

---

2023

## Adolescent education, health and wellbeing status in four counties in Kenya: Two years into the COVID-19 pandemic

Population Council Kenya

Follow this and additional works at: [https://knowledgecommons.popcouncil.org/focus\\_adolescents](https://knowledgecommons.popcouncil.org/focus_adolescents)

**How does access to this work benefit you? Click here to let us know!**

---

### Recommended Citation

Population Council Kenya. 2023. "Adolescent education, health and wellbeing status in four counties in Kenya: Two years into the COVID-19 pandemic," Background to Girls Education Challenge Rapid Research Learning Fund. Nairobi: Population Council.

This Report is brought to you for free and open access by the Population Council.

Background to Girls Education Challenge Rapid Research Learning Fund

# **Adolescent Education, Health and Wellbeing Status in Four Counties in Kenya – Two Years into the COVID-19 Pandemic**

Final Report

Submitted by:

Population Council Kenya

January 2023

Background to Girls Education Challenge  
Rapid Research Learning Fund

Adolescent education, health and wellbeing  
status in four counties in Kenya – two years  
into the COVID-19 Pandemic

Final Report

Submitted by:

Population Council Kenya

January 2023

## Table of Contents

Study Team.....	iii
Acronyms .....	iv
Executive Summary .....	v
Introduction .....	1
Study Objectives.....	2
Research uptake and dissemination plan.....	3
Methodology.....	4
Quantitative component.....	4
Qualitative component.....	7
Limitations .....	9
Ethics considerations and safeguarding.....	9
Results .....	10
Education.....	10
Literacy and numeracy .....	20
Health and wellbeing .....	23
Conclusion .....	36
Recommendations .....	37
References.....	39
Annexes .....	41

## List of Tables

Table 1: Sampling frame for study.....	5
Table 2: Socio-demographic characteristics of the participants in Round 3 (%) .....	6
Table 3: Summary characteristics of qualitative respondents .....	8
Table 4: School enrolment.....	10
Table 5: School environment (among those currently in school).....	16
Table 6: Learning quality (among those currently in school) .....	19
Table 7: Characteristics of sample completing literacy and numeracy .....	20
Table 8: Literacy and numeracy outcomes.....	21
Table 9: Change in literacy and numeracy skills between 2017/ 2019 and 2022.....	22
Table 10: Loss of skill by 2022 among respondents who had the skill in 2017/ 2019 .....	22
Table 11: Time use .....	24
Table 12: Food security .....	26
Table 13: Mental and general health .....	29
Table 14: Experience of violence.....	32
Table 15: Pregnancy and child marriage .....	34

## List of Figures

Figure 1: Map of study counties.....	4
Figure 2: School attendance in 2021 and 2022 among respondents who were enrolled in school in March 2020.....	11
Figure 3: Experience depressive symptoms in the past two weeks .....	30
Figure 4: Experience any violence (emotional, physical, sexual) in the past one month.....	33
Figure 5: Pregnancy among females aged 15-19 in 2020.....	35

## Study team

The study team was led by principal investigator Dr. Karen Austrian, with co-investigators Dr. Tim Abuya, Dr. Beth Kangwana and Dr. Kui Muraya. Data collection and cleaning was led by Eva Muluve and Faith Mbushi, with support from Daniel Osuka, Irean Wangechi, Silvia Kinyua, Arnold Asava and Florian Lugaliki. Data analysis was led by Dr. Ruth Nanjekho, with support from Dr. Erica Soler-Hampejsek.

## Acronyms

AGI-K – Adolescent Girls Initiative – Kenya

COVID-19 – Coronavirus disease of 2019

KAP – Knowledge, Attitudes and Practices

MoE – Ministry of Education

NERC – National Emergency Response Committee

NGO – Non-Governmental Organization

PC – Population Council

RA – Research Assistant

SGBV – Sexual and Gender Based Violence

STI – Sexually Transmitted Infection

UTI – Urinary Tract Infection

## Executive summary

### **Introduction**

The COVID-19 pandemic resulted in widespread school closures globally, including in Kenya. This educational disruption potentially had extensive adverse consequences for adolescent school learners including, but not limited to: school dropout; learning loss; opportunity losses; risk of losing previously acquired skills; and lost socio-emotional benefits of time spent with peers and teachers. This study was undertaken in four counties in Kenya – two urban (Nairobi, Kisumu) and two rural (Kilifi and Wajir). Focusing on adolescent girls aged 10-19 at the start of the pandemic, this study aimed to build understanding of the impact of the COVID-19 pandemic on adolescent girls' education outcomes in Kenya to enable a) implementation of short- and medium-term policies and programmes to address the immediate harms caused; and b) to be better prepared for other pandemics or crises in the future, that could lead to prolonged school closures. The study utilised a mixed methods approach drawing on both quantitative (survey) and qualitative (in-depth interviews) techniques used for previously established research studies of cohorts in four counties in Kenya. Between March and May 2022, 2,784 adolescents participated in phone interviews and 66 adolescents, as well as 46 parents and other adult stakeholders participated in in-depth qualitative interviews. In addition, literacy, comprehension, and numeracy testing was undertaken with 658 of the adolescent respondents.

### **Study findings**

The findings are categorised in two broad thematic areas (education, and health and wellbeing). With regards to education, it was noted that most of the participants who were in school before the COVID-19 pandemic had returned to school by 2021. Nonetheless, a year later, higher dropout rates are observed among the 15-19 age group with reasons for dropout ranging from: pregnancy and early marriage in girls; uptake of income generating activities amongst boys; drug and alcohol dependency; lack of school fees and a general loss of interest in school amongst some adolescents. Local administration officials such as chiefs and village elders were indicated as key in ensuring that children resumed school after the extended pandemic-related closures. The majority of the respondents, in both rural and urban environments, also reported a positive school environment upon the reopening of schools, with sometimes improved infrastructure such as addition or improvement of classrooms, electricity connection, sex-segregated toilet facilities, additional desks, school equipment and supplies, introduction of a school feeding programme, and installation of hand washing stations. The social interactions and relationships between adolescent students and their peers and teachers were also described as mostly positive. Adolescent mothers however, faced unique challenges related to stigmatising and discriminatory attitudes both within the school and home environment. Furthermore, in general, learning quality was described as having deteriorated. This was mostly attributed to extended school closure which meant that many students had forgotten what they previously learnt and struggled to catch up, and a new compressed and much more intensive school calendar and syllabus with minimal learning breaks and much shorter school holidays.

Results from the health and wellbeing theme show that, in general, girls spent more time on household chores and domestic responsibilities during the pandemic compared to their male counterparts. Food and nutrition security had mostly reduced with the onset of the pandemic with many respondents indicating having to skip meals or eat only one type of food for several consecutive days. This was often related to income loss because of the pandemic. Mental health was an important aspect of adolescent health and wellbeing with reports of depressive symptoms being highest in 2020, during the COVID-19 related school closures for all age and sex groups in the four counties. Experience of depressive symptoms falls for all age and sex groups in all four counties in 2021, with a further decline in report of depressive symptoms seen in Wajir in 2022. However, reports of depressive symptoms bounce back up for most age-sex groups in the other



three counties in 2022. Other concerns that the adolescents described included feeling anxious and suffering from burnout. The latter especially related to the new compressed school syllabus. Adolescent mothers, unsurprisingly, faced additional challenges related to mental wellness as a result of stigmatising and discriminatory attitudes from peers, teachers and parents. Other less dominant but equally important themes were around basic hygiene and sexual health and violence. Challenges in accessing healthcare when needed was also indicated as a key influence on general wellbeing. The primary barrier to accessing care was lack of financial resources as well as lack of time due to an overload of schoolwork with the new school calendar and hesitancy related to sexual health matters.

### ***Conclusion***

Overall, the findings from this study shed light on the education, health, and wellbeing status of adolescents in four counties in Kenya two years into the COVID-19 pandemic. At a broad summary level, some of the acute effects of the pandemic have subsided. For the most part, adolescents are back in school albeit experiencing learning challenges and with some dropping out of school by 2022. Although present, large spikes in adolescent pregnancy and/or marriage have not been documented in this sample. Mental health and food security remain concerns, although the stark mental health challenges that adolescents were experiencing during the period of lock downs and school closures are starting to improve.

In light of this, there are two types of recommendations. The first is for immediate, short-term actions that would address the remaining harmful effects of the pandemic: addressing the need for school re-enrolment of those that dropped out during the pandemic, targeted learning support so that those who fell behind can catch up and providing psychosocial support to students. Second is for a set of policies and programmes to be implemented that would build resilience and mitigate harmful impacts of future extended school closures due to pandemics or other crises: integrating systems to make multi-sectoral responses, setting up systems to identify and support the most marginalised girls and other adolescents, reducing the cost of secondary school and strengthening the implementation of Kenya's return to school policy.

## Introduction

When COVID-19 spread rapidly in early 2020, it led to worldwide school closures which affected over 1.6 billion students within the first year. At the peak of school closures, 194 countries reported country-wide closures, which affected an estimated 91% of enrolled learners (United Nations, 2020). This educational disruption has the potential for far-reaching consequences. Its immediate effects are learning loss and school drop-out (UNESCO, 2021). Direct results of school closures include the lost opportunity to gain new skills, the risk of losing existing skills, and the lost socio-emotional benefits of time spent with peers and teachers.

Studies prior to the pandemic have shown that fewer days of schooling instruction can have detrimental impact on students' cognitive skills (Carlsson, Dahl, Öckert, & Rooth, 2015). In the absence of school-provided meals, children may also face increased risk of food insecurity. This may be compounded due to COVID-related disruptions to the food chain, increased unemployment, and decreased household income (Huizar, Arena, & Laddu, 2021). Faced with heightened food insecurity, families may shift feeding practices and inadvertently put girls at a higher risk of malnutrition (Hadley, Lindstrom, Tessema, & Belachew, 2008).

Beyond that, school closures have indirect and, potentially, long-term effects that reach beyond educational attainment. School attendance may be protective against child marriage, child labour, or exploitative sexual relationships. Long term school closures or limitations on education and training opportunities, coupled with economic challenges, may convince parents and caregivers that marriage for their daughters or employment for their sons are effective strategies to secure safety or household livelihoods. Disruptions to sexual and reproductive health education, services, and commodities, some of which are provided at schools, may also lead to increased unintended pregnancies (John, Casey, Carino, & McGovern, 2020; Murewanhema, 2020). Researchers predicted that violence against women may increase given school closures, local restrictions on movement, heightened familial stress due to drops in household income, and closures of sexual and gender-based violence (SGBV) services (Dlamini, 2021; Ertan, El-Hage, Thierrée, Javelot, & Hingray, 2020; John, Casey, Carino, & McGovern, 2020; UN Women, 2020).

In Kenya, schools closed on March 16<sup>th</sup>, 2020 as part of the COVID-19 response and they only fully re-opened in January 2021 with students repeating the 2020 school year. While the Ministry of Education (MoE) had made remote lessons available over television and radio, and released limited digital content, there is a documented digital divide in Kenya that limits access to these lessons, in particular for adolescents living in poverty (Ngaira, 2020). For example, in Population Council data, 96% of young adolescent girls in Nairobi informal settlements have never browsed the internet, compared to 91% of their male agemates, 62% of older adolescent girls and 34% of older adolescent boys. Therefore, due to prolonged school closures and extreme household economic stress caused by the COVID-19 pandemic, adolescent girls in Kenya were predicted to be at high risk of not re-enrolling in school and losing critical literacy and numeracy skills. The combination of household inability to pay school fees, a rise in teenage pregnancy, and prioritisation of boys' education created a harmful environment for girls education (Darso, 2020; UNESCO, 2020). Furthermore there was evidence from prior public health crises which included long-term school closures, such as the Ebola outbreak in West Africa in 2014-15, that it is likely that girls and those from the most economically vulnerable families would be least likely to return to school after the prolonged closure (ACAPS, 2016; Elston, Cartwright, Ndumbi, & Wright, 2017).

Within the first six months to one year of the pandemic, there was a proliferation of articles, commentaries, and discussion on the gendered dimensions of the COVID-19 pandemic, some of which focused on adolescents. For example, modelling exercises projected that without intervention, school closures on average could lead to approximately one year's worth of learning loss in the short term and could accumulate over time (Angrist, de Barros, Bhula, Chakera, Cumiskey, DeStefano, Floretta, Kaffenberger, Piper, & Stern, 2021; Kaffenberger, 2021). A rapid review of the evidence on extended school closures also indicated that learning loss due to school absence would be likely, in particular amongst the most marginalised (Page, Leonard-Kane, Kashefpakdel, Riggall, & Guerriero, 2021). Within the past year, some empirical data has begun to

be published, in particular on school enrolment and learning outcomes, although the scope, scale, and rigour vary. A study published in late 2021 started to document lower literacy and numeracy skills due to the school closures across over a dozen low and middle income countries, and found that the mitigation measures that had been put in place, such as remote learning, were not sufficient to prevent these losses, in particular for the most vulnerable of learners (Conto, Akseer, Dreesen, Kamei, Mizunoya, & Rigole, 2021). Another review of 40 empirical studies on learning loss and/or school dropout published two years into the pandemic indicated that while overall there was documented loss, in particular for those students from lower socio-economic statuses, the impact varied widely from country to country (Moscoviz & Evans, 2022). One study in Kenya indicated that 16% of girls and 8% of boys who were in school at the time of the COVID-19 school closures did not re-enrol when schools re-opened fully in January 2021 (UNESCO, 2021). Another study documented sharp learning losses amongst girls in Kenya one year into the pandemic, in particular for those that spent less time studying during the school closure (TetraTech, 2021).

There is also some emerging data on broader health and well-being effects of the COVID-19 pandemic on outcomes such as mental health, violence and nutrition in Kenya. Several reviews within the first two years of the pandemic indicate broad negative impacts on several dimensions of mental health: depression, anxiety, stress, helplessness, worry, etc. across contexts (Jones, Mitra, & Bhuiyan, 2021; Meherali, Punjani, Louie-Poon, Abdul Rahim, Das, Salam, & Lassi, 2021; Panchal, Salazar de Pablo, Franco, Moreno, Parellada, Arango, & Fusar-Poli, 2021). Harmful effects on mental health have also been documented in Kenya (Decker, Wood, Thiongo, Byrne, Devoto, Morgan, Bevilacqua, Williams, Stuart, & Wamue-Ngare, 2021; Pinchoff, Friesen, Kangwana, Mbushi, Muluve, Ngo, & Austrian, 2021). A paper that reviewed over 100 studies on the effects on violence summarised that most of these studies indicated increases in violence experienced by women and children, which held across contexts, but often was linked to losses in income and employment (Bourgault, Peterman, & O'Donnell, 2021). In a country-specific example, a study in Nairobi, Kenya documented increased experience of intimate partner violence among adolescent girls and young women within the first 18 months of the pandemic (Decker, Bevilacqua, Wood, Ngare, Thiongo, Byrne, Williams, Devoto, Glass, Heise, & Gichangi, 2022). While there were initial projections on the impacts of COVID-19 on early pregnancy and child marriage (Yukich, Worges, Gage, Hotchkiss, Preaux, Murray, & Cappa, 2021), there is less empirical data available as those results may take a longer time-frame to emerge. However, in the short term, in Kenya the evidence is mixed on the impacts on pregnancy in the first year of the pandemic (Presidential Policy and Strategy Unit (Kenya) and Population Council, 2021; Zulaika, Bulbarelli, Nyothach, van Eijk, Mason, Fwaya, Obor, Kwaro, Wang, & Mehta, 2022).

