic status. Our qualitative data highlights that even the few who do get online may not get the assistance with studying that they need. A 17-year-old boy explained, *'[the lockdown] will be harmful for my education. I can get help from teachers for English or Math problems when school is open. I don't understand YouTube and Google tutorials that much. [Also] I'm having trouble with internet connection.'* There were however exceptions among better off families. Rather than the TV-based offerings, by far the most commonly cited way to engage in distance learning among students in Dhaka is studying by using one's own books at home (80 %), with boys 10 percentage points more likely to cite this modality than girls (85 % and 75 % respectively). Adolescents from households with below-median pre-pandemic wealth are 10 percentage points more likely to rely primarily on books for home study than adolescents from wealthier households (85 % versus 75 %). Among married girls, those who were enrolled in school prior to the pandemic (just 17 % of married older girls), all reported continuing to learn during the pandemic by relying on their own books to study at home.

In Ethiopia, schools closed in late March 2020 and remained closed until late October 2020. While the government has made some provisioning for remote education via television (TV), radio and social media (e.g. telegram), key informants and adolescents emphasised that these channels were not readily accessible. As an Education Bureau official in South Gondar (Amhara region) explained:

*How many people have TV and radio? How many of the students in grades 11 and 12 have access to laptops and read things by saving on memory sticks? Even for us, while sitting in the woreda [town], for how many days do we have access to electricity and water? This [approach] is useful for larger towns. It is not possible for towns like ours... In such circumstances, 'education on television and radio' is unthinkable.*

The challenges in accessing TV-, radio-, and internet-based educational resources were reflected in the quantitative findings; in urban Ethiopia, the most commonly reported method of home study by students was using their own textbooks (58 %), although small numbers of adolescents reported that their primary method of learning was tuning in to Ministry of Education TV or radio programming (8%) or working on assignments provided by their school (7%). Older adolescents in Dire Dawa, the largest urban centre in our Ethiopian sample, report substantially greater access to online learning platforms compared to older adolescents in other locations, probably due to better overall digital connectivity in the city. Students attending private schools are also more able to access a variety of distance education modalities than those in government schools. As an 18-year-old girl from Dire Dawa noted:

*When I was attending school, I studied at home and I may have asked teachers about unclear things, and the teachers would explain it for me. But now, I study only in the way I understand it, and it is a little bit tough. I was able to ask my teachers about difficult things, but now since school is closed, that is impossible... I don't know anything about television lessons for students... The school doesn't send any worksheets... There is nothing up to now, maybe it is because it is a government school. Some private*

**Table 5**  
Continuity of Learning During Shutdown – Primary Forms of Learning Among Students Enrolled in Formal Schooling Prior to Pandemic by Subgroup.

