RESEARCH ARTICLE

Assessing the potential impact of coronavirus disease 2019 (COVID-19) on the Sustainable Development Goals (SDG) outcomes: evidence from telephone surveys in the four Young Lives countries [version 1; peer review: 1 approved]

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v1 **First published:** 03 Aug 2021, **3**:15
https://doi.org/10.35241/emeraldopenres.14263.1
Latest published: 03 Aug 2021, **3**:15
https://doi.org/10.35241/emeraldopenres.14263.1

Abstract

This paper draws on the results of telephone surveys conducted to assess the impact of the coronavirus disease 2019 (COVID-19) pandemic on the young people of two longitudinal cohorts (aged 19 and 26 years old at the time) of the four countries that participate in the Young Lives research programme: Ethiopia, India, Peru and Vietnam. We first review the pandemic experiences of these four countries, which differed significantly, and report on the responses of the individual young people to the pandemic and the measures taken by governments. Our main focus is on how the pandemic and policy responses impacted on the education, work and food security experiences of the young people. Unsurprisingly the results show significant adverse effects in each of these areas, though again with differences by country. The effects are mostly more severe for poorer individuals. We stress the challenges that COVID-19 is creating for meeting the United Nations' Sustainable Development Goals, in particular in making it more difficult to ensure that no one is left behind.

Keywords

Sustainable Development Goals, COVID-19, Young Lives, Ethiopia, India, Peru, Viet Nam

Open Peer Review

Approval Status ✓

	1
version 1 03 Aug 2021	✓

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Author roles: Ellanki R: Project Administration, Supervision, Writing – Review & Editing; **Favara M**: Conceptualization, Investigation, Methodology; **Le Thuc D**: Methodology, Project Administration, Supervision, Writing – Review & Editing; **McKay A**: Conceptualization, Supervision, Writing – Original Draft Preparation, Writing – Review & Editing; **Porter C**: Conceptualization, Investigation, Methodology; **Sánchez A**: Formal Analysis, Methodology, Project Administration, Supervision, Writing – Review & Editing; **Scott D**: Formal Analysis, Methodology, Writing – Original Draft Preparation, Writing – Review & Editing; **Woldehanna T**: Methodology, Project Administration, Supervision, Writing – Review & Editing

Competing interests: No competing interests were disclosed.

Grant information: Special thanks to the Foreign, Commonwealth & Development Office (FCDO) for funding the Young Lives at Work research programme of which this is part; and for enabling this rapid research in response to the COVID-19 pandemic.

How to cite this article: Ellanki R, Favara M, Le Thuc D *et al.* **Assessing the potential impact of coronavirus disease 2019 (COVID-19) on the Sustainable Development Goals (SDG) outcomes: evidence from telephone surveys in the four Young Lives countries [version 1; peer review: 1 approved]** Emerald Open Research 2021, **3**:15 https://doi.org/10.35241/emeraldopenres.14263.1

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1. Introduction

The coronavirus disease 2019 (COVID-19) pandemic has struck almost all countries of the world and is expected to have a major and enduring impact on many different development outcomes. The prevalence of COVID-19 cases has varied substantially from country to country, reflecting in part the effectiveness and timeliness of government responses. But in all cases, there have often been considerable economic and social impacts (e.g. Josephson *et al*., 2021). The COVID-19 pandemic will almost certainly add substantially to the challenges of meeting the United Nations' Sustainable Development Goals (SDGs), which were already very ambitious, centred around the concept of leaving no-one behind.

While daily information is available from the World Health Organisation (WHO) and other sources on the reported country numbers of COVID-19 cases and deaths, there remains a limited amount of meaningful and representative micro data which can be used to assess its impact on development outcomes. Many attempts have been made at collecting data using phone surveys, which have been informative; but are often based on an unknown and potentially biased sample of respondents[1]. A more promising approach is where COVID-19 surveys have been conducted following up on an existing sample, and in particular following up on previous longitudinal studies. Examples of this include surveys conducted in Ghana and South Africa[2], and the World Bank's Living Standard Measurement Study (LSMS) COVID follow up surveys[3]. By taking this approach, not only is the sample well known, but there is also a wealth of information already available on the past history of the respondents. This past information is highly relevant for current outcomes, and it also enables the distributional consequences of COVID-19 to be assessed.