This study fills an important gap in the literature in a) providing longer-term (two years after the start of the pandemic) data at the sub-national level for adolescents in Kenya; b) exploring a multi-sectoral, multi-dimensional set of outcomes; and c) disaggregating data on adolescents by age and sex.

### *Study objectives*

This study was funded through the Girls Education Challenge Rapid Research and Learning Fund (see Annex 1 for full proposal). The overall objective of the study is to deepen the field's understanding of the COVID-19 pandemic on adolescent girls' education outcomes in Kenya so that a) short and medium term policies and programs can be implemented to address the immediate harms caused; and b) to be better prepared for other pandemics or crises in the future that lead to prolonged school closures.

The primary research question for this study is:

- What are the gendered effects of the COVID-19 school closures and other mitigation measures on adolescent girls in four counties across Kenya on their school enrolment, literacy and numeracy throughout the first two years of the pandemic?

Secondary research questions include:

- What are the gendered effects of the COVID-19 mitigation measures on adolescent girls' time use, experience of SGBV, mental health, nutrition and food security, and timing of pregnancy and marriage approximately two years after the start of the pandemic?
- What are the pathways, drivers, challenges and barriers related to the pandemic's effects on girls' schooling outcomes?
- Did participation in girls' empowerment programmes prior to the COVID-19 pandemic increase resilience during the pandemic?<sup>1</sup>

The primary audience for the study is policy makers and practitioners in the gender and education space who are working to close gaps in education and learning caused by the pandemic. The secondary audience is researchers.

### *Research uptake and dissemination plan*

The research team developed a plan to guide work to engage county, national and global level stakeholders, programme implementors and direct end-users with the aim of developing the actionable policy and programme responses based on the study. Our research uptake goals are to: 1) provide county and national level government officials with relevant evidence that they can use as they determine budget allocations and make policy decisions vis-à-vis girls' education; and 2) provide donors, government stakeholders and practitioners with evidence that can shape their investments in, and work on, girls' education in COVID-19 recovery programs – both in Kenya and globally. Therefore, the plan includes activities and products for county, national and global level audiences. See Annex 5 for the full research uptake and dissemination plan.

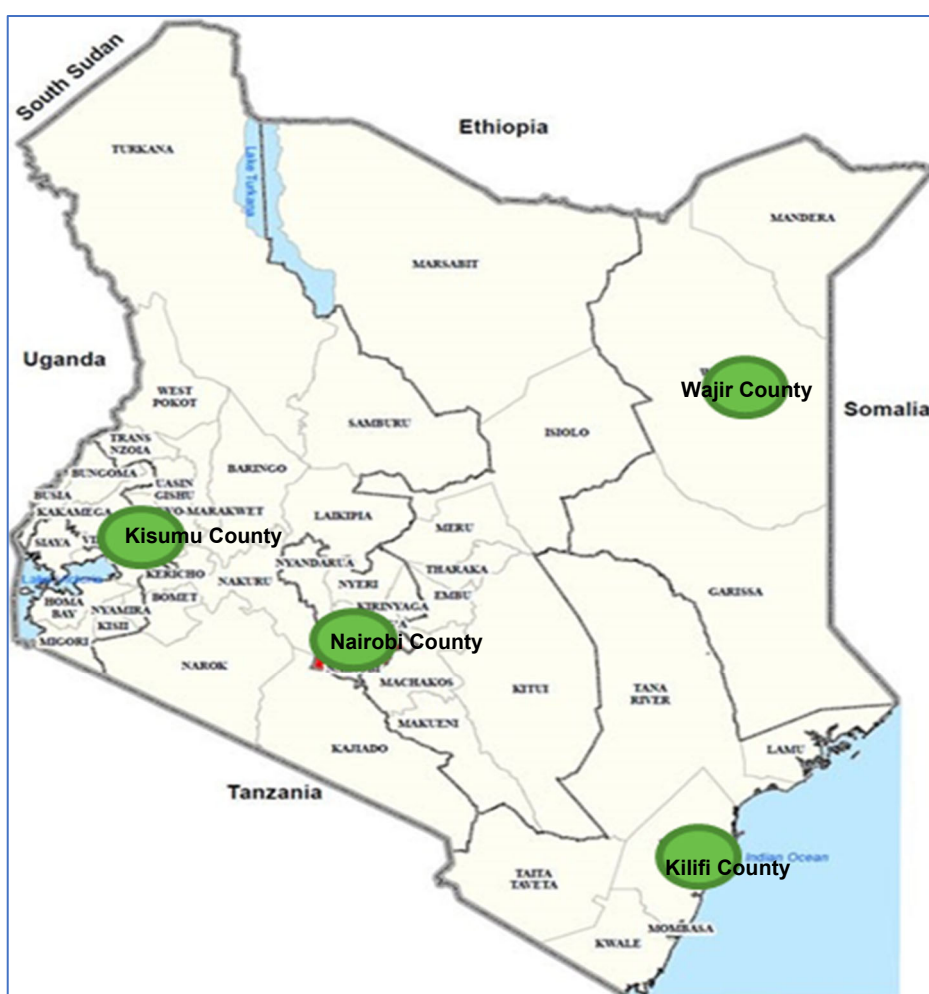
---

<sup>1</sup> Unfortunately, the sample size and balance after the third round of data collection did not allow us to explore the final secondary research question with rigour and depth.

## Methodology

The study leverages four ongoing, Population Council-led study cohorts of vulnerable adolescents, as well as the adults in their households, which were established prior to the COVID-19 pandemic to conduct various impact evaluation studies of girls' empowerment programmes. These cohorts existed in four different counties, reflecting diverse geographic settings, including 1) urban informal settlements in Nairobi County – characterised by high population density, lack of access to clean water, shared sanitation facilities, and located in the epi-centre of COVID-19 cases in Kenya; 2) rural Wajir County – a pastoralist setting, as well as one of the most under-developed, socially conservative counties in Kenya with low school enrolment rates for girls and high rates of child marriage; 3) rural Kilifi County – a remote rural setting in the coastal region of Kenya with high rates of SGBV and early pregnancy; and 4) urban slums and peri-urban areas in Kisumu County – a high HIV-prevalence setting in western Kenya. See Figure 1.

**Figure 1: Map of study counties**



### *Quantitative component*

Population Council (PC) Kenya had established and followed cohorts of vulnerable adolescents in each of these counties prior to COVID-19 – including three randomised controlled trials and two quasi-experimental studies – to evaluate the impact of adolescent programmes. At the start of the pandemic, the National Emergency Response Committee (NERC) asked PC Kenya to conduct a knowledge, attitudes and practices (KAP) survey to generate data to help inform their responses. In order to rapidly respond to NERC's request, our research team initially sampled from two of these cohorts across five informal settlements in Nairobi. As the pandemic evolved and evidence

requests from government stakeholders in Kenya increased, we expanded the COVID-19 data collection to include adolescents and adults in the household, as well as additional counties. Counties were therefore selected based on where PC Kenya had pre-existing research cohorts. By August 2020 we had conducted at least one round of data collection (R1) with adults and adolescents in each of the four counties. A second round (R2) of quantitative data collection took place in February/March 2021 (see Table 1).

**Table 1: Sampling frame for study**

	Setting	Cohort	Dates Survey Data Collected*	Adult Sample	Adolescent Sample		
					Sex	Age	Schooling Status as of March 2020
<b>Nairobi</b>	Urban informal settlements	AGI-K <sup>2</sup> NISITU <sup>3</sup>	July 2019 March - June 2020* February 2021	<b>n=2,009</b> Women: 63% Men: 37%	<b>n=1,022</b> Girls: 84% Boys: 16%	<b>n=1,022</b> 10-14: 29% 15-19: 71%	<b>n=1,022</b> In School: 87% Out of School: 13%
<b>Wajir</b>	Rural (remote/pastoralist); 79 villages in the sub-counties	AGI-K <sup>9</sup>	August 2019 July 2020 February 2021	<b>n=1,322</b> 898 women 424 men	<b>n=1,234</b> Girls: 61% Boys: 39%	<b>n=1,234</b> 10-14: 18% 15-19: 82%	<b>n=1,234</b> In School: 78% Out of School: 22%
<b>Kilifi</b>	Rural (remote); clusters of 140 primary schools in three sub-counties	Nia <sup>4</sup>	December 2019 August 2020 February 2021	<b>n=1,288</b> 782 women 506 men	<b>n=1,063</b> Girls: 73% Boys: 27%	<b>n=1,063</b> 10-14: 13% 15-19: 87%	<b>n=1,063</b> In School: 91% Out of School: 9%
<b>Kisumu</b>	Urban informal settlement; peri-urban	DREAMS <sup>5</sup>	May 2018 August 2020 February 2021	<b>n=858</b> 721 women 137 men	<b>n=602</b> Girls: 71% Boys: 29%	<b>n=602</b> 10-14: 24% 15-19: 76%	<b>n=602</b> In School: 85% Out of School: 15%

\* Four rounds of data were collected in Nairobi with adults (monthly from the start of the pandemic), and one round with adolescents (June 2020).

The third round (R3) of data collection was collected as part of the Girls' Education Challenge Rapid Research Learning Fund. R3, the focus of this study, was collected between February and March 2022 from a sampling frame drawn from all adolescents interviewed in the first round of data collection (n=3,921) (see Annex 4 for a detailed fieldwork report). A total of 2,785 adolescents were successfully interviewed for a response rate of 71% (ranging from 63% to 80% in the four counties). Adolescents in the age category of 15-19 at R1 formed the largest percentage (80%) of the total sample interviewed compared to the 10-14 category. It is worth noting that these were the same participants who had been interviewed during study R1, two years prior. Data on the state of household income at R1 was also collected whereby 22% of the households reported to have lost their income completely, 40% lost partially whereas 38% of the households were not affected. A higher percentage of those who either lost partially or fully were from Kisumu and Nairobi counties and the least affected were from Wajir County. Table 2 shows the socio-demographic characteristics of the adolescents who participated in the R3 survey.

<sup>2</sup> <https://www.popcouncil.org/research/adolescent-girls-initiative-action-research-program>

<sup>3</sup> <https://www.popcouncil.org/research/nisitu-testing-the-effects-of-implementing-girl-centered-programming>

<sup>4</sup> <https://www.popcouncil.org/research/evaluating-the-nia-project>

<sup>5</sup> <https://www.popcouncil.org/research/reducing-hiv-risk-among-adolescent-girls-and-young-women-DREAMS>

**Table 2: Socio-demographic characteristics of the participants in Round 3 (%)**

Number of adolescents interviewed in round 3	Kilifi (n=760)	Kisumu (n= 376)	Nairobi (n=657)	Wajir (n=991)	Total (n=2784)
<b>Age at start of pandemic:</b>					
10 to 14	12%	27%	27%	18%	20%
15 to 19	88%	73%	73%	82%	80%
<b>Sex:</b>					
<b>Female</b>					
10 to 14	2%	14%	21%	2%	8%
15 to 19	73%	57%	67%	58%	64%
<b>Male</b>					
10 to 14	10%	13%	6%	16%	12%
15 to 19	15%	16%	6%	24%	16%
<b>Household lost income at R1</b>					
Fully lost	24%	28%	30%	9%	22%
Partially lost	43%	59%	53%	13%	40%
Did not lose	37%	13%	17%	78%	38%

**Literacy and numeracy testing**

Literacy and numeracy data were also collected, in person, for girls in Kilifi and Nairobi counties for whom we had comparable data from before the COVID-19 pandemic and had completed the third round of COVID-19 surveys. Note that boys were not included in the literacy and numeracy testing as we did not have comparable data for them from before COVID-19. For the Kilifi cohort, literacy and numeracy tests were conducted from March to May 2017 as part of the baseline survey for the Nia trial. For the Nairobi cohort, literacy and numeracy tests were conducted from June to July 2019 as part of the endline of the Adolescent Girls Initiative – Kenya (AGI-K) trial. The tests administered in 2022 were the same as used in the AGI-K and Nia trials. The literacy test in Kilifi assessed girls' ability to read aloud two sentences in Kiswahili and two sentences in English. The literacy test in Nairobi assessed girls' ability to read aloud plus reading comprehension in Kiswahili and English. The numeracy tests included 26 questions from a test developed by Uwezo, an East African education organisation, that are based on the Kenyan Standard 2 level curriculum, 11 questions from official mathematics assessments for Standard 4 and, for girls in Nairobi only, and four questions from Standard 8 (see Annex 2 for detailed quantitative tools). Of the 475 eligible girls in Kilifi and 381 eligible girls in Nairobi, 82% (n=385) and 69% (n=260), respectively, completed the literacy and numeracy tests in April 2022.

For the numeracy test, the research assistant (RA) gave the respondent a hard copy of the test and asked them to manually calculate and give responses to the presented math problems. Respondents were given 25 minutes to complete the numeracy test. To test for literacy, the RA gave the respondent a pre-printed sheet and asked them to read two specific short, simple sentences (in Kilifi) or paragraphs (in Nairobi) in both English and Kiswahili. In Nairobi, if the respondent could partially read a short paragraph, the RA would then give them a printed story, ask them to read it, and subsequently ask them two questions related to the story. This was to test for comprehension. For all the above tests, the RAs recorded the respondents' responses on digital tablets with pre-uploaded tools, that auto calculated the scores accordingly.

**Data analysis**

The quantitative data was analysed in Stata version 14. Descriptive statistics were computed to gauge participants' levels of agreement on various aspects of KAP related to COVID-19 and the

results were presented in tables. For a selected set of indicators, descriptive statistics were computed at all three rounds to explore trends across time. For literacy and numeracy, in addition to computing descriptive statistics, retention and loss of skills across time were explored, and bivariate associations between loss of skills and schooling related variables were estimated.