	Males, age 15+	Females, age 15+	Males, age 10–14	Females, age 10–14	Above-Median Assets	Below-Median Assets	Students with disabilities	Students without disabilities
<i>Jordan</i>								
Doing assignments provided by school	5.0 %*	11.5 %*	6.1 %	9.5 %	7.5 %	8.6 %	6.1 %	8.6 %
Self-study using own books at home	15.0 %	10.2 %	6.9 %	4.9 %	7.8 %	8.0 %	8.7 %	7.7 %
Using Ministry of Education (MOE) programming on TV or radio	19.4 %	15.5 %	37.6 %*	28.9 %*	27.8 %	28.4 %	29.3 %	27.8 %
Using MOE programming online	18.3 %	17.7 %	18.4 %	17.4 %	18.2 %	17.7 %	16.3 %	18.3 %
Online videos (not affiliated with MOE programming)	16.1 %	11.9 %	5.7 %	6.6 %	7.8 %	9.4 %	11.0 %	8.0 %
Using mobile learning apps	12.2 %*	22.6 %*	14.9 %*	22.5 %*	19.7 %	17.4 %	14.4 %*	19.5 %*
Any other online learning	6.1 %	9.3 %	4.7 %	6.6 %	6.9 %	5.9 %	8.0 %	6.0 %
Any other form of learning (not online)	1.1 %	0.4 %	0.5 %	0.4 %	1.1 %*	0.0 %*	0.4 %	0.6 %
No learning activities at all	6.7 %*	1.3 %*	5.2 %	3.1 %	3.2 %	4.6 %	5.7 %	3.5 %
<i>Ethiopia</i>								
Doing assignments provided by school	7.4 %*	3.5 %*	19.3 %*	6.4 %*	5.6 %	7.9 %	6.3 %	7.3 %
Self-study using own books at home	58.3 %	52.8 %	60.2 %*	70.1 %*	56.6 %	59.4 %	58.2 %	57.8 %
Using Ministry of Education (MOE) programming on TV or radio	7.2 %	8.7 %	9.3 %	7.9 %	10.1 %*	6.9 %*	0.5 %	8.5 %
Using MOE programming online	2.7 %	3.2 %	1.9 %*	0.0 %*	3.5 %	1.8 %	0.9 %*	2.7 %*
Online videos (not affiliated with MOE programming)	4.5 %	3.6 %	0.5 %	1.2 %	4.2 %	2.4 %	4.8 %	3.1 %
Using mobile learning apps	7.9 %*	1.0 %*	2.1 %	0.6 %	3.6 %	3.3 %	3.1 %	3.4 %
Any other online learning	2.8 %*	6.3 %*	1.1 %	2.0 %	5.1 %	2.8 %	1.1 %*	4.2 %*
Any other form of learning (not online)	0.1 %	0.1 %	0.0 %	0.0 %	0.0 %	0.0 %	0.4 %	0.0 %
No learning activities at all	9.1 %*	20.8 %*	5.8 %*	11.9 %*	11.4 %*	15.4 %*	20.1 %	13.1 %
<i>Dhaka, Bangladesh</i>								
Doing assignments provided by school	3.4 %	4.6 %	3.0 %	6.2 %	3.6 %	5.4 %	–	–
Self-study using own books at home	81.0 %	73.5 %	87.7 %*	75.5 %*	75.3 %*	84.9 %*	–	–
Using Ministry of Education (MOE) programming on TV or radio	3.5 %	6.6 %	4.1 %*	12.5 %*	9.8 %	4.7 %	–	–
Using MOE programming online	0.0 %	1.0 %	0.0 %	0.0 %	0.0 %	0.4 %	–	–
Online videos (not affiliated with MOE programming)	0.8 %	3.1 %	0.0 %	1.3 %	2.0 %	0.0 %	–	–
Using mobile learning apps	0.8 %	0.0 %	0.0 %	0.0 %	0.3 %	0.0 %	–	–
Any other online learning	3.6 %	5.6 %	2.8 %	2.7 %	4.7 %	2.0 %	–	–
Any other form of learning (not online)	0.0 %	1.2 %	0.0 %	0.0 %	0.4 %	0.0 %	–	–
No learning activities at all	6.8 %	5.5 %	2.4 %	1.8 %	4.3 %	2.6 %	–	–

Note: Table presents responses from adolescents who were enrolled in formal school immediately prior to the pandemic (March 2020), including 1282 adolescents in host communities in Jordan, 1463 adolescents in urban Ethiopia, and 374 adolescents in Dhaka, Bangladesh. Within each subgroup, an asterisk (\*) indicates a statistically significant difference in the percentage of students from each subgroup category reporting using a given method as their primary form of learning during school closures at  $p < 0.05$ .

*schools do different things... They send questions for their students to study.*

In Jordan, access to distance learning is somewhat higher than in other settings. During early lockdowns in response to the pandemic, all schools and universities were closed and the Ministry of Education introduced a remote learning programme delivered through an online service (darsak.jo) and two national TV channels. The vast majority of our sample were aware of these: 92 % of younger adolescents and 86 % of older adolescents had heard of the ministry’s national broadcasts on TV or radio; even so, only 46 % of adolescents previously enrolled in formal schooling report using these television, radio, or internet-based services as their main way of engaging in learning while schools are closed. However, our qualitative findings showed that despite the quick launch of distance learning, adolescents in our sample reported numerous barriers to continuing their education, such as having no access to the internet, having one TV set for the whole household, or not having a computer at home. As a 12-year-old girl living in an informal settlement near Amman explained:

*I used to go to school, now I only study at home. They sent us a message, and told us it is now through the internet... In our tent, only my dad has a phone. We do not know how to study alone, and I do not know if they stopped giving lessons or not.*

Among younger adolescents, 33 % reported that their primary method of learning during school closures was MOE TV or radio broadcast, while another 18 % reported primarily using MOE programming online. Older adolescents were less likely to rely primarily on MOE TV or radio broadcasts to continue learning (17 %). However, older adolescents often reported that their primary method to continue learning during school closures involved the internet, including MOE online programming (18 %), mobile learning apps (18 %), or online videos (14 %). In stark contrast to trends in Bangladesh and Ethiopia, only 6% of younger adolescents and 12 % of older adolescents were learning primarily by using their own textbooks.

#### 4.3. Support for distance learning

Overall, our findings show that many adolescents received limited support with distance education from their schools and teachers. While

adolescents across contexts reported high rates of support from their families for continued learning, qualitative results suggest that students still struggle to learn at home during school closures (See Table 6).

In Dhaka (Bangladesh), with schools and teachers providing limited support to distance learning (only 15 % of adolescents report receiving learning support from school and 23 % of households report having been in contact with a teacher in the past week), support for home learning falls to the family. A 17-year-old boy stressed, *‘if I face any problem doing homework or understanding any chapter, I can’t talk to my teacher’*; and a 19-year-old boy recounted, *‘No, [our school] didn’t get any chance to give us study plans or homework. No [I am not in contact with my teachers because] I don’t have a mobile phone and don’t use Facebook.’*

Most adolescents, however, reported receiving some family support with their studies, with younger adolescents 9 percentage points more likely to receive family help than older adolescents (84 % versus 75 % respectively), and with no marked differences by gender or pre-pandemic household wealth status. Notwithstanding widespread family support for adolescents’ home study, sometimes this is insufficient. A 17-year-old girl living with a disability expressed her profound concerns:

*I can’t get good results in this way, if the school is closed. We are poor. If we don’t get good results in the exam, we won’t get a chance anywhere. Our studies are being affected because of corona[virus]... our education institutes [special needs classes] are closed. [Yes,] you can study at home, but you need someone [to help you]. You need an educated elder brother or sister. Or either one of your parents has to be educated. But in my family, there is nobody who is educated. Everyone wants to raise their children into decent human beings [but] how will they do this? Everything is closed.*

Similarly, a 16-year-old girl expressed a worry that was shared in numerous other qualitative interviews: *‘The bad thing is that I am not gaining any new knowledge or study topics. I am the eldest among my siblings, so there is no one who can help.’*

In Ethiopia, our survey findings indicate that overall, few formal schools are providing learning support during school closures, with just 25 % of adolescents indicating such support (and much higher rates among older adolescents in Dire Dawa (36 %) than in Batu (21 %) and Debre Tabor (14 %), and only 10 % of enrolled adolescents reporting contact with a formal school teacher in the past week. This was echoed in the in-depth interviews, with students—and also teachers—highlighting that they had had no interaction with their teachers, many of whom had moved back to their place of origin during the pandemic. With generally low levels of parental literacy, adolescents had very limited options to access support with their studies at home. As a 16-year-old girl from Batu noted: *‘We do not have contact with our teachers. Teachers also consider it as vacation and they went. No one asks or sends questions.’* Similarly, a 19-year-old adolescent boy from Dire Dawa explained: *‘I will sit for 8th grade exam but I am not studying. I am not*

*getting knowledge from my teachers, which has a big impact.’*

The survey findings indicated that most adolescents were getting support from their families to continue studying (58 %), with higher rates among older adolescents in Batu (65 %) than in Dire Dawa (49 %) and Debre Tabor (51 %). Most often, family support includes giving the adolescent a space to study (reported by 48 % of students with any family support), reducing chores (39 %) and helping with schoolwork (37 %). However, data from the in-depth interviews suggest that the support they did receive had limited impact. As an 18-year-old girl from Debre Tabor noted:

*My study is mostly practical. There might be minor things that I can do with a calculator, otherwise, it is not something that you can do on your own. It is something that you work in a group of three or four. There are some notes you read at home, but there is not much that you can do alone.*

In Jordan, among adolescents enrolled in formal schooling, students had significantly greater support from teachers than in the other two countries: 48 % of younger adolescents and 55 % of older adolescents had been in contact with a formal schoolteacher in the seven days prior to the survey. Older and younger adolescents were equally likely to report receiving any support from their family (88 %); however, the type of support appears to vary by age. Across genders, older adolescents are more likely to receive space to study, books, and a device with internet access. In contrast, younger adolescents are more likely to receive support in the form of direct family help with schoolwork, TV or radio time allocated for learning, and familial support in organizing study groups with peers.

These survey findings notwithstanding, our qualitative findings indicate that adolescents who were able and motivated to continue their learning reported having many difficulties in doing so (e.g. understanding study materials), due to lack of interaction with teachers and limited help from family members. Many girls were worried about their education prospects, as their families did not value this new modality of learning. As a 16-year-old married Syrian girl in Jordan commented:

*I am one of the people who do not listen to what others say, but sometimes others’ talk can affect one’s life... Currently, I do not think of leaving my studies even when people say to me ‘this is in vain, it’s fake studying’. I try as much as possible not to listen to them or even respond.*

There was, however, an important exception that emerged in our Jordan sample, which showed that young people who are part of a UNICEF-supported national non-formal education programme, Makani were supported to access distance education modalities. Across the sample, 25 % of adolescents in Jordan were enrolled in any informal or non-formal educational programmes prior to the pandemic in March 2020. Among this group, some 28 % of younger adolescents and 38 % of older adolescents who were enrolled in any informal schooling or nonformal programme received learning support from this programme during closures. These adolescents reported that they received additional learning support during lockdown, which they greatly appreciated, as it gave them the opportunity to interact with programme facilitators and ask questions about their school assignments through phone and WhatsApp.

4.3.1. Gender differences in support, privacy and time use

Our findings point to significant differences based on gender in terms of support for education, access to privacy needed for studying, and time use, but there was considerable variation across contexts, with girls in Bangladesh and Ethiopia facing disadvantages, while boys in Jordan were more disadvantaged (see Tables 7 and 8).

In Dhaka (Bangladesh), there were significant gender differences in the specific strategies and methods that families have adopted to facilitate home-based learning; while girls and boys are equally likely to report support from their families, girls are 11 percentage points less likely to receive help with their schoolwork compared to boys (65 %

**Table 6**  
Family Support for Learning During Shutdown in Jordan by Cohort.

	Older Cohort	Younger Cohort	Significant difference
Family is providing learning support (among formal school students)	85 %	89 %	No
<b>Types of Support:</b>			
Family is homeschooling (teaching the material)	29 %	55 %	Yes
Family is helping with schoolwork	25 %	61 %	Yes
Family is providing space to study	75 %	67 %	Yes
Family is providing a device with internet access	78 %	70 %	Yes
Family is providing books to study	32 %	22 %	Yes
Family is providing TV or radio time	41 %	61 %	Yes
Family is organizing study groups	26 %	37 %	Yes
Family is providing mobile apps	34 %	42 %	Yes

Note: Table presents only results for types of family support with statistically significant differences by subgroup at p < 0.05.



**Table 7**  
Family Support for Learning During Shutdown in Dhaka, Bangladesh, by Gender.

	Male	Female	Significant difference
Family is providing learning support (among formal school students)	81 %	81 %	No
<b>Types of Support:</b>			
Family is helping with schoolwork	77 %	65 %	Yes
Family is providing space to study	64 %	50 %	Yes
Family is providing books to study	35 %	23 %	Yes

Note: Table presents only results for types of family support with statistically significant differences by subgroup at  $p < 0.05$ .