This paper reports on the impact of COVID-19, based on a well-known set of longitudinal surveys conducted in four countries, and covering the major regions of the developing world: those conducted by the Young Lives research programme on a repeated basis since 2002, in Ethiopia, India (Andhra Pradesh and Telangana), Peru and Vietnam. The first round of these surveys began by collecting data on the families of 2,000 children in each country who were born around the Millennium, and on a further 1,000 children who were around eight years old at the time of the first survey (respectively, the Younger and Older Cohorts). The same approach was adopted in all countries, making the data comparable. These children and their households were then surveyed approximately every three years, with five consecutive rounds culminating in 2016.

A sixth survey round had been planned for 2020, which could not be conducted due to the pandemic. In response, Young Lives implemented three rounds of phone surveys, focusing on the impact of COVID-19 on the Younger and Older Cohorts, then aged approximately 18–19 and 25–26 years, respectively. With the strong support of our expert fieldwork teams, using up-to-date contact information and using the same approach in each country, we were able to track respondents with a low level of attrition. This paper reports key messages coming from the results of the first two rounds of these phone surveys.

Young Lives is uniquely positioned to inform policy makers quickly of the effects of the pandemic on young people's transition to the labour market, to higher education and on their health and well-being. First, the phone survey builds on a long-term relationship with participants over almost 20 years, which contributes to low refusal rates and may improve the quality of the information collected. Second, the pro-poor nature of the samples (covering both rural and urban areas) focuses on those likely to be most affected by the crisis and who, importantly, may not be covered in web-based surveys. Third, with three separate phone surveys conducted at different points in time and further surveys planned for 2021, it is expected that the data collected will also allow for a short and medium-run analysis of changes in key variables, as the pandemic continues to evolve. Finally, the four-country structure can inform on the differential impact of the COVID-19 pandemic in different contexts, which may have wider implications outside the countries considered. This is of particular interest, given both the very different experiences and subsequent government responses taking place in the four countries.

This paper is structured as follows. Following this introduction, we outline the approach to the phone surveys in Section 2, after which Section 3 summarises the impact of COVID-19 in each of the four countries. Following this, Section 4 summarises individual responses to the pandemic, while Section 5, Section 6 and Section 7 discuss the impacts on the key SDG outcomes of education, work and food security respectively, drawing on the results of both calls wherever possible. Section 8 then concludes.

2. Young Lives and the methodology of the phone survey

During the initial outbreak of COVID-19, the tracking of Young Lives respondents was already taking place in preparation for a sixth survey round (expected to go to the field in June 2020, starting in Peru). In light of the quickly evolving situation, a revised approach to data collection was adopted, focusing on the experiences of these young people during the pandemic. This took the form of a phone survey, with Round 6 of the more conventional Young Lives survey postponed until later. We therefore planned for the "*Listening to Young Lives at Work: COVID-19 phone survey*", a three-call survey following

[1] JPAL and the European Economic Association set up two of the most extensive repositories of COVID related studies; the first one available https://www.povertyactionlab.org/COVID19 and the second one https://www.eeassoc.org/index.php?site=JEEA&page=298&trsz=299 here.

[2] The National Income Dynamics Survey (NIDS) in South Africa and the EGC-ISSER socioeconomic panel survey in Ghana.

[3] See: https://www.worldbank.org/en/programs/lsms/brief/lsms-launches-high-frequency-phone-surveys-on-covid-19

approximately 10,500 young people in the four countries. These 10,500 individuals represent all respondents from the original 12,000 surveyed in 2002 (round 1 of the longitudinal study) who were still contactable in the sixth round tracking exercise[4]. Further details of the sampling methodology and selection criteria followed for the original 2002 survey round can found here.