### *Qualitative component*

#### **Data collection**

The qualitative component entailed individual in-depth interviews with a range of respondents (Table 3) in the four study counties and covered various topics relevant to the research objectives. The goal of the qualitative data was to explore the pathways to the various outcomes that would be described by the quantitative data. Participants were selected purposively by community mobilisers to reflect specific segments of adolescents (i.e. age, schooling status), as well as a range of adults relevant in adolescents' lives (i.e. mothers, fathers, teachers, community leaders, etc.) After training, and successful identification of targeted respondents and appropriate consenting, research assistants conducted in-person, in-depth interviews in all four counties (see Annex 3 for qualitative tools). In some study sites like Wajir, the interviews with community members were conducted at a central location for practical reasons. In these sites, there were long distances between the respondents' homesteads. It was therefore not practical or time-efficient to move from homestead to homestead for the purposes of conducting the qualitative interviews. Instead, participants were asked to come to a central place and reimbursed accordingly for their transport costs.

All interviews were audio-recorded. Recordings were saved in a password protected Google Drive folder that was only accessible to those directly involved in the research work. The interview recordings were subsequently transcribed and translated simultaneously. The transcripts were checked for quality by independent validators. The validation process entailed the validator (who was conversant with the relevant local language), listening to the audio recording while reading through the translated transcript. They would then make edits (in tracked changes) where they deemed necessary. The validator would then have a discussion with the original transcriber on areas of discrepancies, and they would agree on which translation most accurately reflected the respondents' meaning. It was only after the process of validation that the transcripts were analysed.



**Table 3: Summary characteristics of qualitative respondents**

Adolescents	Male		Female		Total
Site	15-18 yrs	10-14 yrs	15-19 yrs		
Nairobi	6	6	12		24
Kilifi	3	3	8		14
Wajir	3	3	8		14
Kisumu	3	3	8		14
<b>Mothers</b>					
Site	30-40 yrs	41-50 yrs	>50 yrs	Total	
Nairobi	2	3	1	6	
Kilifi	0	2	1	3	
Wajir	2	1	0	3	
Kisumu	1	1	1	3	
<b>Fathers</b>					
Site	30-40 yrs	41-50 yrs	>50 yrs	Total	
Nairobi	0	4	0	4	
Kilifi	0	2	0	2	
Wajir	0	2	0	2	
Kisumu	0	1	1	2	

#### Key Informants<sup>6</sup>

Site	Male				Female				Total
	20-30 yrs	31-40 yrs	41-50 yrs	>50 yrs	20-30 yrs	31-40 yrs	41-50 yrs	>50 yrs	
Nairobi	0	1	2	1	1	0	1	0	6
Kilifi	1	1	1	1	0	1	0	0	5
Wajir	0	1	2	1	0	1	0	0	5
Kisumu	0	0	1	1	0	2	1	0	5
<b>TOTAL RESPONDENTS</b>			<b>112</b>						

#### Qualitative data analysis

The qualitative data was managed using Nvivo software and analysed using a thematic analysis approach. This entailed immersion in the raw data through extensive familiarisation with the interview transcripts and field notes. A coding scheme was then developed to categorise recurrent themes. The initial themes and sub-themes were based on the study objectives as well as other emergent recurrent themes from the data. The coding process involved splitting and rearranging the data from all the respondents according to thematic content. The findings from this process were then organised into county-specific charts to enable comparison.

For both the quantitative and qualitative components, relevant training of research assistants in all four counties was undertaken prior to data collection. RAs are casual enumerators (or data collectors) - usually from the local community - who are hired on a temporary basis by PC Kenya, to collect research data for projects as and when needed. All the RAs that were engaged in this work have conducted similar studies with PC Kenya. The purpose of the training was to equip the RAs with knowledge and skills on how to undertake the various components of the study. They were supervised by team leads and a study coordinator with support from PC Kenya staff. Separate training workshops were conducted for each component of the work. The training covered a range of topics including but not limited to: research ethics and ethical practice in research; the study purpose; interviewing skills (both phone-based and face-to-face); review and practice of the study questionnaires and interview guides; data quality checks and measures;

<sup>6</sup> Key informants included: local administrators, chiefs, women leaders, religious leaders, teachers and mentors/youth leaders.

general research assistant roles and responsibilities; and practical logistics related to the data collection. The training was conducted by highly qualified facilitators (study coordinators) together with Population Council staff.

### *Limitations*

This study includes three main limitations. The first is that our quantitative sample is limited to those adolescents whose parents are reachable by phone, and then furthermore the adolescents themselves being reachable by phone. This may mean that the most vulnerable were left out of the quantitative sample. The second is that the girls in the sample were all part of prior studies, many of them beneficiaries of girls' empowerment programmes. This may mean that the effects of the pandemic were somehow muted/ reduced, in particular gender gaps, due to possible earlier programme benefits experienced by the female respondents. It also linked to the third limitation, which is that we were not able to answer the third secondary research question and determine the ability of pre-pandemic participation in girls empowerment programs to mitigate the effects of the pandemic due to the final sample size and balance between prior status being in intervention or control/ comparison groups.

### *Ethics considerations and safeguarding*

This study has been approved by the Population Council Institutional Review Board (p936) and the Amref Health Africa Ethical and Scientific Review Committee in Kenya (p803-2020). We are also covered by a research permit from the National Commission for Science, Technology and Innovation (P/22/16531).

Prior to the interview, respondents gave their informed consent over the telephone. For adolescent respondents under the age of 18, we verbally collected informed consent on the phone from parents/ guardians to conduct the adolescent survey before beginning the survey, and the collected assent from the minors. We conducted the same ethical process as an in-person survey, ensuring participants understand the risks, the option to end the survey at any time, and that we will ensure their privacy. RAs were trained on ethics and safeguarding in collecting data from adolescents. During data collection, we routinely checked the data for quality. All data was de-identified prior to analysis.

## Results

### Education

#### Education and return to school

##### Key findings:

- While most children enrolled in school prior to the pandemic have re-enrolled, about one-third of girls between 15-19 at the start of the pandemic were no longer in school, compared to about one-quarter of boys.
- Economic constraints (i.e. not being able to pay school fees) was the main reason for not re-enrolling; however secondary reasons had gendered dynamics: girls were more likely to report pregnancy and having had a baby as a reason for not returning to school and boys reported entering into income generating activities as a main reason.

The current (beginning of 2022) school enrolment status in all the four counties and different age categories was above 50% with Kisumu registering 100% school enrolment among the 10-14 year old male adolescents (see Table 4). In the 15-19 age category, Nairobi had the least (56% female) followed by Wajir with 57% male enrolment rate. The enrolment rate among the 10-14 age category of the adolescents was higher across the four counties as compared to the 15-19 age category for both males and females. Among those who were in school in March 2020, school re-enrolment is slightly higher than the overall enrolment rate. As can be seen from Table 4, all the four counties had more than 60% retention rate with Nairobi having the least (61%) among the 15-19 female age category and Kisumu with the highest (100%) among the 10-14 male age category.

**Table 4: School enrolment**

	Kilifi				Kisumu				Nairobi				Wajir			
	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male
<i>Current schooling status among full sample</i>	88%	92%	81%	76%	94%	100%	70%	72%	99%	98%	56%	68%	91%	76%	61%	57%
<i>Current schooling status among those enrolled in school in March 2020</i>	88%	93%	86%	83%	94%	100%	76%	73%	99%	98%	61%	80%	95%	83%	74%	67%

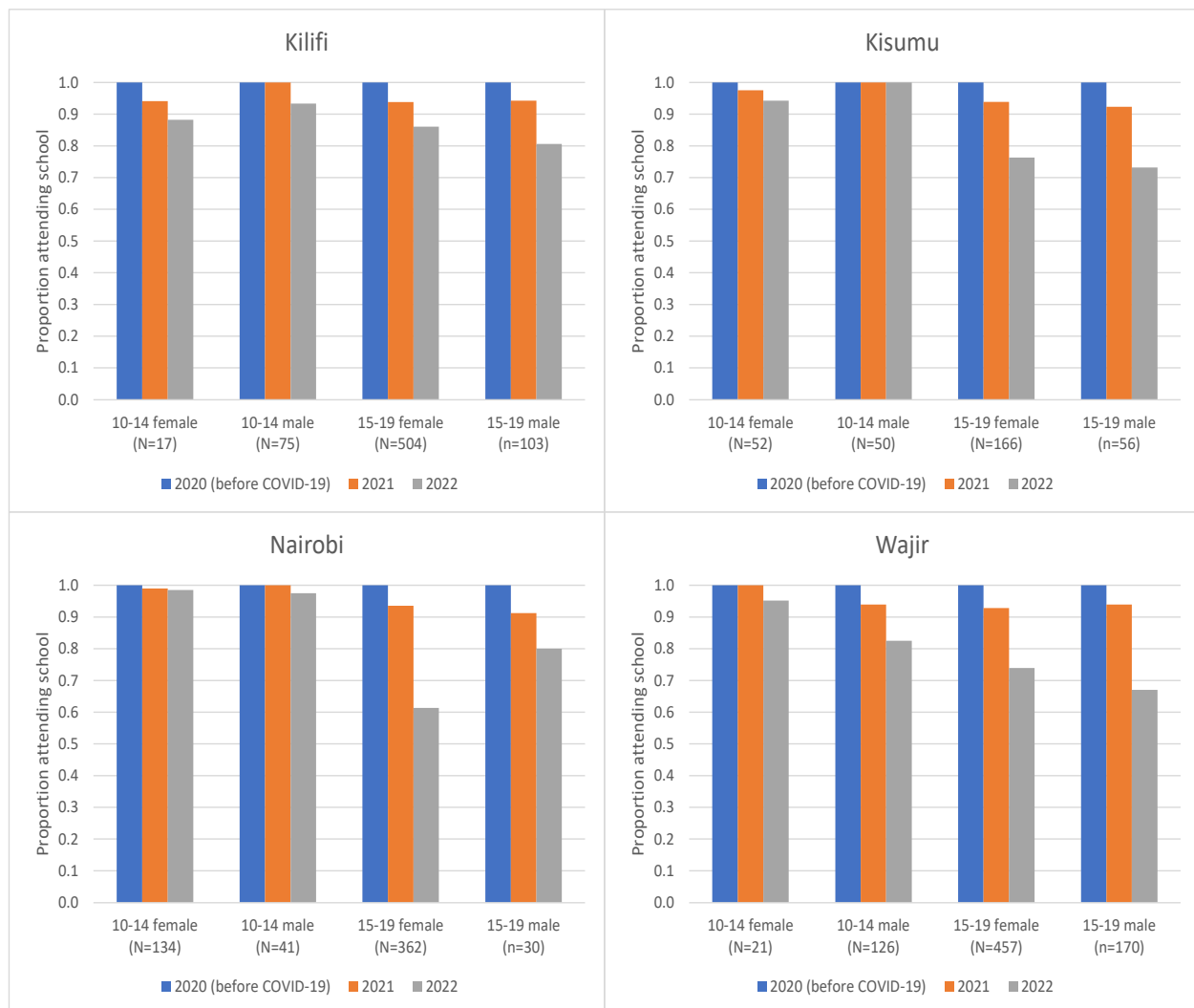
Figure 2 shows re-enrolment rates in 2021 and 2022 among respondents who were in school in March 2020, prior to the COVID-19 related school closures. Over 90% of both female and male students aged 10-19 in March 2020 had returned to school by February 2021, ranging from 91% of males in the 15-19 age category in Nairobi to 100% in the younger age category among males in Kilifi, Kisumu and Nairobi and among females in Wajir.

This seems to imply that most of the participants who were in school before the COVID-19 pandemic virus returned to school after the pandemic. This can also be seen from the responses to the interview question asking whether most of their classmates returned to school after COVID-19 school closures were lifted. Responses to this question confirmed the fact that most of them had indeed returned.

Nonetheless, higher dropout rates are observed by 2022, a year after the re-opening of schools, in particular among the 15-19 age group. While retention remained high among the 10-14 age category in Kisumu and Nairobi, with over 94% of female and male students still enrolled in school, among female students in the 15-19 age category, around two-fifths had left school by early 2022 in Nairobi, and around a quarter in Wajir and Kisumu. It should be noted that, according to the

2014 Kenya Demographic and Health Survey, school attendance rates in Kenya start facing declines at age 15 and these declines become steeper with age, in particular for females. Data from the 2019 Kenya Population and Housing Census, although not directly comparable to the study sample, also illustrates the dropout that occurs due to aging: among females (males) aged 14-17, 91% (92%) attended school in Kilifi, 94% (95%) in Kisumu, 90% (93%) in Nairobi, and 31% (32%) in Wajir. These figures among females (males) aged 18-22 are 40% (54%) in Kilifi, 47% (60%) in Kisumu, 33% (42%) in Nairobi, and 14% (22%) in Wajir. Thus, the high dropout rates observed, affecting females in particular, as the 15-19 year olds age into 17-21 year olds are not unexpected.

**Figure 2: School attendance in 2021 and 2022 among respondents who were enrolled in school in March 2020**



Note: The figures show the proportion of respondents attending school among respondents who were enrolled in school in March 2020, prior to the school closures related to COVID-19. The sample includes respondents who were interviewed in both 2020 and 2022, sample sizes for 2021 can be smaller for some age-sex groups.

The qualitative data provided useful gender-specific insights on reasons for the high dropout rates. Pregnancy (and related childcare responsibilities), particularly in older adolescent girls, emerged as an important factor contributing to school dropout. Sometimes, as illustrated in the quote below, shame and stigma related to the pregnancy deterred the adolescent girl from returning to school. Even where parents were supportive of the girl returning to school after childbirth, some stated that the adolescent mums had lost interest in learning and were not keen to resume schooling

*“There are those girls that got pregnant, because of staying idle with nothing to do. So, some felt ashamed to go back to school and decided that the only option was to stay at home.”*

Stakeholder, Nairobi

Furthermore, some adolescent girls who returned to school while being pregnant or after childbirth cited general discomfort being in the classroom, and unfriendly or stigmatising attitudes from teachers, as reasons for discontinuing their schooling. The two illustrative quotes below indicate challenges faced by such girls while in the classroom.

*“For now, I still have some bit of stress. I became pregnant [during the school closures] so learning is sometimes very challenging...I cannot sit down for long hours, and then at night I have to sleep early. Meaning, sitting for long at night while studying has become uncomfortable.”* Adolescent girl, 15-18 years, Kisumu

*“I don’t get along with some teachers, like one male teacher. Whenever he comes to class, he just talks ill of me. When he is explaining something [difficult] in class, he tells other students that there are others like me who know about it because I’ve already given birth, and I can say more about it. I do feel bad but I don’t say [anything]. My parents also, especially my father always discourages me. He says I was cheated and can’t grasp anything while studying.”*

Adolescent mother 15-19 years, Kilifi

Closely linked to adolescent pregnancy and specific to Wajir County – a socially conservative and remote area – was forced marriage of adolescent girls. In this setting, it was reported that during the extended school closures, some parents married off their adolescent girls as it was assumed that schools would never reopen. Similarly in this setting, it was noted that a devaluing of education by some parents meant that they preferred to keep girls home to herd goats and cattle, and attend to other domestic chores rather than send them to school.