**Table 8**  
Family Support for Learning During Shutdown in Ethiopia by Gender.

	Male	Female	Significant difference
Family is providing learning support (among formal school students)	63 %	54 %	Yes
<b>Types of Support:</b>			
Family is homeschooling (teaching the material)	15 %	22 %	Yes
Family is helping with schoolwork	44 %	31 %	Yes
Family is providing space to study	62 %	35 %	Yes
Family is reducing time spent on household chores	57 %	22 %	Yes
Family is organizing study groups	1%	4%	Yes
Family is providing mobile apps	1%	4%	Yes

Note: Table presents only results for types of family support with statistically significant differences by subgroup at  $p < 0.05$ .

versus 76 %), as highlighted by a 12-year-old girl who reported, 'I read from my guidebook [at home]. There is no one to help me.' Girls are also 14 percentage points less likely to enjoy additional space to study at home (50 % of girls versus 64 % of boys) although qualitative data suggests that this has more to do with urban low-resource housing than with gender. A key informant explained:

*In urban slums, the housing pattern is a bit different... They live in a small space, so, they don't have a dedicated space for learning. The small houses they live in, you can't stay in those small spaces for too long either.*

Girls may also be required to spend more time on household chores; one 17-year-old girl explained 'I don't regularly [watch the government's TV classes]... because of my housework'. In Dhaka, less than 2% of adolescents enrolled in formal school are accessing study groups to help with learning continuity, with no differences by gender. Adolescents explained that maintaining contact with peers to study is an expense they cannot rely on with constancy. Although some Internet providers are providing low-cost data bundles, these are still out of reach for some adolescents. A 19-year-old girl explained, 'Sometimes [my friends] call me and when I feel bored I spend some time with them. But it's not possible to study with them on the phone, it's not possible to call friends all the time.' An 18-year-old boy living with a disability similarly mentioned:

*Those who are using Facebook are joining and attending [classes and study groups]. Now almost every college [upper secondary school level] student is using Facebook and Messenger. My problem is that I've no Wi-Fi in my house. So, I need to purchase the internet or go outside for that. It takes a lot of bandwidth for that one-hour class.*

In Ethiopia, there were even stronger gender differences in terms of family support for distance education. Adolescent boys were more likely to report receiving any support from their family at all (63 % compared to 54 %). Furthermore, boys were almost twice as likely as girls to receive support in terms of being given space to study (62 % versus 35 %) and having their time spent on chores reduced to accommodate

home study (57 % versus 22 %).

For example, a 17-year-old girl in Dire Dawa noted:

*I used to have rest time when there was school. Now I am working until night. I am spending my time working... I am happy because I am helping my mother, and I have also come to understand how much my mother was toiling... Before, it was not for the whole day that she was working alone. For example, when I was attending school, I used to help her in the evening.*

Adolescent boys also received more support from their family in terms of helping with their schoolwork – 44 %, compared to 31 % of adolescent girls.

Overall, very few adolescents reported receiving family support for organizing study groups or accessing mobile apps to support their distance education; however, among the few who did, girls reported more support (4.4 %) than boys (1.5 %), and similarly with mobile apps (4.1 % for girls compared to 1.2 % for boys).

In Jordan, our findings highlighted strong educational advantages for girls compared to boys during school closures due to COVID-19. This does, however, also echo pre-pandemic patterns of educational disadvantage (Presler-Marshall et al., 2017). We found that 89 % of older girls and 82 % of older boys had heard of ministry national broadcasts on TV or radio.

In terms of adolescents' time use during school closures, 43 % and 51 % of younger and older adolescents respectively were spending the same number of hours or more per weekday studying or learning. In terms of household chores, 87 % of younger adolescents and 83 % of older adolescents spent more time on household chores and/or childcare since the pandemic began. However, when this data was disaggregated by gender, our findings show that older boys were slightly more likely to report an increase in chores and childcare responsibilities than girls (86 % compared to 81 %). Furthermore, among enrolled students, 63 % of older girls reported that their family had reduced their chores, compared to 45 % of older boys.

This gender difference was also reinforced by access to support from formal education providers. During closures, 85 % of older girls and 56 % of older boys reported receiving learning support from their formal school; 64 % of older girls had been in contact with a teacher in the past seven days, compared to 43 % of older boys.