Ethical approval for the Young Lives COVID-19 phone survey was obtained from the University of Oxford (UK)[5], Addis Ababa University, College of Health Sciences (IRB) (Ethiopia), the Centre for Economic and Social Studies (CESS) (India), the Instituto de Investigación Nutricional (Peru), and Hanoi University of Public Health (Vietnam). Given the nature of the events taking place in the four countries, careful consideration was given to the ethics of contacting individuals during what was obviously a distressing and uncertain time (see Crivello & Favara, 2020). We began each interview with a general discussion of the person's health and wellbeing and explained that their information would be important to understand the experiences of young people like themselves[6,7]. Respondents were never obliged to answer the questions and were asked for their consent to participate at the outset of each of the survey calls, although very few we contacted chose not to respond. The precise wording of the statements related to consent can be found in the Introduction section of the three survey instruments, which are available here and as extended data (Tuc *et al*., 2021).

This paper presents a descriptive analysis of the results in relation to key variables of the first two calls, which were conducted in June/July 2020 and August/October 2020, respectively, following a careful piloting exercise in each country[8]. In the analysis which follows, the few respondents with missing information for a specific variable are dropped from the corresponding part of the analysis[9]. As well as presenting statistics for our sample, overall, we present some disaggregation according to criteria including urban/rural residence, household wealth and housing characteristics, testing for statistically significant differences between the groups (t-test).

The first survey call was administered to 9,819 individuals from a tracking sample of almost 10,500 individuals, about 91% of the tracking sample, with a country attrition rate between 2.4% in India and 20.0% in Peru[10,11]. In the second call, we reached 9,704 respondents.

In order to keep the survey instrument short, we decided to spread the survey across three separate calls, collecting a limited amount of information each time. The first call of the survey initially informed the respondents of the need to postpone Round 6 and asked for their willingness to take part in the three survey calls. For those willing to participate (the vast majority), this 15 minute call collected information on a number of key quantitative topics related to their experiences of the pandemic and the subsequent national response. The phone interviews were conducted by our highly experienced male and female enumerators using the Surveybe software suite, developed by EDI Global (No field notes or recordings were made during the interviews). We included questions specifically related to the virus, such as whether anyone in their household had been infected, knowledge of symptoms and preventative behaviours, but we also covered topics related to the impact of the pandemic on livelihoods, education and food security.

The second call took place between August and October 2020 and was designed to gather more in-depth information on the ongoing effects of the pandemic during a 45-minute interview. We again asked respondents to tell us about the types of preventative behaviours used to limit the spread of COVID-19, and also collected further information on employment and food insecurity, with the goal of analysing how the ongoing pandemic was impacting upon these aspects of our respondent's lives. By the end of this call, participants in Peru and India received a consultation guide (sent by e-mail and/or WhatsApp) with information about the COVID-19 virus and about public services available for the youth population (related to health, education, and jobs). Many of the modules used in the phone survey were adapted from established survey instruments. For example, questions on Food Security were derived from the Household Food Insecurity Access Scale (HFIAS) (see Coates *et al*., 2007). In addition, all questions were also piloted extensively in each of the four study countries (prior to both survey calls). This was done to ensure the meaning of each question was clear in the context of that country and in the languages used to administer the survey[12].

[4] In each of the countries a tracking exercise was conducted in late 2019. This involved briefly contacting all individuals surveyed in the previous round (in 2016) to establish whether the respondent could be reached for the next survey round and updating contact details (including phone numbers).

[5] Research Ethics Approval Ref No: CUREC 1A/ ODID CIA-20-034 (Oxford)

[6] More ethical considerations are discussed in Section 6 of the fieldwork manual, available here.

[7] A discussion of the ethical challenges facing longitudinal research in low- and middle-income countries in a period of crisis such as the recent pandemic is discussed in the paper by Crivello & Favara (2020).

[8] The data from all three calls of the phone survey are freely available from the UK Data Archive: https://beta.ukdataservice.ac.uk/datacatalogue/studies/study?id=8678

[9] There were very few missing values in the variables considered here. For example, in relation to protective behaviour (see Table 2), the highest number of missing observations in any country sample was 10 (0.6%) in the Peru sample. In relation to food security (Section 7) the highest number of missing observations was 20 (1.2%), again in Peru.