Overall, for adolescent boys, the key barrier to re-enrolment and/or staying in school was engagement in income generating activities during school closures, which then deterred them from re-joining school. In this case, school was perceived as a hindrance to earning money, which was deemed more valuable, particularly where there was loss of parental income as a result of the pandemic and related restrictions. This was also sometimes linked to adolescent pregnancy. That is, an adolescent boy who accepted responsibility for a girl’s pregnancy would then be forced to drop out of school to provide for his young family as illustrated in the second quote below.

*“The boy lost interest in learning (school) He stayed home for so long until other boys started telling him they should look for things to sell so that they get some little money to maintain themselves. Because at that time I would go search for casual jobs and would not get any.*

*Then there were no jobs, we were not even allowed to work in people’s homes.”* Parent, Nairobi

*“Even if you take him to school and yet he has two kids and they want food...the boy is forced to [dropout of school] and venture into things like bodaboda (motorbike public service transport for income generation), because he has a wife and kids to take care of.”* Parent, Kilifi

Drug and alcohol abuse particularly in the urban and peri-urban areas (Nairobi, Kisumu and Kilifi) was another major barrier cited for boys’ failure to re-enrol and/or remain in school. As illustrated below, many respondents (including the adolescents themselves) raised these two issues as major concerns, adversely impacting the male children in their communities.

*“Due to the holiday [school closures], many of them [boys] joined these groups that deal in marijuana and [did not return to school]. They see themselves as untouchable. Many of them ran away from home...they have not returned to their homes.”* Adolescent boy, 15-18 years, Nairobi

Across all four counties and both genders, lack of school fees emerged strongly as a reason for not returning or remaining in school post COVID-19 related school closures. This was exacerbated by parental job losses as a result of the pandemic and related restrictions. Additionally, to make up for time lost during the extended school closures, the government of Kenya introduced a new 'compressed' school calendar, with very short school holidays and increased school terms. A few parents and stakeholders reflected positively on the new school calendar, describing it as a deterrent to negative adolescent behaviour since it kept adolescents busy with schoolwork. Nonetheless, many parents complained of being unable to keep up with the frequent school fees payments (and other related school costs), as a result of the new compressed school calendar. This led to delayed re-enrolment or adolescents being regularly sent home from school for non-payment of fees. The lack of fees was especially a challenge for parents whose adolescents were anticipated to transit to secondary school after completion of primary education. The compressed school calendar also presented learning challenges for the adolescents as described further below.

*"You see we were used to buying [school] uniforms in December [before the start of the new school year in January]...with this one [new school calendar], we were first confused. I think the calendar has become so squeezed. Because you find a child stays for a one-week holiday then they go back to school and he is already in a new [school] term. Something that I have never seen in my whole life. As a parent my mind told me they are still where they were. I didn't think the transition happened. Because with this transition, in a week a child goes to the next class, what is that?"* Parent, Nairobi

Other less dominant but important barriers to school re-enrolment that were discussed included: a growing apathy towards school and education more broadly, amplified by observing many older peers in the community who had completed school, but could not secure jobs and remained unemployed for extended periods of time; and feeling demoralised after a continuous cycle of poor performance in school, which then led to the adolescent dropping out.

*"Those who've completed both college and university stay jobless in the village. So what value does education have? We are demoralised, at least we need to be motivated. [For now] we have removed our mind from the schooling issue."* Adolescent boy, 15-18 years, Wajir

*"Some children [adolescents] just chew Miraa [Khat, a stimulant drug], and when you ask them what had happened; they will tell you that those who have completed their studies are jobless and schooling does not have any benefit at all."* Stakeholder, Wajir

Nonetheless, there were enablers to school re-enrolment of adolescents which also ensured that they remained in school. One noteworthy enabler was the local administration. As illustrated below, some respondents noted that the local administration, led by chiefs and village elders, played an active and crucial role in ensuring that most adolescents returned to school when schools reopened. They were, however, not always successful as some parents withheld or gave false information on the whereabouts of their children. This was especially the case where adolescent children were involved in income generating activities that supported the family.

*"Many stayed at home but when they heard that the chief was going round checking, that is when some parents took their children back to school. There are some who did not take their children back, but there was a time when the chief went around looking for children who were not going to school, and the parents were forced to take them to school."* Parent, Kilifi

It is also important to note that *some* adolescents who did not re-enrol in school for the reasons described above, indicated that they were unhappy about it, or felt isolated and shunned by their school going peers; and expressed a desire to continue their education either by re-enrolling at a later stage or registering for technical and vocational courses. These views were echoed by parents and other key stakeholders, who indicated the need to encourage adolescents who did not enrol back to school, to pursue some other form of education that would be useful in future.

*"I feel very bad when I see others going to school and I am at home taking care of the baby. That pains me a lot, because those who are going to school will have a better life. School is very good, I like school. Even now there is an institute...ASFk, I was in ASFk...there is a study going on here. So, I also joined so that at least I learn a bit."* Adolescent girl, 15-19 years, Nairobi

*"I had thought of having an abortion so that I am able to go back to school, but I was told that that is not good. Sometimes when my classmates call me, I feel bad. I don't feel good when they are in school, and I am at home. I will go back to school [after childbirth]."* Adolescent girl, 15-19 years, Kisumu

*"I would like to go back to school but I don't have anyone to leave my children with because my mother is struggling to be able to pay rent and educate my other siblings. So, if I say I will leave her with my children, it would be like I am giving her a lot of stress. I think it is better for me to go to college [instead of school]. Because I know I would be preparing my children in the morning, and when it gets to 10.00a.m, I go there to learn how to stitch garments, and then go back home in the evening."* Adolescent girl, 15-19 years, Kilifi.

### **School environment**

Key findings:

- Students reported conflicting COVID-19 mitigation measures at school – the majority of students report having more than 40 children in each classroom, but also having sufficient hand-washing stations.
- Students noticed an improvement in school infrastructure that was put in place during the school closures (water, more classrooms, etc.).

Table 5 shows responses to a set of items regarding respondents' school environment. They were asked whether in their school experience each item was very true (VT); somewhat true (ST); somewhat false (SF) or very false (VF), The majority of participants in Kilifi, Kisumu and Nairobi gave a response of VT to whether they are more than 40 students in the classroom, with responses ranging from 59% among 10-14 year old males in Nairobi to 93% of 10-14 year old females in Kilifi. In Wajir the responses ranged from 15% of the 10-14 females to 46% of the 15-19 year old males. The majority of the participants in Kilifi, Kisumu and Nairobi Counties gave a response of VT to whether they could access water and soap for hand washing. The responses ranged from 68% among the 10-14 year old male adolescents in Kilifi to 94% among the 10-19 year old female adolescents in Kisumu. In Wajir County, only 25% of 10-14 year old females responded with VT while 43% of males in the same category responded with VT. When asked about being happy to be back in school, more than 77% of the participants in the two age categories in the four counties responded with VT. When asked whether they were worried that they would get COVID-19 while in school, about half (range: 28% to 64%) of respondents in the urban counties indicated VT or ST compared with about one-third (range 15% to 53%) of students in urban counties. While we do not have survey data to explain the difference, possible reasons could be lower numbers of infections and deaths due to COVID-19, less crowding in living and school settings and/or less education about COVID-19 in rural areas.

Qualitatively, questions on the school environment explored issues to do with the physical infrastructure and social relationships related to the adolescents' return to school. Many adolescents described the school infrastructure as having mostly improved compared to the pre-COVID school closures. They described the addition or improvement of classrooms; electricity connection; sex-segregated toilet facilities; additional desks, school equipment and supplies; introduction of a school feeding program; and installation of hand washing stations. In particular, the installation of electricity was described as highly instrumental in facilitating early morning and

evening learning, which was adapted as a strategy to cope with the increased academic demands of the new school calendar. Additionally, a few stakeholders mentioned that some schools received a regular supply of soap for hand washing from community partners, thus enabling the implementation of COVID-19 prevention protocols. Some respondents also stated that the number of teachers in schools had been increased, allowing for greater coverage of the syllabus. However, this was not the case for Wajir County, where only a few teachers returned after schools reopened, resulting in a range of challenges including in learning as illustrated below.

*“Yes, the learning [school] environment has changed. Initially we had a good number of teachers hence learning was good. But after schools reopened, only five teachers remained due water shortages and lack of learning materials like books and chalk.”* Adolescent girl 10-14 years, Wajir.

With regards to social relationships, many adolescents described positive student relationships and social interactions that had been missed as a result of the COVID-19 restrictions. Nonetheless, there was some concern amongst a few parents that students were adversely influencing each other in the school environment. Specifically, that negative behaviours that had been picked up by some students during the school closures were ‘rubbing off’ on other students. This was especially in relation to drug and alcohol use which had started during the school closures and continued even after the adolescents returned to school. On the other hand, the relationship between adolescents and their teachers was largely defined as positive except for what was described as ‘unruly adolescent behaviour’. This notion of ‘unruly behaviour’ was nonetheless discounted by most adolescents who opined that some teachers misunderstood their inability to complete school assignments as unruly behaviour. Many adolescents stated that - especially in the context of the new compressed syllabus - it was often a challenge to complete school assignments at home, as they were still required to undertake their house chores; and they wished that teachers would empathise with their circumstances.

*“You get many of the teachers will give you [after school] work...one gives you homework, then the other one also comes and adds you more homework. But when you go home you don’t get that time to do it because, housework is still waiting for you. So, like me who is staying with a [single] father I have to do house chores when I go back home. Then when I come to school, I haven’t done my homework. That becomes a problem since the teacher will not understand.”* Adolescent girl 15-18 years, Nairobi.



**Table 5: School environment (among those currently in school)**

	Kilifi				Kisumu				Nairobi				Wajir			
	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male
<i>There are more than 40 students in my classroom</i>																
Very true	93%	72%	80%	74%	69%	68%	65%	70%	65%	59%	68%	60%	15%	45%	36%	46%
Somewhat true	0%	10%	4%	5%	6%	4%	5%	12%	3%	10%	4%	16%	25%	22%	32%	24%
Somehow false	0%	0%	3%	6%	2%	10%	4%	2%	4%	5%	6%	4%	45%	20%	24%	23%
Very false	7%	18%	12%	16%	22%	18%	24%	16%	29%	27%	22%	20%	15%	12%	8%	7%
<i>There is a place at school I can easily access to wash my hands with soap and water</i>																
Very true	93%	68%	89%	75%	94%	88%	94%	84%	93%	85%	91%	76%	25%	43%	51%	38%
Somewhat true	0%	15%	9%	16%	6%	8%	5%	12%	4%	10%	5%	20%	45%	27%	26%	31%
Somewhat false	0%	7%	1%	1%	0%	2%	0%	0%	2%	2%	1%	4%	20%	19%	11%	19%
Very false	7%	10%	2%	8%	0%	2%	1%	5%	1%	2%	2%	0%	10%	7%	12%	11%
<i>I am happy to be back in school</i>																
Very true	93%	77%	96%	84%	94%	100%	93%	100%	89%	93%	94%	84%	90%	90%	90%	89%
Somewhat true	7%	20%	4%	14%	2%	0%	7%	0%	7%	7%	5%	12%	5%	5%	8%	8%
Somewhat false	0%	0%	0%	2%	4%	0%	0%	0%	3%	0%	0%	4%	0%	3%	1%	1%
Very false	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	5%	0%	1%	0%
<i>I am worried that I will get coronavirus in school</i>																
Very true	7%	21%	17%	15%	33%	26%	33%	30%	26%	12%	23%	16%	5%	13%	14%	14%
Somewhat true	20%	30%	27%	38%	22%	38%	23%	26%	14%	24%	22%	12%	10%	28%	21%	27%
Somewhat false	13%	13%	22%	22%	16%	14%	14%	21%	16%	29%	15%	36%	40%	24%	30%	19%
Very false	60%	37%	33%	25%	29%	22%	30%	21%	44%	34%	40%	36%	45%	28%	34%	34%

## Learning quality

### Key findings

- The majority of respondents reported having forgotten a lot of school material during the school closures and struggling to focus in school upon return.
- The compressed school calendar to make up for the lost time has been harming the quality of learning and increasing pressure on students with negative feedback.

Responses on learning quality from both the quantitative and qualitative data suggest that the COVID-19 pandemic had some negative effect on the participants' ability to pay attention in class after returning to school, although the data is mixed. The most affected county was Kilifi with 70% of 15-19 year old male adolescents reporting a negative effect followed by 68% of 10-14 year old male adolescents from the same county (see Table 6). Across the counties, the least affected as per the self-reported responses based on gender were the 10-14 year old females, with Kilifi County recording the least effect (20%) and Kisumu County the highest effect with 39%. However, some of the survey data is somewhat at odds, with some respondents reporting that they are able to keep up with what has been taught, at the same time as reporting that they feel left behind and do not understand what is being taught. This might be explained by a tendency to over-report positive outcomes when the question is phrased positively ("I can keep up" v. "I feel left behind"). After the schools reopened, many of the adolescents agreed that they had forgotten what they had learned before the pandemic. Similar views were observed in the qualitative interviews particularly in the context of the new compressed school calendar; with some adolescents describing the return to school and learning as more challenging, full of pressure, and stressful.

*"Learning is now harder because of the compressed school calendar. Previously, there was some break time between lessons. We had time for things like P.E (Physical Education). But there is no time for P.E now. Lessons follow each other without breaks. School holidays used to be long periods, like 2 months of resting. Now the school holiday is capped at a maximum of 10 days. Previously we used to have time to do other things like accessing medical services because time could allow. There is nothing of the sort right now because of the 10-day school holidays. Initially if one wanted to visit their parents who are rearing animals out in the 'hinterland', they had that time to check on them. We do not have time to go and see our parents out there now."* Adolescent girl 10-14 years, Wajir.

Similarly, as illustrated in the quotes below, some parents and key stakeholders referred to the learning process as being exhausting to school going adolescents. Several respondents attributed this negative experience to the extended school closures, that resulted in the adolescents forgetting what they had previously learnt in school, and an accompanying loss of focus on education. As a result, most respondents described the adolescents as being stressed, tired and exhausted after a day in school; with little time to rest even during school holidays. Some parents stated that their adolescents often complained of having to do schoolwork for long hours both at school and home, with little time to revise the material. According to respondents, this led to some adolescents having difficulty in concentrating during class time; and consequently resulted in anxiety especially amongst parents and some stakeholders, that the adolescents would be tempted to drop out of school.