Among older girls, 40 % (compared to 25 % of boys) reported having a mobile app provided by their family.

#### 4.3.2. Gender differences in risk of not being re-enrolled after COVID-19 closures

When adolescents' female caregivers were asked whether they were apprehensive of their adolescent child not returning to school following COVID-19, girls were reported to be at greater risk.

In Bangladesh, adult caregivers of girls were more concerned about their female child not returning to school compared to boys, yet numbers were stark for both genders (35 % and 24 % respectively). Our qualitative data underscores economic problems stemming from COVID-19 as posing the greatest obstacles towards continuing education, coupled with a prospect of poor exam scores. A 17-year-old girl explained:

*Most of the time I worry about how my father has no earnings now. Will I be able to get admitted in college? If I can't... I will lose one year of life. A lot of time has been wasted. If my father has financial problems it will make the problem worse.*

Similarly, a key informant discussed the financial risks associated with dropping out of school, highlighting the negative consequences this could lead to:

*Because of the cost, a lot of girls and boys might leave studying... because of their financial state. This is a risk. And because of this, what will*

*happen is that child marriage will increase. And along with child marriage, early pregnancies...*

Similarly, in Ethiopia, of all adolescents enrolled in either formal or informal schooling prior to the pandemic, 97 % want to return to school. Fewer than 1% report feeling concerned that they will not be able to return, with no differences according to age cohort, gender or residential location. This however contrasts starkly with the views of their primary female caregivers, who were significantly more worried about their adolescent children returning to school: 46 % were concerned that their adolescent would not return to school. This was particularly the case among caregivers with daughters: 51 % of caregivers of adolescent girls expressed concerns compared with 41 % of caregivers of adolescent boys. There were also notable differences across urban sites: caregivers of older adolescents living in Debre Tabor (50 %) and Dire Dawa (46 %) more concerned than those in Batu (35 %). These findings resonate with the qualitative findings, which highlight that older adolescents – and especially girls, who are more vulnerable to family pressure to drop out of school – were concerned about disruptions to their exams, which they need to pass to continue on to preparatory school and eventually university. As a 15-year-old girl from Dire Dawa noted: *I don't know if the school is going to be opened. We are in a critical time. The year is ending. It is harming us. There are final exams, but if it continues like this, there will be no exam and we are losing this year.*

In Jordan, among enrolled adolescents, 11 % of non-Jordanian adolescents and 7% of Jordanian adolescents think they will not be able to return to school when restrictions end. Notably among younger adolescents, 8% of boys worry about not being able to return to school after closures, compared to just 5% of younger girls. A roughly equal percentage of male and female students in the older cohort (17.5 %) expressed similar worries. A much higher percentage of caregivers are concerned that their adolescents may not be able to return to school after lockdowns end: 68 % of non-Jordanian caregivers and 56 % of Jordanian caregivers. However, there were no significant gender differences in these concerns among caregivers.

#### 4.3.3. Differences for adolescents with disabilities

Within the quantitative analysis sample, 10 % of Ethiopian adolescents and 20 % of Jordanian adolescents have a disability.<sup>1</sup> In both Ethiopia and Jordan, our findings underscore that adolescents with disabilities have faced greater disadvantages in accessing distance education during the pandemic.

In Ethiopia, the challenges of school closures emerged as especially difficult for young people with disabilities, as students with disabilities were slightly less likely to be using technology in distance learning. Among adolescents enrolled in any form of formal or informal education prior to the pandemic, 15 % of those with a disability were using internet, TV or radio to continue learning, compared to 22 % of adolescents without a disability.