[10] More information on attrition can be found here. https://www.younglives.org.uk/sites/www.younglives.org.uk/files/YL-COVID-19-PhoneSurvey-AttritionReport-5.pdf

[11] The higher rate of attrition in Peru was due to not having the latest phone numbers of respondents, or to respondents not having credit on their phones.

[12] Amharic, Oromifa, Tigrinya (Ethiopia), Telugu (India), Spanish (Peru) and Vietnamese (Vietnam).

3. The context of COVID-19 in the four countries

The four countries have had very diverse experiences during the pandemic, both in the number and severity of cases, but also in their policy responses. Table 1 shows data on the impact of COVID-19 in the four Young Lives countries at the time of the second call.

This data confirms the variation in the extent to which countries have been impacted. Relative to country population, COVID-19 has had by far the most striking impact in Peru, followed by India; the reported impact is much lower in Ethiopia and especially so in Vietnam, where there have been slightly over 1,170 cases reported in total (at the time of the data collection). Among these four countries, not only is the incidence of COVID-19 highest (by some margin) in Peru, but many more cases in Peru have resulted in deaths than in the other three countries.

Each of these four countries put in place strong policies to respond to COVID-19 (Cueto *et al.*, 2020). In Ethiopia, the first case was experienced in March 2020. The government response was rapid and proactive, including bans on public meetings, closure of education institutions and borders. This was accompanied by a very active media campaign, the imposition of social distancing and personal hygiene responses as well as quarantine measures. The government sought to put in place measures to enable remote learning (radio, television, internet etc.), to prevent layoffs and to address food security. In India, a national lockdown was imposed in the third week of March; only essential services were allowed, and again educational institutions were closed, large gatherings outlawed, and campaigns launched emphasising social distance and hygiene responses. Measures were also put in place to strengthen the health infrastructure and to provide enhanced food access through the public distribution system. The national lockdown ended on 8 June 2020, however, many lockdowns and restrictions continued at the local level.

In Peru, a national lockdown was introduced in mid-March 2020 and a curfew put in place. As in the other countries, social gatherings were prohibited, education institutions were closed, and emergency remote learning was put in place. Peru also made efforts to expand health facilities and various unconditional cash transfers were introduced. The national lockdown ended in late June but was followed by local lockdowns between July and September 2020. Vietnam's response to COVID-19 saw the situation as a "whole-society fight", introducing measures very early on in the outbreak, implemented by the military and public security services. Details on symptoms, protective measures, and testing sites were communicated through traditional and social media and have resulted in good implementation of appropriate responses across the country. There was a 15-day period of isolation nationwide that ended on 15 April, and then only local lockdowns were applied in affected provinces. As such, there are many common features in the four countries' responses to COVID-19, though the speed and thoroughness of response often differed.

We now report some basic results from the surveys on some key outcomes[13].

4. Knowledge, incidence and behavioural responses in the four countries

First, we consider the incidence of COVID-19 among our samples (Younger and Older Cohort combined), as well as assessing respondents' knowledge of the virus and appropriate responses. This information comes predominantly from the first survey call. The reported infection rates among the Young Lives first call respondents reflect those of the four countries at the time of the survey (June–July 2020). The Peru sample experienced the highest number of suspected infections, with 184 respondents (9.1%) reporting that at least one household member had either been infected or was believed to have been infected (displaying typical COVID-19 symptoms). This figure was also high for the Indian sample, at 169 individuals (6.2%), yet substantially smaller for Ethiopia and Vietnam, with only 16 and 8 individuals reporting suspected infections (0.65% and 0.31%, respectively). In Peru, incidences of infection were centred on urban households, with 96.3% of cases found in urban areas (only 82.7% of the Peru sample is located in these areas). In India, however, 81.1% of infections came from rural areas (where 71.3% of sampled households are located).

Arguably, the first step in limiting the spread of COVID-19 is providing accurate information to the public on virus symptoms.

[13] All statistics presented in the paper were generate using Stata version 15. This software is publicly available from www.stata.com.

Table 1. Extent of impact of coronavirus disease 2019 (COVID-19) in the four Young Lives countries.