*"...they were not catching up like in the past, so you would find that even if you look at their learning, it was disturbing. Previously, my daughter was always between number one and ten in class. I was shocked when she became number twenty, fifteen, twenty-five. Until I asked what the problem was and realized that it's because she stayed for long [out of school]. And so they were not comprehending well. It is like they had forgotten [what they previously learnt], but right now I*

*see that they are catching up. They are starting to get used to it, they are catching up.*" Stakeholder, Nairobi.

*"Most of them have gone back to school but they are facing a lot of challenges like too much workload in their learning. The learners look like they are new in the school. After being away for so long their concentration level is low. Sometimes they argue with their teachers because of the [heavy] workload and short holidays...Some of these adolescents are just in school under the pressure of their parents and teachers. They are physically in school and mentally absent due to workload, timing of the school timetable which is tight, and short holidays."* Parent, Wajir.

In particular, girls who returned to school after childbirth faced unique challenges in their learning experience due to the dual responsibility of childcare and school demands. These adolescent mothers indicated the need to be better supported with childcare to enable them to concentrate on their education. One such girl stated that it was difficult for her to revise her schoolwork or complete assignments while at home, because her baby needed attention. Another girl experienced a similar challenge which was exacerbated by an unsupportive home and school environment, whereby her teacher and parents made disparaging remarks about her and her ability to succeed in studies, now that she was an adolescent mother. When asked whether they received assistance to compensate for the loss, a greater percentage of the adolescents reported that they received help from school and did extra work at home. Most of the participants however wished they could have more time to revise what they were learning, in order to catch up with the rest of their class members. Similar findings emerged from the qualitative data with some respondents stating that teachers were going over and beyond the call of duty and ensured that they always availed themselves to the students, including offering remedial classes to ensure that the adolescents succeeded. In some cases, parents even offered the teachers a small 'token of appreciation' in gratitude and recognition of the extra time they were putting in, to ensure that their children succeeded academically.

*"The teachers will volunteer themselves, but as parents we also show our appreciation because they have taken up their [personal] time [to do extra teaching]. And we don't pay them in any way. So just as a way to show appreciation and since we are so many parents, we can give like 20/= or even 50/= shillings. So that we even encourage them to continue volunteering. The main goal is for the student to be able to perform well."* Stakeholder, Kilifi.

Parents also expressed willingness to help adolescents to cope with increased school demands and stated that they regularly offered encouragement, motivation, and counselling as a means of social support. Some parents indicated that they often collaborated with the school administration in planning for, and facilitating, remedial classes for their children. Some boys and girls also stated that their parents and older siblings assisted them with school assignments.

The adolescents, on the other hand, described adjusting to the increased learning demands by attending remedial classes, staying up late at night or waking up early in the morning to study, making personal timetables, and utilising any free time including the short holiday breaks to catch up with schoolwork and revision. Several adolescents mentioned that having extra revision books and personal textbooks at home helped them better understand topic areas and prepare for the new school term ahead of the teacher. A few reported that this strategy helped improve their performance and seemed to be the only way to keep up with the new fast paced learning.

**Table 6: Learning quality (among those currently in school)**

	Kilifi				Kisumu				Nairobi				Wajir			
	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male
<i>Has the Coronavirus had mainly a positive, negative or no effect on your ability to pay attention in class?</i>																
Negative effect	20%	68%	57%	70%	39%	40%	34%	49%	30%	22%	34%	64%	35%	62%	34%	60%
No effect	80%	32%	41%	25%	59%	60%	61%	44%	63%	73%	56%	24%	50%	25%	61%	22%
Positive effect	0%	0%	2%	5%	2%	0%	5%	7%	7%	5%	10%	12%	15%	14%	5%	18%
<i>When I returned to school after the school closures (in January 2021) I felt I had forgotten some of what I had learned before( % agreed)</i>	87%	79%	82%	80%	63%	74%	73%	70%	64%	78%	70%	88%	75%	81%	69%	75%
<i>My school offered me help to catch up in my learning once schools re-opened in January 2021 (% agreed)</i>	87%	85%	87%	84%	94%	82%	93%	79%	91%	95%	87%	96%	90%	79%	61%	76%
<i>I have been able to keep up with what the teacher is currently teaching (January - March 2022); (% agreed)</i>	100%	92%	84%	91%	92%	100%	91%	98%	92%	93%	92%	80%	90%	87%	71%	80%
<i>I feel left behind and do not understand what the teacher is currently teaching (January - March 2022); (% agreed)</i>	7%	23%	22%	26%	12%	10%	12%	9%	17%	34%	17%	28%	30%	29%	29%	33%

## ***Literacy and numeracy***

### **Key Findings**

- In Nairobi, 9% and 38% of respondents experienced some loss of reading and comprehension skills in Kiswahili and English, respectively.
- 6% of respondents in Kilifi and 7% of respondents in Nairobi experienced some loss of numeracy skills.
- In Kilifi, respondents who were enrolled in school in March 2020, in 2022, and who reported learning from home during the school closures, were less likely to have lost numeracy skills.

Literacy and numeracy assessments are available for 260 female respondents in Nairobi and 385 female respondents in Kilifi. These respondents had completed the same assessments in prior surveys that were conducted in 2019 in Nairobi and in 2017 in Kilifi. As noted earlier, male respondents were not included in the literacy and numeracy testing as we did not have comparable data for them from before COVID-19.

Table 7 shows characteristics of the sample completing the literacy and numeracy assessments. On average, respondents were 17.7 years old when interviewed in 2020, thus they were around 20 years old when completing the 2022 literacy and numeracy assessments. In Nairobi, 78.5% of respondents were enrolled in school in March 2020, prior to the school closures related to COVID-19, but only less than half were enrolled in school in 2022. School enrolment among respondents in Kilifi was higher: 88.3% were enrolled in school in March 2020, and almost 80% in 2022. Respondents were asked in the 2020 and 2021 surveys whether they had been doing any learning or schoolwork from home while schools had been closed. In Nairobi, 76.5% of respondents reported doing any learning/ schoolwork from home at some point, this figure is close to 86% in Kilifi. Respondents in Nairobi were more likely to have experienced household loss of job or income than respondents in Kilifi.

**Table 7: Characteristics of sample completing literacy and numeracy**

	<b>Nairobi (N = 260)</b>	<b>Kilifi (N = 385)</b>
Female	100.0%	100.0%
Age in 2020, mean	17.7	17.7
In school in 2020, prior to COVID-19 related closures	78.5%	88.3%
In school in 2022	48.6%	79.5%
Learned from home during school closures	76.5%	85.7%
Household faced loss of job or income in 2020		
No	16.7%	33.5%
Partial	50.0%	38.0%
Complete	33.3%	28.5%

Table 8 presents the literacy and numeracy outcomes. Respondents in Kilifi were asked to read aloud two sentences in Kiswahili and two sentences in English. In 2017, 98.4% of respondents in Kilifi were able to read in full the two sentences in Kiswahili and 94.3% read the two sentences in English. In 2022, 99.2% of respondents in Kilifi read in full the two sentences in Swahili and 97.1% the two sentences in English. Respondents in Nairobi were asked to read aloud two short paragraphs in Kiswahili and two short paragraphs in English. In 2019, 97.7% of

respondents in Nairobi were able to read in full the two paragraphs in Kiswahili and in English. In 2022, 95.4% of respondents read in full the two paragraphs in Kiswahili and 94.6% the two paragraphs in English. Respondents in Nairobi were also asked to read aloud a short story and to answer two questions about the story, this exercise was also conducted in Kiswahili and in English. In 2019, 90.4% and 86.5% of respondents in Nairobi read the full story and answered correctly both questions in Kiswahili and in English, respectively. In 2022, these figures were 87.7% for Kiswahili and 52.7% for English.

To measure numeracy, we considered the 37 questions in the test that were asked to respondents in both Nairobi and Kilifi. We excluded the first six of these 37 questions as basically all respondents could solve them, leaving a total of 31 questions. On average, respondents in Nairobi answered correctly 83.4% of the 31 questions in 2019 and 84.2% in 2022, with slightly over 79% of respondents answering at least 75% of the questions correctly in both 2019 and 2022. In Kilifi, on average, respondents answered correctly 77.8% of the 31 questions in 2017 and 84.5% in 2022, with the percentage of respondents answering correctly at least 75% of the 31 questions increasing from 66.2% in 2017 to 81% in 2022.

**Table 8: Literacy and numeracy outcomes**

	Nairobi (N=260)		Kilifi (N=385)	
	2019	2022	2017	2022
Kiswahili				
Can read two sentences/paragraphs	97.7%	95.4%	98.4%	99.2%
Can read full story and answer two questions correctly	90.4%	87.7%		
English				
Can read two paragraphs / sentences	97.7%	94.6%	94.3%	97.1%
Can read full story and answer two questions correctly	86.5%	52.7%		
Numeracy				
Percent of questions answered correctly, mean	83.4	84.2	77.8	84.5
Answered at least 75% of questions correctly	79.6%	79.2%	66.2%	81.0%

Although informative, the mean figures presented in Table 8 can mask changes in skills occurring at the individual level. In Table 9 we explore whether respondents retained, gained, lost, or didn't have the skill across the two time periods. We define retained skill as having the skill in the earlier year and in 2022; gained skill as not having the skill in the earlier year but having the skill in 2022; lost skill as having the skill in the earlier year but not in 2022; and no skill as not having the skill in both the earlier year and in 2022. Most respondents in Kilifi retained or gained the ability to read in both Kiswahili and English. In Nairobi, a small percentage (around 4%) lost ability to read in Kiswahili and in English. When looking at reading and comprehension, only available for respondents in Nairobi, a considerably higher percentage of respondents experienced a loss of skills. Of respondents in Nairobi, 9.2% and 38.1% experienced some loss of reading and comprehension skills in Kiswahili and English, respectively. For numeracy we look at changes in the ability to solve at least 75% of the test. Respondents in Kilifi were more likely to have gained skills than respondents in Nairobi, reflecting the fact that a higher percentage of respondents in Nairobi were already able to solve 75% of the test in the earlier period. A similar percentage of respondents (6.2% in Kilifi and 7.3% in Nairobi) experienced some loss of numeracy skills.

**Table 9: Change in literacy and numeracy skills between 2017/ 2019 and 2022**

	Retained skill	Gained skill	Lost skill	No skill
<b>Kiswahili</b>				
Kilifi: Can read two sentences	97.7%	1.6%	0.8%	0.0%
Nairobi: Can read two paragraphs	93.5%	1.9%	4.2%	0.4%
Nairobi: Can read full story and answer two questions correctly	81.2%	6.5%	9.2%	3.1%
<b>English</b>				
Kilifi: Can read two sentences	93.5%	3.6%	0.8%	2.1%
Nairobi: Can read two paragraphs	93.9%	0.8%	3.9%	1.5%
Nairobi: Can read full story and answer two questions correctly	48.5%	4.2%	38.1%	9.2%
<b>Numeracy</b>				
Kilifi: At least 75% correct	60.0%	21.0%	6.2%	12.7%
Nairobi: At least 75% correct	72.3%	6.9%	7.3%	13.5%

Note: For Kilifi change is measured between 2017 and 2022. For Nairobi change is measured between 2019 and 2022. Sample sizes are 385 female respondents for Kilifi and 260 female respondents for Nairobi. The figures may not add up to 100% due to rounding.

Table 10 presents loss of skills by some key factors among respondents who had the skills in the earlier survey. We focus on reading and comprehension (available for Nairobi only) and numeracy, as most respondents had retained their reading ability. No statistically significant differences are observed in Nairobi. In Kilifi, respondents who were enrolled in school in March 2020, in 2022, and those who reported learning from home during the school closures, were less likely to have lost numeracy skills than their peers who were not enrolled in school or did not engage in learning from home.

**Table 10: Loss of skill by 2022 among respondents who had the skill in 2017/ 2019**

	Nairobi			Kilifi
	Kiswahili Reading and comprehension	English Reading and comprehension	Numeracy At least 75% correct	Numeracy At least 75% correct
Sample had skill in earlier year	235	225	207	255
Lost skill	10.2%	44.0%	9.2%	9.4%
<u>Lost skill by characteristics</u>				
In school in March 2020				
Yes	9.3%	45.5%	9.0%	8.1%
No	13.2%	38.8%	9.8%	25.0%*
In school in 2022				
Yes	10.4%	47.7%	9.7%	6.5%
No	10.0%	40.7%	8.7%	26.3%***
Any learning from home during school closures				
Yes	9.0%	45.7%	9.2%	7.8%
No	14.0%	38.5%	9.1%	24.0%**

Note: For Kilifi the earlier survey is from 2017. For Nairobi the earlier survey is from 2019. P-values are from tests of proportions; \*\*\*p<0.001, \*\*p<0.01, \*p<0.05

## *Health and wellbeing*

### *Time use*

#### Key findings:

- Girls generally spent more time on the house chores as compared to boys.
- Findings related to learning quality and school re-enrolment/ dropout also suggest that domestic responsibilities and household chores were a key issue for girls.

The average time that participants spent on household chores ranged between 1.63 to 3.56 hours per day, the highest recorded by females aged between 15-19 from Kilifi and the least by males aged 10-14 from Nairobi (see Table 11). Girls generally spent more time on house chores compared to boys. Although time use as a theme was not explicitly explored in the qualitative work, findings related to learning quality and school re-enrolment/ dropout also suggest that domestic responsibilities and household chores were a key issue for girls.

The only exceptions were in Kisumu County where boys between 15-19 spent more time on household chores than girls of the same age category, and in Wajir County where boys between 10-14 spent more time on household chores than girls in the same age group. Compared to before the pandemic started, less than a third (range: 5% to 42%) of the participants across the counties felt that this was more than the time spent on those activities before the pandemic, while around 50% (range: 18% to 57%) generally felt it was about the same, indicating that the balance of daily activities had returned to pre-pandemic conditions for the majority of adolescents. Remarkably, 77% of the girls aged between 10-14 in Wajir County felt this was less time compared to before the pandemic.



**Table 11: Time use**

	Kilifi				Kisumu				Nairobi				Wajir			
	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male
TIME USE																
Mean hours spent on household chores	3	2.87	3.56	3.12	2.49	1.93	2.99	3.19	2.58	1.63	2.62	1.91	1.72	2.36	3.12	2.3
<i>Would you say this is more or less time than you spent on these activities before the coronavirus?</i>																
More	24%	34%	28%	32%	25%	28%	24%	42%	25%	21%	25%	16%	5%	20%	19%	22%
Less	24%	18%	30%	22%	27%	23%	30%	23%	25%	25%	30%	30%	77%	0%	24%	25%
About the same	53%	48%	42%	46%	48%	40%	46%	35%	50%	57%	45%	54%	18%	56%	57%	53%

## **Food security**

### Key findings:

- Over half of respondents in Kilifi and Kisumu (and almost half in Nairobi) reported having skipped at least one meal a week.
- For the majority of those that skip meals, it is still happening more often than before the COVID-19 pandemic.