Overall, few adolescents reported using the Ministry of Education's online programming as their primary form of learning during closures (2.5 %). However, among adolescents with disabilities who were previously enrolled in formal school, less than one percent reported using this online programming as their primary method to continue their education. As an 18-year-old girl with a visual impairment emphasised:

*It is easier for people with no sight problem – they can copy and read any material they want. For us, it is all about listening to the teacher and trying to remember what he has said. Sometimes we ask other students to read to us to study for examinations. Now there are no students to read to us. So if we are asked to take an exam when school opens, we haven't learnt*

*anything... People are scared to touch each other and students went back to the countryside to their families. There is no one [to help].*

Our findings on family support for adolescents with disabilities in Ethiopia were more positive. Adolescents with a disability who were enrolled in school prior to the pandemic were as likely as peers without a disability to receive family support for learning during school closures (58 %). In terms of returning to school after lockdown, our findings reveal that caregivers of adolescents with disabilities in urban areas of Ethiopia were significantly more likely to be worried that their child would not return to school compared to caregivers of adolescents without disabilities (58 % versus 45 %).

In Jordan, our findings underscore that adolescents with disabilities may also be disadvantaged during school shutdowns. Overall, adolescents with disabilities report similar levels of support from their families (88 %) and schools (70 %) as those without a disability. However, 73 % of adult female caregivers of adolescents with a disability were concerned that their child would not be able to return to school, compared to 62 % of caregivers of adolescents without a disability.

Across formal and informal students, those with a disability are as likely as those without a disability to be using technology (internet, TV, or radio) to continue learning (79 %). Even so, our qualitative findings highlight that the online learning programmes provided by the national education ministry were not disability-friendly, resulting in adolescents with disabilities stopping their studies altogether, which has caused considerable anxiety, as a 16-year-old Palestinian girl in Jordan with a hearing disability explained:

*I feel very sad because we don't go to school and we cannot study. Before the corona[virus] outbreak, my time was full – I was busy studying, spending time with my teachers and friends. Studying was the most important thing in my life. I feel afraid because we may lose the year and we might not be able to go back to school at all.*

## 5. Discussion

Our findings highlight that the pandemic is compounding pre-existing vulnerabilities to educational disadvantage in LMIC contexts, and that gender, poverty and disability intersect to deepen education inequalities. Overall access to distance education in Bangladesh and Ethiopia during the pandemic was very limited in urban communities, but more accessible in host communities in Jordan.

The gender differences in access to educational options that governments have put in place to support public health responses to COVID-19 do not follow a single pattern across the contexts included in this study. We found limited gender differentials in terms of access to distance education and family support in Bangladesh, stark differences in favour of boys in Ethiopia (especially in terms of having space to study and reduced expectations around time spent on chores), and clear differences in favour of girls in Jordan.

In Bangladesh, for girls in marginalized communities facing poverty, school attendance often shields them from household chores during part of the day and critically provides them with space to learn, socialize and form support networks (Chysamia, et. al., 2012). Our findings suggest that school closures in this context translate into reduced support and physical space to learn for adolescent girls compared to their male peers. In particular, distance learning may not be compatible with gender norms that dictate that when adolescent girls are home, they should assume domestic and care-giving roles that preclude dedicating time to learning. Therefore, even when distance learning is available to mitigate the effect of school closures, marginalized girls cannot take advantage of these measures to the same extent as boys.

In contrast, in Jordan, the findings revealed that girls were significantly more likely to be accessing online education programming on the internet than their male peers and were also more likely to receive support from their schools and teachers in studying at home. It is

<sup>1</sup> Note: The sample size for adolescents with disabilities in Dhaka, Bangladesh is too small to be reported.

important to note that public schools in Jordan are sex-segregated after grade 3, and girls' schools tend to be more supportive of students, including distance learning (UNICEF Jordan rapid assessment, October 2020). These findings mirror pre-pandemic gender disparities in education in Jordan. Boys are disadvantaged in terms of enrolment (predominantly due to poverty and pressures to be engaged in child labour) and learning outcomes (shaped by high levels of peer and teacher violence in schools and poor quality instruction, stemming from limited training and limited prestige attached to teaching as a profession for men in Jordan) (Presler-Marshall et al., 2017). There is also an emerging consensus that gender stereotypes of boys as disrespectful, disruptive and in need of authoritarian teaching and disciplinary methods are leaving boys largely unsupported and unmotivated to perform and stay in school or distance learning, and pressed to engage in child labour when households face poverty and economic pressure (Shirazi, 2016).