	Cases	Deaths	Cases per 1M pop	Deaths per1M pop
Ethiopia	94,218	1,445	819	13
India	7,990,322	120,010	5,790	87
Peru	890,574	34,197	27,010	1,037
Vietnam	1,172	35	12	0.4

Source: WHO, data as of 29 October 2020 (WHO, 2021)

According to the World Health Organisation (WHO), the most common symptoms associated with the virus were a dry cough, fever and tiredness[14]. Public information in each country emphasized a list of symptoms which broadly overlapped with this, though with some differences. For example, in Peru, difficulty breathing was highlighted on the official government website. When asked if they know the signs and symptoms of COVID-19, the proportion of the sample who mentioned all three common symptoms was surprisingly low in all countries, the highest being 16.1% in Vietnam and the lowest 10.4% in Ethiopia. With the exception of Peru, knowledge of two of the three common symptoms was far more common. Overall, 94.8% of respondents in India and 81.2% in both Vietnam and Ethiopia correctly identified at least two common symptoms, although this number was only 55.1% in Peru. In all countries, urban residents reported a significantly higher number of these three common symptoms.

Alongside knowledge of symptoms, the extent to which individuals adhered to behaviour aimed at preventing the spread of COVID-19 is clearly fundamental to limiting infection rates. We asked respondents whether they had adopted five specific behaviours widely recommended as a means of preventing infection: social distancing, washing hands more frequently, avoiding handshakes or physical greetings, avoiding groups and wearing protective gear when outside. The highest proportion adopting all five behaviours was in Peru, where 80.6% of the sample followed all five measures. In India and Vietnam, 72.2% and 67.2%, respectively, adhered to all suggested behaviours, but this was only the case for 56.1% of respondents in Ethiopia, where more than 50% of the sample live in rural areas. As with the knowledge of symptoms, in Peru, India and Ethiopia, urban respondents reported a higher number of preventive behaviours, as did those with access to the internet in all countries.

When assessing the adoption of preventative behaviours, we capture both the knowledge of appropriate measures and the capacity to adhere to these measures. For example, where a residence is shared with other families or water must be sourced from a public location, avoiding groups, or maintaining social distancing may be nearly impossible. To measure how suitable a dwelling is to allow respondents to follow recommended behaviours, we used an adapted version of the Home Environment for Protection (HEP) Index, developed by Brown *et al.* (2020)[15]. Our index separates households into either a low or high HEP group (based on a threshold index score of 0.5). When comparing the low and high HEP groups across all countries, we found that the proportion of low HEP respondents adopting each behaviour was smaller in all countries, and across all five recommended behaviours (see Table 2). This was true to a statistically significant extent in many cases. A lower capacity for self-isolation due to the home environment appears to have reduced compliance with preventative measures.

The extent to which the capacity to self-isolate impacted upon reported infection rates is less clear. Focussing only on the

[14] See https://www.who.int/health-topics/coronavirus

[15] This indicator measures: the ability to receive reliable information on virus protection and the presence of dwelling attributes suitable for implementing social distancing within the household. Further details of the Young Lives HEP index can be found here.

Table 2. Adopting recommended behaviours to prevent infection.

	Ethiopia			India			Peru			Vietnam		
	Low HEP (%)	High HEP (%)	p-value	Low HEP (%)	High HEP (%)	p-value	Low HEP (%)	High HEP (%)	p-value	Low HEP (%)	High HEP (%)	p-value
Wash hands more often	97.4	98.2	0.267	94.0	97.6	0.000	77.2	88.1	0.001	94.1	97.2	0.000
Avoid physical greetings	80.9	83.7	0.135	83.3	84.3	0.483	75.2	88.2	0.000	81.0	85.6	0.006
Avoid groups meeting	71.0	77.4	0.003	82.0	81.1	0.537	75.2	86.9	0.001	87.1	90.7	0.012
Wear protective gear	81.9	89.1	0.000	97.9	98.8	0.075	77.2	88.5	0.001	98.4	99.3	0.050
Keep a distance of 1-2 m	80.9	83.5	0.154	91.6	92.0	0.721	76.2	86.1	0.007	74.3	75.8	0.449
All 5 behaviours	54.2	63.9	0.000	72.3	72.2	0.939	68.3	81.4	0.001	64.0	68.2	0.051
Individuals	1835	572		1578	1168		101	1508		622	1916	