As shown in Table 12, over 50% of respondents in Kilifi and Kisumu counties (range: 55% to 75%) and near 50% of respondents (range: 39% to 54%) in Nairobi reported having skipped at least one meal in the week prior to the survey. In contrast, in Wajir County most of the participants reported that they had not skipped a meal in the past week, with the highest responses coming from the 10-14 female age category (95%) followed by the 15-19 female age category (83%). When asked how this compared to before the pandemic, with the exception of females in Wajir, more than 50% of respondents (range: 52% to 81%) felt skipping meals was more common two years into the pandemic as compared to before it began. Other responses suggested that skipping of meals happened more with the advent of the COVID-19 pandemic.

This was supported by findings from the qualitative work with many adolescents stating that they skipped meals, had one meal a day, or ate only one type of food for several consecutive days. This was often related to their parents' inability to afford meals or ensure nutrition diversity as a result of pandemic-related loss of income generating activities. Meals were therefore reduced to the most basic food commodities for survival. Many adolescents indicated having to adjust to the situation because of the financial struggles that they observed amongst the adults. One stakeholder suggested that adolescents in boarding school possibly had better nutritional status compared to their counterparts who lived at home, as they would get meals at school.

*"Before we used to have three meals a day. But now sometimes we cook only once a day, and if it's twice we cook the same type of food. I got stressed because of the poverty my family is experiencing."* Adolescent girl 15-19 years, Wajir.

**Table 12: Food security**

	Kilifi				Kisumu				Nairobi				Wajir			
	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male
<i>How frequently are you skipping meals or eating less</i>																
Never	25%	25%	35%	45%	37%	34%	30%	25%	49%	61%	46%	53%	95%	53%	83%	66%
Other responses	75%	75%	65%	55%	63%	66%	70%	75%	51%	39%	54%	47%	5%	47%	17%	34%
<i>Would you say that you are skipping meals or eating less food more or less (among those reporting yes)</i>																
More	50%	56%	61%	55%	69%	79%	70%	66%	60%	81%	63%	76%	0%	57%	13%	52%
Other responses	50%	44%	39%	45%	31%	21%	30%	34%	40%	19%	37%	24%	100%	43%	87%	48%

## **Mental health**

### Key findings:

- About one-third of respondents reported symptoms of depression, anxiety or stress.
- On average, girls were more likely to report negative mental health as compared to boys.
- Reports of depression and stress were highest in 2020 during the school closures and have since improved.
- The main causes of symptoms include: parents' lack of money/ income, the compressed school calendar, failed romantic relationships and increased fighting in the home.

About one-third (range: 0% to 47% in each age/ location segment) of the participants reported having little interest or pleasure in doing things they normally enjoyed before the COVID-19 pandemic, or feeling some form of anxiety or stress, with Wajir County recording least percentage in all the age categories as compared to other counties (see Table 13). Wajir County also had the least percentage of signs of feeling down, depressed or hopeless, nervous, anxious or on edge and not being able to stop or control worrying. There were some gender disparities in the responses of the 15-19 age groups with a higher percentage of boys than of girls experiencing these signs in Kilifi and Kisumu. The opposite trend can be seen for the 15-19 age group in Nairobi with a higher percentage of girls than of boys reporting these signs.

Figure 3 shows the proportion of respondents who report experiencing little interest or pleasure in doing things they normally enjoy or feeling down, depressed or hopeless in the past two weeks. Reports of depressive symptoms are the highest in 2020, during school closures related to COVID-19, for all age and sex groups in the four counties. Experience of depressive symptoms falls for all age and sex groups in all four counties in 2021. In 2022, a further decline in report of depressive symptoms is seen in Wajir but reports of depressive symptoms bounce back up for most age-sex groups in the other three counties.

The qualitative study explored potential sources of mental health concerns and the types of feelings that were associated with these concerns. Amongst adolescents, the most cited feelings related to adverse mental health were anxiety, stress, and worry. In many cases, adolescents expressed anxiety over parents' lack of money for school fees, and often worried whether they would be able to complete their studies. A few parents noted that adolescents experienced most stress when they were chased away from school due to lack of school fees. This was described as more common after schools reopened and was attributed to parental loss of income as a result of the pandemic and related restrictions. In a few cases, adolescents said that they feared asking their parents for money, and as such experienced stress over their lack of basic needs such as sanitary towels.

*"Our parents are suffering right now. So, you know, you find that your parent has returned home [at the end of the day] without money. You sympathise with how they struggle for you to be able to eat. So, this will keep on being on your mind to the extent that you get stressed. Then you find that you have stress."* Adolescent boy 15-19 years, Kisumu.

*"Sometimes you see when I am in school, I start to think about my father, where he is now and how he doesn't have a job. When your mind hits there, then you go to school and your parent doesn't have any money to pay for your fees [it becomes very stressful]."* Adolescent girl 15-19 years, Nairobi.

As previously indicated, the new compressed school calendar was a source of concern for many respondents. Some adolescents stated that they experienced stress due to the academic pressure from the current school calendar. This was also noted by both parents and stakeholders, who described the students as experiencing burn out. The time lost during school closures was an additional source of worry and anxiety for a few of the adolescents. One girl for example stated that she constantly "felt bad" about the time wasted during the long school closure, and invariably worried about all the lost opportunities.

Additionally, there was a gender-related mental health issue specifically for adolescent girls who fell pregnant or had children during the school closures. One girl for example stated that she was continually stressed due to pregnancy related sickness. Another was concerned over her lack of concentration and inability to give full attention to her academics. Furthermore, some pregnant girls were stigmatised and faced ridicule from their peers, which in turn adversely affected their mental wellbeing. Girls with children also had constant anxiety over the care of their young ones while they attended school.

*“Yes, I was stressed because I had to stay back at home while others were in school learning. I was of afraid of going back to school while pregnant. My school mates would mock me, make fun me and talk ill of me.”* Adolescent girl 15-19 years, Kilifi.

Relatedly, ‘failed’ romantic relationships were described as causing despair, grief and agony amongst affected girls. One girl for example described having recurrent and ruminating thoughts about this boy who, in her opinion, had treated her unjustly.

*“This boy, I keep thinking of him until I keep saying his name. I say his name every day. I don’t sleep without mentioning his name. I keep mentioning him. As in, “[boy’s name] can do this to me?” I keep saying that because I think of the many things I wasted on him and how he wasted my time. I just keep thinking.”* Adolescent girl 15-19 years, Nairobi.

Relationship challenges between adolescents and their parents also contributed to sub-optimal mental wellness. For example, constant disagreements between parents and adolescents about real or presumed romantic relationships, resulted in increased stress especially for adolescent girls.

Lastly, several adolescents also indicated that constant fights and ‘bickering’ between their parents was stress-inducing for them. Sometimes marital/ family separation occurred due to such unresolved grievances, adultery on the part of one partner, household heads inability to provide financially for the family, or migration in search of work. Such family separation was noted to adversely affected adolescents and contribute to poor mental health.

*“Sometimes I am stressed because my father likes fighting with my mother.”* Adolescent boy 15-19 years, Kisumu.

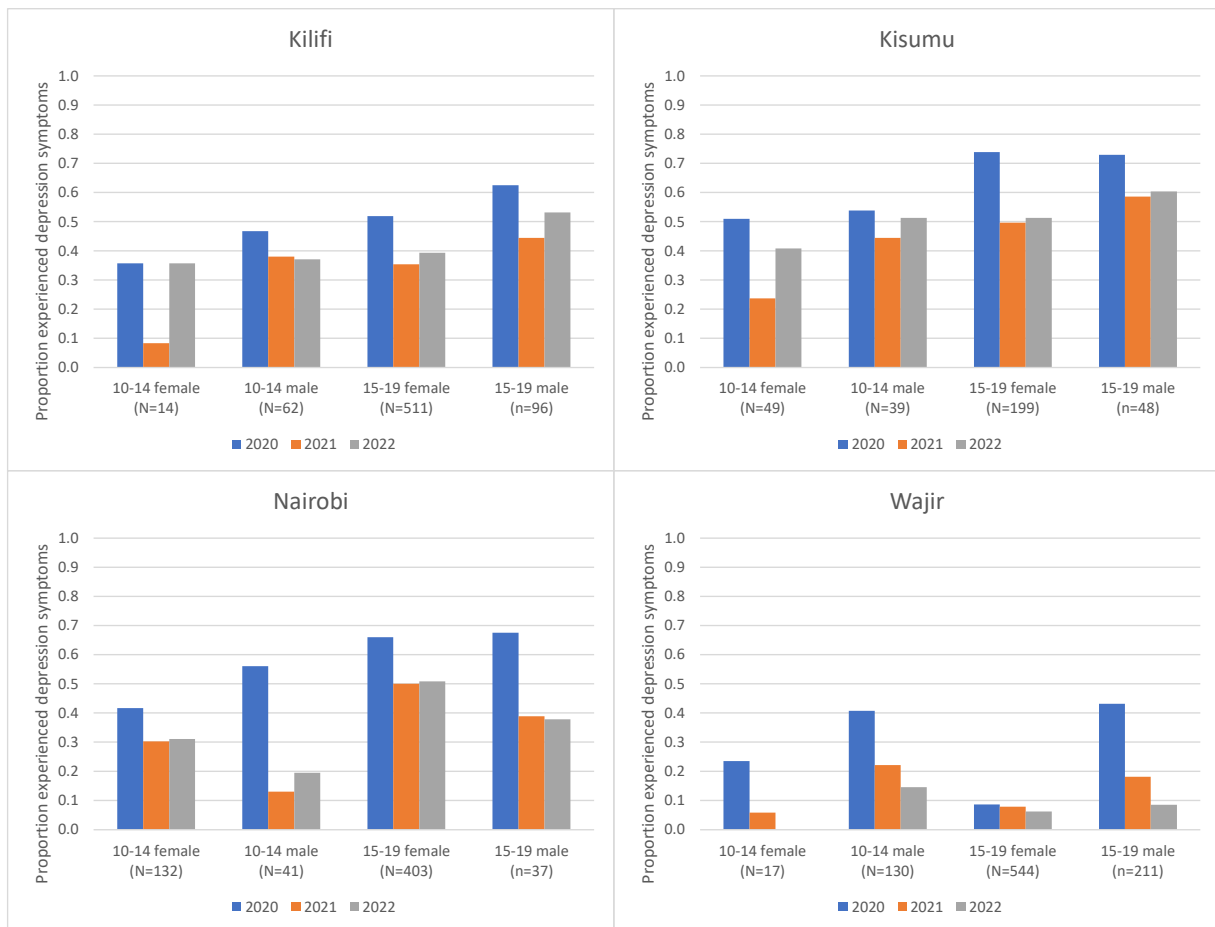
*“Yes, I get stressed by my parents like the time they were arguing, I was just staring at them. I would think and say to myself, this is bad, it’s bad...how do you leave one person [mother] providing for the family alone? The woman works excessively, she gets tired, and you are just there...I was thinking that is bad and...I am saying the lady is working hard and you [father] are just there. You know I don’t like people arguing and quarrelling.”* Adolescent girl 15-19 years, Nairobi.

Coping with mental health concerns remained a huge challenge for many adolescent boys and girls. In some cases, adolescents said that their parents were equally stressed and were therefore not able to listen to them or offer guidance and counselling; sometimes resulting in the use of drugs and alcohol as a coping mechanism. On the other hand, several adolescents identified other mentors or adults that they regularly confided in when facing stressful or anxious situations. Consequently, many parents and stakeholders stressed the importance of having adequate and accessible adolescent mental health services in the communities; especially as COVID-19 campaigns had relegated most of these other health services to the background.

**Table 13: Mental and general health**

	Kilifi				Kisumu				Nairobi				Wajir			
	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male
<i>Over the last 2 weeks, how often have you been bothered by any of the following:</i>																
<i>Little interest or pleasure in doing things you normally enjoy (dichotomise into 0/other for these four items)</i>																
0 days	81%	70%	77%	56%	67%	57%	63%	55%	79%	93%	64%	83%	100%	88%	96%	92%
Other	19%	30%	23%	44%	33%	43%	37%	47%	21%	7%	36%	17%	0%	12%	4%	8%
<i>Feeling down, depressed or hopeless</i>																
0 days	63%	67%	64%	54%	69%	70%	58%	51%	79%	80%	63%	77%	100%	91%	97%	94%
Other	38%	33%	36%	46%	31%	30%	42%	49%	21%	20%	37%	23%	0%	9%	3%	6%
<i>Feeling nervous, anxious or on edge</i>																
0 days	63%	63%	79%	56%	69%	73%	63%	55%	81%	85%	64%	72%	100%	99%	98%	100%
Other	38%	38%	21%	44%	31%	27%	37%	45%	19%	15%	36%	28%	0%	1%	2%	0%
<i>Not being able to stop or control worrying</i>																
0 days	69%	70%	74%	42%	73%	73%	66%	47%	80%	80%	69%	72%	100%	98%	97%	99%
Other	31%	30%	26%	58%	27%	27%	34%	53%	20%	20%	31%	28%	0%	2%	3%	1%

**Figure 3: Experience depressive symptoms in the past two weeks**



Note: The figures show the proportion of respondents experiencing depressive symptoms among respondents interviewed in both 2020 and 2022, sample sizes for 2021 can be smaller for some age-sex groups. Depressive symptoms are measured as reporting having experienced little interest or pleasure in doing things or feeling down, depressed or hopeless at least one day during the past two weeks.

### **Hygiene and sexual health**

Hygiene and sexual health were a recurrent emergent theme in the qualitative data in relation to adolescent health and wellbeing. For some adolescents, basic hygiene including the ability to bathe daily was a challenge due to inadequate water supply and/or having to travel extremely long distances to fetch water. For girls in particular, menstrual hygiene and the related unaffordability of sanitary products presented a gendered challenge that significantly impacted on their health and wellbeing.

*“Mostly you get us girls we have our periods every month and sometimes we get scared...you will find that someone lives with their [sole parent] father. So, it’s hard to tell him to give you 50/= shillings to buy something. Because some live with fathers who are drunkards. So, it becomes hard. It is not easy for [such fathers] to think of giving [their daughters] money to buy such things, like Always [sanitary pads]. You find it hard.”*  
Adolescent girl 15-19 years, Nairobi.

*“When I asked my mother for money, she would say she had none. When I needed sanitary towels, she would tell me to go the shop, it was a shop near our home, and ask to get it on credit. But we owed the shopkeeper a lot of money and so he would refuse to give me stuff on credit, because we did not have money. When I asked for money from my boyfriend, he would give me.”* Adolescent girl 15-19, Kilifi.