Our findings also highlight that formally provided support for adolescents to engage in distance education is often inadequate, and the burden of providing this support therefore often falls to families which may not know how to effectively provide it. Our findings from Ethiopia may be evidence that even when families value girls' education and do their best to support distance learning, poverty and unfamiliarity with supporting the education of adolescents may diminish the impact of government-led measures to ensure learning continuity, affecting both girls and boys from marginalized backgrounds. These findings also speak to growing global concerns around the potential risks of school closures leaving adolescent girls at higher risk of child marriage. At the time of the survey, less than 5% of adolescent girls in the urban Ethiopia sample reported concern about marrying earlier due to the pandemic; however, few adolescent girls report that the pressure to marry has decreased during this crisis (9%), and the vast majority reported that the pressure to marry has not decreased at all (91%). It is therefore critical to monitor trends in pressure to marry in diverse urban and rural contexts during the pandemic and its aftermath.

Overall, our findings show that the effects of distance learning to mitigate the impacts of school closures tend to mirror previous patterns of gender inequality and also tend to reinforce biased gender norms, exacerbating gender inequalities in opportunities to learn.

In terms of disability, our findings from Ethiopia and Jordan underscore that adolescents with disabilities face significantly greater barriers to accessing distance education than their peers without disabilities, mirroring their more general educational disadvantage. In both contexts, adolescents with disabilities were less likely to access many forms of distance education, online and offline, and their caregivers were also significantly more concerned that they may not re-enroll when schools reopen. However, interestingly, adolescents with disabilities were more likely to receive some types of family support (in terms of study space and time use) than their peers without disabilities.

### 5.1. Limitations

This study has several limitations worth noting to contextualise the study and inform its interpretation. The nature of the virtual survey presented some challenges to survey administration; a segment of households in each country were unreachable due to changes in phone numbers or other contact information between the time of the baseline and COVID-19 surveys. Although adolescents who were reached for the COVID-19 survey were roughly similar to the overall sample on observable characteristics—save for younger adolescents more likely to be found for the survey than their older counterparts—it is possible that the phone survey did not capture responses from households with the least stability in connectivity or technology access. While we sought to address this bias through our qualitative interviews (as we purposefully over-sampled the most disadvantaged at baseline to include in our qualitative interview sub-set), this should be considered in any interpretation of findings for this study. Additionally, the current analysis focuses exclusively on adolescents living in urban contexts in Ethiopia,

Bangladesh, and Jordan and as such, findings may not be applicable to adolescents in other settings, such as Ethiopian adolescents in rural areas, or Syrian refugee adolescents living in refugee camp settings in Jordan.

## 6. Conclusions

Our survey and qualitative research findings point to several important implications for inclusive distance education as the Covid-19 unfolds and more broadly in emergencies in LMIC contexts. First, it is critical that governments and development partners urgently invest in gender- and disability-responsive programming to ensure greater uptake of distance education provisioning across all modalities, from no-tech and low-tech formats through to online and mobile app formats. It is also essential that teachers and complementary non-formal education providers are equipped with training so that they can implement distance education in ways that do not reinforce pre-existing social and educational inequalities.

Second, our findings suggest that gender-responsive approaches must be informed by context-specific understandings of pre-existing gendered educational disadvantages, and recognise that girls and boys may be disadvantaged in different ways in terms of access to different types of distance education modalities and support from teachers and families. For example, due to domestic and care work responsibilities girls may especially benefit from options that allow for following distance education programming during flexible hours; this may also be beneficial to boys in settings where they need to engage in paid work activities to support their families. Girls may also benefit from awareness raising activities with communities about the importance of continuing to view girls as learners during school closure rather than as potential candidates for marriage, and from social protection support to enable families to continue to support their daughters' education. Third, given significant concerns among caregivers across all three contexts that adolescents may be unlikely to return to school when lockdowns and other restrictions are removed, it will be critical for all stakeholders to invest in promoting return to school through mass communication channels, community outreach, and potentially one-off cash or in-kind transfers. This would be the most effective way to support vulnerable households to invest in their children's resumption of education in the context of the short- and longer-term economic fallout of the global pandemic.

### Author statement

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