Notes: Figures are based on the Younger Cohort and Older Cohort (combined sample). HEP refers to the Young Lives Home Environment for Protection index described above. The p values report on the statistical significance of the difference between the low and high HEP groups.

two countries where infections were highest, 2.8% of those in the low HEP group believed a household member was (or had been) infected in India, relative to 1.7% in the high HEP group. In contrast, a greater proportion of households from the high HEP group reported suspected infections in Peru (5.2%, relative to 3.7% in the low group), although a higher proportion of high HEP households came from the more affected urban areas.

When we returned to interview our respondents in August-October 2020, we again asked whether they had followed the same recommended behaviours[16]. The proportion of those who adhered to all five behaviours increased noticeably in Peru (the worst affected country), from 80.6% to 95.1%, with increases in both low and high HEP households. This total compliance proportion also increased in Ethiopia to 71.6%, with those in the low HEP group, in particular, appearing more cautious (an increase from 54.2% to 72.6%). In Vietnam, where the outbreak was widely believed to be under control, those following all five measures declined to 61.5%. However, a decline was also observed in India, despite cases in the country continuing to rise during the period between the two survey calls. Here, the proportion of those from low HEP households fell from 72.3% to 67.7%, and from 72.2% to 65.0% in the high HEP group.

We now turn to assessing the impact of the COVID-19 pandemic on three key outcomes of direct relevance to the SDGs: school attendance, work and food security, after which we briefly report on some other outcomes.

5. Impacts on schooling

The impact on schooling is more easily judged in the first call, where schools were mostly closed (usually due to the pandemic response) than in the second call, which overlapped with the school holidays in Ethiopia and Vietnam. The question of impacts on education is more relevant to those in the (Younger) 19-year-old cohort.

The degree to which those in the Younger Cohort experienced interruptions to their studies varied by country. In the case of Ethiopia, where schools and undergraduate courses in universities closed very early on in the pandemic (while post-graduate programmes were run online), this break in education was nearly complete (96.0%). In Vietnam, 84.3% of those in education reported having their studies interrupted, while this was the case for 66.0% of those in education in India and 54.1% in Peru. The pandemic also caused many of those who were planning to enrol in education to alter their plans. This was most evident in Peru, where 40.7% of those who had originally planned to enrol in the coming year, chose not to.

The overall ability of those in education to continue learning remotely depended both on the ability of schools to provide effective remote learning opportunities and on individuals' ability to engage in remote learning. Complementary Head Teacher phone surveys carried out by Young Lives in Ethiopia and India (Outhred *et al.*, 2020a and Outhred *et al.*, 2020b), showed that schools sought to provide remote learning opportunities for students, via recorded lessons, radio, TV or online classes, though students were frequently not able to engage with this (especially in Ethiopia).

The call 1 results show that a student's ability to learn remotely is correlated with the relative wealth of the country, with the wealth of an individual household within the country, with location of individuals within these countries (rural or urban) and with parental education (see Table 3)[17]. In Peru and Vietnam, 84.4% and 78.1% of those not learning in the classroom were able to continue their education remotely, while this was the case for only 29.6%

[16] In the second survey call, we asked about specific forms of protective equipment: face masks, gloves and facial shields/protectors, and also asked them to tell us about the previous week only.

[17] Here, the tercile of the wealth distribution is calculated relative to either the rural or urban sample, dependent on the respondent's location when surveyed.

Table 3. Access to remote learning.

	Ethiopia		India		Peru		Vietnam	
	(%)	p-value	(%)	p-value	(%)	p-value	(%)	p-value
Total	27.1		29.6		84.4		78.1	
Lowest wealth group (R5)	22.3	0.046	20.9	0.000	84.3	0.450	69.3	0.000
Highest wealth group (R5)	28.1		40.2		86.9		82.4	
Rural	15.0	0.000	24.0	0.000	73.7	0.001	69.3	0.000
Urban	44.9		41.6		86.9		84.6	
Highest parent educ: None	16.5	0.000	13.9	0.000	78.4	0.088	59.8	0.000
Highest parent educ: Completed primary +	31.5		33.7		85.2		82.1	
Individuals	1382		1216		641		1078	

Notes: Figures are based on the Younger Cohort only. The p values relate to the statistical significance of the difference between the two groups in each case.

of respondents in India, and just 27.1% of the Ethiopian sample (see Table 3).