Sexual health was another important emergent theme from the qualitative data in relation to adolescent health and wellbeing. In a few cases, respondents mentioned that some sexually active adolescents would get urinary tract infections (UTI), sexually transmitted infections (STI), and warts. These adolescents were encouraged to seek treatment from youth friendly centres. The existence of such centres which allowed for private consultations and treatment of adolescents was lauded as a positive and beneficial thing. However, many respondents felt that most of these centres primarily targeted adolescent girls, which left an unaddressed gap for the boys. Even then, many of the girls were shy and hesitated to access these services.

*“I was told that I have UTI and warts, and sometimes they are painful. They are the ones affecting my health...”* Adolescent girl 15-19 years, Kisumu.

## Violence

### Key Findings:

- While tension and violence is prevalent in households and in people’s lives, it has for the most part returned to pre-pandemic levels.

Table 14 shows the participants’ responses regarding violence and their personal experiences. They were asked to rate whether the incidences happened more, less or about the same as compared to before coronavirus. Regarding tension in the house, less than 20% (range: 0% to 19%) across the counties felt there was now more tension in their houses as compared to before the pandemic, apart from Kisumu County where responses reporting more tension ranged from 15% among females 10-14 years old to 30% among males 15-19 years old.

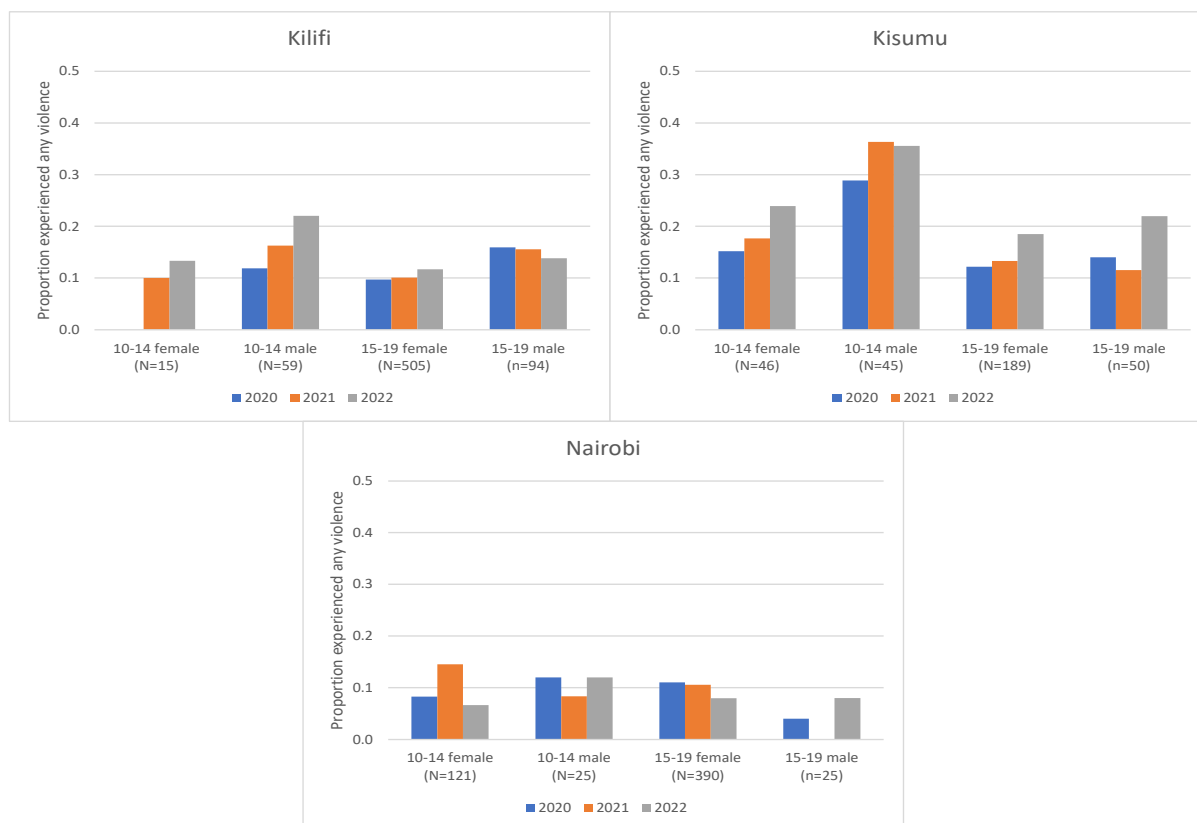
Some participants in Kilifi, Kisumu and Nairobi reported to have been personally humiliated, insulted, or threatened during the COVID-19 pandemic period. The highest percentage was reported by the 10-14 males (25%) from Kisumu County followed by 10-14 females (20%) from the same county. Among those who said they have personally been hit, slapped, kicked or beaten, Kilifi County had the highest percentage (45%) of the romantic or sexual partners being responsible among the 10-14 males. Some sexual violence (range: 0% to 6%) was also mentioned across the counties which seem to have happened to more or less the same degree after the pandemic. Additionally, though not a major emergent theme, the qualitative data indicated that some adolescents experienced verbal abuse from their parents, which was often attributed to stress related to a lack of income and financial resources. Figure 4 shows the proportion of respondents who report experiencing emotional, physical or sexual violence in the past one month across time.



**Table 14: Experience of violence**

	Kilifi				Kisumu				Nairobi				Wajir			
	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male
<i>Think about if it is more, less or about the same as compared to before Corona started: Tensions in my house</i>																
More	6%	14%	5%	12%	15%	26%	23%	30%	19%	7%	16%	16%	0%	5%	1%	3%
Less	18%	27%	34%	25%	29%	38%	31%	32%	30%	38%	37%	41%	59%	52%	58%	44%
About the same	76%	58%	61%	63%	56%	36%	46%	42%	51%	55%	47%	44%	41%	44%	41%	53%
<i>In the past one month, have you personally been humiliated, insulted, or threatened? (% yes)</i>	0%	16%	10%	17%	20%	25%	11%	14%	5%	9%	3%	0%	0%	0%	0%	0%
<i>Would you say that it is happening more, less or the same as compared to before Coronavirus? (among those reporting yes)</i>																
More	100%	23%	33%	35%	30%	0%	36%	13%	50%	33%	43%	33%	0%	0%	0%	50%
Less	0%	46%	37%	47%	50%	0%	32%	38%	0%	0%	25%	67%	0%	0%	0%	50%
About the same	0%	31%	28%	18%	20%	0%	27%	50%	50%	67%	14%	0%	0%	0%	0%	0%
<i>In the past one month have you personally been hit, slapped, kicked or beaten?(% yes)</i>	0%	17%	2%	4%	22%	17%	8%	5%	5%	9%	3%	0%	0%	0%	0%	0%
<i>Have any of your sexual or romantic partners been responsible for these situations? (among those reporting yes) (% yes)</i>	0%	45%	18%	25%	9%	0%	13%	0%	0%	0%	8%	0%	0%	0%	0%	0%
<i>Would you say that it is happening more, less or the same as compared to before Coronavirus? (among those reporting yes)</i>																
More	0%	27%	36%	25%	36%	13%	6%	33%	29%	67%	42%	0%	0%	0%	0%	0%
Less	0%	45%	18%	75%	18%	0%	56%	67%	14%	33%	33%	0%	0%	0%	0%	0%
About the same	0%	27%	27%	0%	45%	50%	25%	0%	14%	0%	17%	0%	0%	0%	0%	0%
<i>In the past one month have you personally been forced to do something sexually that you did not want to do? (% Yes)</i>	6%	2%	2%	0%	4%	2%	3%	2%	1%	0%	2%	0%	0%	0%	1%	1%
<i>Would you say that it is happening more, less or the same as compared to before Coronavirus? (among those reporting yes)</i>																
More	0%	0%	25%		50%	0%	71%	0%	0%		50%		0%	0%	25%	
Less	100%	0%	0%		50%	100%	0%	100%	0%		38%		0%	0%	75%	
About the same	0%	0%	38%		0%	0%	29%	0%	100%		13%		0%	0%	0%	

**Figure 4: Experience any violence (emotional, physical, sexual) in the past one month**



Note: The figures show the proportion of respondents experiencing any emotional, physical or sexual violence in the past one month among respondents interviewed in both 2020 and 2022. Sample sizes for 2021 can be smaller for some age-sex groups. Wajir is not included as questions regarding experience of violence were not asked in the earlier rounds.

### **Pregnancy and child marriage**

#### **Key findings:**

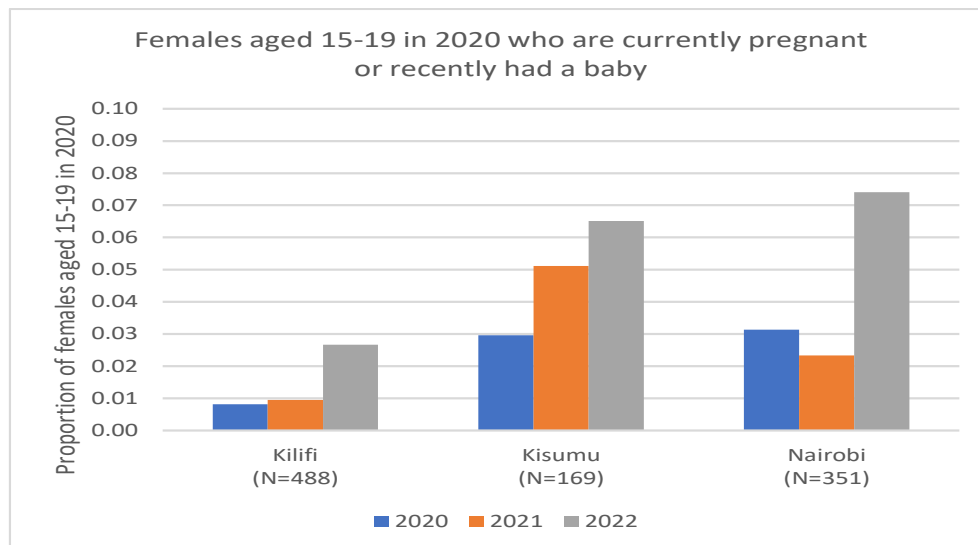
- The proportion of girls between ages 15-19 who were currently pregnant or had recently had a baby increased between 2020 and 2022. While some was due to aging, as evidenced in the qualitative data, some was caused by the conditions during the COVID-19 pandemic.

Figure 5 shows the proportion of females aged 15-19 in 2020 in Kilifi, Kisumu and Nairobi who were either currently pregnant or recently had a baby. In all three counties, as expected due to aging, girls' rates of recent pregnancy or current pregnant increased. Kilifi had the lowest rates of pregnancy throughout the period of observation. Pregnancy rates in Kisumu have consistently increased, while in Nairobi there was a slight decline between 2020 and 2021 but a large increase between 2021 and 2022. In 2022, the percent of 15-19 year old girls currently pregnant or recently having had a baby was between 3% and 8% across the counties (see Table 15). The percentage of those currently married or living with a partner ranged between 0% to 13% with the highest percentage being reported by the 15-19 year old females from Wajir County. Among the girls who are either married or cohabiting, 100% of 10-14 and 87% of 15-19 age categories from Kilifi got married since the pandemic started. The responses given suggest that some of the girls got married due to the COVID-19 pandemic or because they were pregnant. Some girls also reported that it was their choice to get married, for instance in Wajir County, 86% of the girls (15-19) made their own choice while only 4% got married because of the pandemic. We acknowledge that it is also not a pure dichotomy and that some girls chose to marry, even within the context that they had to make that choice in the first place due to pandemic related reasons.

**Table 15: Pregnancy and child marriage**

	Kilifi				Kisumu				Nairobi				Wajir			
	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male	10-14 Female	10-14 Male	15-19 Female	15-19 Male
Currently pregnant or recently had a baby			3%				7%				8%				6%	
Are you currently married or living with a partner? (% married/cohabiting)	6%	2%	3%	1%	2%	0%	5%	0%	0%	0%	3%	0%	0%	0%	13%	3%
% Married since the pandemic started (among currently married or living with partner)	100%		87%		100%		38%		0%		43%		0%		42%	
Nature of marriage (among currently married or living with partner): (% True)																
I got married because schools were closed	0%		27%		0%		0%		0%		14%		0%		3%	
I got married because my family needed money	0%		7%		0%		0%		0%		29%		0%		0%	
I got married because of Coronavirus	100%		13%		0%		13%		0%		14%		0%		4%	
It was my choice to get married	100%		87%		0%		100%		0%		80%		0%		86%	
My parents decided who I would marry	0%		7%		0%		0%		0%		14%		0%		22%	
My parents decided that it was the right time to get married	0%		13%		0%		0%		0%		29%		0%		29%	
If the Coronavirus pandemic had not happened, I would not be married right now	100%		27%		100%		13%		0%		29%		0%		5%	
I got married because I became pregnant	100%		47%		100%		25%		0%		29%		0%		3%	
Has Coronavirus changed the timing of when you think you will get married? (among those not currently married)																
Married sooner	0%	2%	4%	2%	0%	0%	0%	0%	0%	2%	1%	5%	0%	1%	1%	2%
Married later	27%	12%	27%	21%	17%	21%	20%	27%	14%	17%	24%	32%	9%	14%	25%	20%
No change	73%	86%	69%	77%	83%	79%	80%	73%	86%	81%	74%	62%	91%	86%	74%	78%

**Figure 5: Pregnancy among females aged 15-19 in 2020**



Note: Sample sizes for 2021 are smaller for all three counties. Wajir is not included as pregnancy was not asked in the earlier rounds.

### **Barriers to accessing healthcare**

The qualitative data indicated that access to healthcare (or lack thereof) was an important concern for adolescents, which in turn impacted on their health and wellbeing. Various barriers to accessing healthcare were cited with the most common being financial constraints. This included lack of financial resources to pay for transport to health facilities and required tests or to purchase prescribed medications. This was especially the case for families that were not enrolled in the national health insurance scheme. The situation was exacerbated by lack of medical and laboratory equipment and supplies in government health facilities that should ideally offer free or highly subsidised services. This resulted in a range of coping strategies being employed including: use of alternative or home treatments; seeking care from pharmacies instead of health facilities and ‘prematurely’ stopping treatment for example when an adolescent’s health seemed to be improving even if they were not fully recovered. The situation was especially dire for adolescent mothers as illustrated in the quote below, exacerbated by unsupportive home environments. For example, one adolescent mother stated that her parents refused to support her in getting medical attention, while another indicated that after childbirth, her family denied her food.

*“It was bad, when we (adolescent girl and baby) would get sick we would just take painkillers since we did not have money to go to hospital.” Adolescent girl 15-19 years, Kilifi.*

Long queues at health facilities were also a deterrent to accessing healthcare particularly in the context of the new ‘compressed’ school calendar and syllabus. In this new system, there was rarely time for anything else including seeking medical treatment when needed. Some students indicated avoiding seeking treatment due to the time spent at the health facilities which would have otherwise been spent studying.

A few adolescents also expressed hesitation in accessing treatment due to misconceptions on their health status or cause of illness. These fears were especially related to sexual health (or misperceptions relating to it) as illustrated below. For instance, one girl avoided going to hospital for treatment for fear that the health professionals would diagnose her with an STI. Additionally, some stakeholders noted that adolescents would fear informing their parents of illness especially when there was family discord. In such cases, treatment would be delayed risking the health of the adolescent.

*“Most of the youth usually hide and avoid going to hospital because they fear they will be told they have been engaging in unprotected sex. But sometimes it is because of wearing dirty or wet underwear. So, they fear seeking services.” Stakeholder, Kilifi.*

## Conclusion

### ***Summary of findings***

Overall, the findings from this study shed light on the education, health and wellbeing status of adolescents in four counties in Kenya two years into the COVID-19 pandemic. At a broad summary level, some of the acute effects of the pandemic have subsided. For the most part adolescents are back in school, mental health status is improving and large spikes in adolescent pregnancy and/or marriage have not been documented in this sample. However, it is important to look at the particular gendered effects on sub-groups to understand where particular areas of longer-term harm caused by the pandemic may be found. Overall, many of the effects are similar to what other studies in Kenya have found (Presidential Policy and Strategy Unit (Kenya) and Population Council, 2021; TetraTech, 2022).

In the education domain, older adolescent girls in particular faced the challenges of adolescent pregnancy and the difficulty that placed on their return to education. Furthermore, school fees continue to be a barrier to education for both girls and boys – and the fact that the COVID-19 pandemic added to household economic stress only exacerbated that challenge. In addition, the compressed school calendar placed additional financial stress on households as school fees needed to be paid more frequently in 2021 and 2022. Moreover, some loss of basic reading and comprehension and numeracy skills was observed among adolescent girls (this information is not available for boys).

In regard to health and wellbeing, the study findings lay out an array of challenges that adolescents are facing. A high number of adolescents are skipping meals. Symptoms of depression and anxiety are common, although improvement has been seen since the very high levels experienced during school closures. Pregnancy, motherhood and employment make it difficult for older adolescents, girls and boys respectively, to complete secondary school. The qualitative data paints a rich picture of the pathways through which these challenges shape the lives of adolescents and makes clear that all of these challenges existed prior to the pandemic, and while the pandemic may have exacerbated these challenges in its initial phases, with time, the challenges remain, although the pandemic is no longer the key driver.

## Recommendations

In line with the study objectives to a) inform short and medium term policies and programmes to address the immediate harms caused by the COVID-19 pandemic; and b) to be better prepared for other pandemics or crises in future that lead to prolonged school closures, we divide our recommendations from this study into two sections. As the study findings show, there are still adolescents, in particular girls, who dropped out of school during the pandemic, and students in school that need both academic and psychosocial support. Therefore, the first set of actions recommended are for the short term to address the lingering effects of the pandemic that can still be mitigated with immediate action. In addition, lessons have been learned about the pathways through which the pandemic had an impact on the education, health and wellbeing of adolescents, in gendered ways, that can be used to avoid similar outcomes in the future. Therefore, the second set of recommendations are focused on building resilience so as to mitigate the effects of future pandemics and crises.

It should be noted that while the data reflects only four of Kenya's 47 counties, these recommendations can be taken up across counties with a reflection on the differences between geographies, in particular rural versus urban areas, highlighted in the data above. In addition, in Kenya, the education sector remains a centralised function at the national level and the health sector is a function devolved to the county level. Therefore, counties will not be able to implement changes in education programs without national involvement, so there is a need for cooperation between both national and county levels, as well as education and health sectors.

### **Short term recommendations to address immediate harms of the pandemic:**

Non-Governmental Organisations (NGOs) and the relevant national government ministries and agencies, with donor support, should:

- Implement a short-term programme to identify girls and boys that have dropped out of school due to the pandemic and provide the necessary support for re-enrolment, whether it be a waiver of school fees, or support to pregnant or parenting girls, etc. in order to address short term spikes in school drop out.
- Offer short-term, intensive learning support programmes so that those students that were not able to study remotely during the school closure can close the learning gap so as to avoid long term impacts on their education outcomes.
- Deliver short-term psychosocial support to adolescents via schools and community-based programs to address the accumulated and remaining stress and anxiety caused by the economic impacts of the pandemic, the demands of the compressed school schedule, and increased stress and tension in the household.

Beyond these specific recommendations, one key dynamic to note is that as the recovery from the pandemic continues, the window may be closing on the sense of urgency to invest and address the specific harms that are still lingering. Therefore, it is important to act quickly in the coming year to secure support on these three policy and programmatic components.

### **Recommendations to build resilience for future pandemic or crisis induced extended school closures:**

- Government at both national and county levels should set up systems and protocols to be able to specifically identify and target sub-groups of adolescents, and their households, that are the most marginalised in order to reach the smaller percentages of adolescents that are experiencing school dropout, adolescent pregnancy, child marriage, depression and more. NGOs should prepare for the need to supplement national or large-scale responses with targeted additional support to more marginalised sub-groups of adolescents.

- Government and NGOs should strengthen systems for multi-sectoral programming and cooperation between ministries so that future responses can address the array of issues that adolescents will face in an integrated fashion. Siloed programmes, both government and NGO implemented, will only address one of the likely many issues that adolescent girls and boys will face in an extended school closure.
- The Kenyan Ministry of Education should continue to strengthen the implementation of Kenya's 'return to school' policy for pregnant and parenting mothers, and other adolescents who are not enrolled in school for financial or other reasons. With NGO and donor support, implementation guidance can be strengthened, and funding should be allocated for carrying it out.
- The government should implement policy measures that will further reduce the cost of schooling in Kenya – in particular at secondary school level – whether through further subsidies that lower the cost of school fees and boarding costs, offering more bursaries, etc. This will make it more likely that in future, a crisis that involved economic shock to households, as well as extended school closures, would result in less school dropout.
- Both government and NGOs should establish the digital and analogue infrastructure for wider access to remote learning, should that be needed in a future crisis. This will prevent losses in literacy and numeracy skills.

In conclusion, the results of this study show that adolescents are still experiencing the residual effects of the pandemic, on top of a broad set of pre-existing challenges. Furthermore, those impacts are not homogenous among different age groups, sexes and geographies of adolescents. Action must be taken quickly, as the world is entering a post-pandemic phase, to address the immediate harms caused to education and broader health and wellbeing of adolescents during the pandemic. In addition, there are key policies and programmes that can be put in place to build resilience and preparation for any future extended school closures that may be experienced in times of crisis, so that such harms will be mitigated.

## References

- ACAPS. (2016). *Beyond a Public Health Emergency: Potential Secondary Humanitarian Impacts of a Large-Scale Ebola Outbreak*. Retrieved from [https://www.acaps.org/sites/acaps/files/products/files/t\\_beyond\\_a\\_public\\_health\\_emergency\\_feb\\_2016.pdf](https://www.acaps.org/sites/acaps/files/products/files/t_beyond_a_public_health_emergency_feb_2016.pdf)
- Angrist, N., de Barros, A., Bhula, R., Chakera, S., Cummiskey, C., DeStefano, J., . . . Stern, J. (2021). Building back better to avert a learning catastrophe: Estimating learning loss from COVID-19 school shutdowns in Africa and facilitating short-term and long-term learning recovery. *International Journal of Educational Development, 84*, 102397.
- Bourgault, S., Peterman, A., & O'Donnell, M. (2021). Violence against women and children during COVID-19—one year on and 100 papers in. *Washington DC: Center for Global Development*.
- Carlsson, M., Dahl, G. B., Öckert, B., & Rooth, D.-O. (2015). The Effect of Schooling on Cognitive Skills. *The Review of Economics and Statistics, 97*(3), 533-547. doi:10.1162/REST\_a\_00501
- Conto, C. A., Akseer, S., Dreesen, T., Kamei, A., Mizunoya, S., & Rigole, A. (2021). Potential effects of COVID-19 school closures on foundational skills and Country responses for mitigating learning loss. *International Journal of Educational Development, 87*, 102434.
- Darso, S. (2020). What is the effect of COVID-19 on girls' education? Retrieved from <https://www.mercycorps.org/blog/COVID-19-effect-girls-education>
- Decker, M. R., Bevilacqua, K., Wood, S. N., Ngare, G. W., Thiongo, M., Byrne, M. E., . . . Gichangi, P. (2022). Gender-based violence during COVID-19 among adolescent girls and young women in Nairobi, Kenya: a mixed-methods prospective study over 18 months. *BMJ Global Health, 7*(2), e007807. doi:10.1136/bmjgh-2021-007807
- Decker, M. R., Wood, S. N., Thiongo, M., Byrne, M. E., Devoto, B., Morgan, R., . . . Wamue-Ngare, G. (2021). Gendered health, economic, social and safety impact of COVID-19 on adolescents and young adults in Nairobi, Kenya. *PLoS ONE, 16*(11), e0259583.
- Dlamini, N. J. (2021). Gender-Based Violence, Twin Pandemic to COVID-19. *Critical Sociology, 47*(4-5), 583-590. doi:10.1177/0896920520975465
- Elston, J. W. T., Cartwright, C., Ndumbi, P., & Wright, J. (2017). The health impact of the 2014–15 Ebola outbreak. *Public Health, 143*, 60-70. doi:<https://doi.org/10.1016/j.puhe.2016.10.020>
- Ertan, D., El-Hage, W., Thierrée, S., Javelot, H., & Hingray, C. (2020). COVID-19: urgency for distancing from domestic violence. *European journal of psychotraumatology, 11*(1), 1800245.
- Hadley, C., Lindstrom, D., Tessema, F., & Belachew, T. (2008). Gender bias in the food insecurity experience of Ethiopian adolescents. *Soc Sci Med, 66*(2), 427-438. doi:10.1016/j.socscimed.2007.08.025
- Huizar, M. I., Arena, R., & Laddu, D. R. (2021). The global food syndemic: The impact of food insecurity, Malnutrition and obesity on the healthspan amid the COVID-19 pandemic. *Prog Cardiovasc Dis, 64*, 105-107. doi:10.1016/j.pcad.2020.07.002
- John, N., Casey, S. E., Carino, G., & McGovern, T. (2020). Lessons Never Learned: Crisis and gender-based violence. *Developing World Bioethics, 20*(2), 65-68. doi:<https://doi.org/10.1111/dewb.12261>
- Jones, E. A. K., Mitra, A. K., & Bhuiyan, A. R. (2021). Impact of COVID-19 on Mental Health in Adolescents: A Systematic Review. *International Journal of Environmental Research and Public Health, 18*(5), 2470.
- Kaffenberger, M. (2021). Modelling the long-run learning impact of the Covid-19 learning shock: Actions to (more than) mitigate loss. *International Journal of Educational Development, 81*, 102326.
- Meherali, S., Punjani, N., Louie-Poon, S., Abdul Rahim, K., Das, J. K., Salam, R. A., & Lassi, Z. S. (2021). Mental Health of Children and Adolescents Amidst COVID-19 and Past Pandemics: A



Rapid Systematic Review. *International Journal of Environmental Research and Public Health*, 18(7), 3432.

- Moscoviz, L., & Evans, D. K. (2022). Learning loss and student dropouts during the covid-19 pandemic: A review of the evidence two years after schools shut down. *Center for Global Development, Working Paper*, 609.
- Murewanhema, G. (2020). Adolescent girls, a forgotten population in resource-limited settings in the COVID-19 pandemic: implications for sexual and reproductive health outcomes. *Pan Afr Med J*, 37(Suppl 1), 41. doi:10.11604/pamj.suppl.2020.37.41.26970
- Ngaira, G. (2020). Coronavirus has forced dual roles on parents. *The Standard*. Retrieved from <https://www.standardmedia.co.ke/commentary/article/2001378911/coronavirus-has-forced-dual-roles-on-parents>
- Page, E., Leonard-Kane, R., Kashefpakdel, E., Riggall, A., & Guerriero, S. (2021). Learning Loss, Learning Gains and Wellbeing: A Rapid Evidence Assessment. *Education Development Trust*.
- Panchal, U., Salazar de Pablo, G., Franco, M., Moreno, C., Parellada, M., Arango, C., & Fusar-Poli, P. (2021). The impact of COVID-19 lockdown on child and adolescent mental health: systematic review. *European child & adolescent psychiatry*, 1-27.
- Pinchoff, J., Friesen, E. L., Kangwana, B., Mbushi, F., Muluve, E., Ngo, T. D., & Austrian, K. (2021). How Has COVID-19-Related Income Loss and Household Stress Affected Adolescent Mental Health in Kenya? *Journal of Adolescent Health*, 69(5), 713-720.
- Presidential Policy and Strategy Unit (Kenya) and Population Council. (2021). *Promises to keep: Impact of COVID-19 on adolescents in Kenya*. Retrieved from
- TetraTech. (2021). *Independent Evaluation of the Girls' Education Challenge Phase II - Teachers and Teaching for Marginalised Girls* Retrieved from
- TetraTech. (2022). *Independent Evaluation of the Girls' Education Challenge Phase II (GEC II) – Evaluation Study 1: Effects of Covid-19 on Access and Learning in the GEC II* Retrieved from United Kingdom:
- UN Women. (2020). *The Shadow Pandemic: Violence Against Women and Girls and COVID-19*, New York, USA.
- UNESCO. (2020). COVID-19 school closures: Why girls are more at risk. Retrieved from <http://www.iiep.unesco.org/en/covid-19-school-closures-why-girls-are-more-risk-13406>
- UNESCO. (2021). *When schools shut: Gendered impacts of COVID-19 school closures*: UNESCO Paris.
- United Nations. (2020). *Policy Brief: Education during COVID-19 and beyond*. Retrieved from [https://www.un.org/sites/un2.un.org/files/sg\\_policy\\_brief\\_covid-19\\_and\\_education\\_august\\_2020.pdf](https://www.un.org/sites/un2.un.org/files/sg_policy_brief_covid-19_and_education_august_2020.pdf).
- Yukich, J., Worges, M., Gage, A. J., Hotchkiss, D. R., Preaux, A., Murray, C., & Cappa, C. (2021). Projecting the impact of the COVID-19 pandemic on child marriage. *Journal of Adolescent Health*, 69(6), S23-S30.
- Zulaika, G., Bulbarelli, M., Nyothach, E., van Eijk, A., Mason, L., Fwaya, E., . . . Mehta, S. D. (2022). Impact of COVID-19 lockdowns on adolescent pregnancy and school dropout among secondary schoolgirls in Kenya. *BMJ Global Health*, 7(1), e007666.

## Annexes

Annex 1: Original proposal

Annex 2: Survey tools

Annex 3: Qualitative tools

Annex 4: Fieldwork report

Annex 5: Communication and dissemination plan