In Ethiopia and India, the effect of location on access to remote learning was particularly clear. In India, remote learning took place for only 24.0% of those in rural areas, relative to 41.6% of the urban sample, while those in urban areas were around three times more likely to be learning online in Ethiopia relative to rural locations. In Vietnam, there was also clear evidence of an urban-rural digital divide in access to online teaching, and urban respondents were also more likely to be learning online in Peru. The probability of continuing to learn remotely was also noticeably higher for those with parents who were educated above primary level in all countries, relative to those whose parents had lower education levels (less so, in Peru). These findings could indicate the potential reinforcement of an intergenerational poverty gap in education. For example, in India, having a parent educated to primary level (or above) more than doubled the probability of a respondent continuing their studies online during the pandemic.

By the time of our second survey, in all countries other than Peru, the majority of those who had experienced interruptions to their studies were either back in education or were expecting to return when the academic year started (64.1% in Ethiopia, 67.0% in India and 88.2% in Vietnam). In the case of Peru however, only 43.1% of the 517 Younger Cohort respondents who had reported interruptions to their education had returned to classes (either in-person or remotely). In most cases, those who did not return cited factors associated with the pandemic as the reason behind their choice (for example, an inability to pay fees due to quarantine).

While many young people were beginning to return to education, there was evidence across all countries of specific groups being less likely to be enrolled (or planning to enrol) by call 2. Considering those in the Younger Cohort who had been enrolled in education at some point during 2020 (including the pre-pandemic period in all countries), a disproportionately high number of those who had left education came from the lowest wealth tercile, rural areas or groups whose parents had relatively low levels of education (defined as no formal education in India and Ethiopia, incomplete primary or less in Peru and Vietnam). For example, 14.2% of rural households in Vietnam had not returned to education (compared to only 2.1% in urban areas). There was also evidence of a digital divide in continued enrolment in all countries other than Vietnam. Notably in Peru, where 37.4% of those with no internet access had left education (relative to 13.7% of those who could potentially study online).

Information from the call 2 survey also indicated that enrolment in education was not a guarantee of being actively involved in learning. We asked those young people who stated that they were currently enrolled in education to report the types of learning they were involved in, such as attending classes (in-person), virtual classes and educational TV/radio programs/learning apps. In Ethiopia and India, 64.1% and 31.3% of enrolled students were not involved in any form of learning. This figure was also surprisingly large in Vietnam, at 11.4%. In all four countries, the highest proportion of enrolled students not involved in any learning activities was found among those without access to the internet.

6. Impacts on work

One of the most common experiences across all country samples was the negative impact on work of both the virus and the subsequent government response (Favara *et al.*, 2021). Focussing on the (Older) 25-year-old Cohort, the percentage of first call respondents who reported either losing their job, receiving reduced pay, or losing all (or most) of their own-business/farm income was substantial in all cases, and no less in Vietnam where the number of cases reported was low (Table 4)[18]. For Peru and India (which experienced the worst infection rates), this group represented 65.5% (Peru) and 66.1% (India) of those who were in employment at the time of the outbreak. 61.7% of those in the Vietnam sample also lost income or employment during

[18] It is important to note, however, that the urban Young Lives sample in Vietnam comes predominantly from the city of Da Nang, which was far more seriously affected than the average urban area within the country.

Table 4. Loss of employment or income.

	Ethiopia		India		Peru		Vietnam	
	(%)	p-value	(%)	p-value	(%)	p-value	(%)	p-value
Total	38.4		66.1		65.5		61.7	
Rural - Lowest Wealth group (R5)	27.4	0.246	66.5	0.624	70.6	0.363	61.7	0.813
Rural - Highest Wealth group (R5)	35.9		63.6		53.8		60.4	
Urban - Lowest Wealth group (R5)	43.5	0.456	66.7	0.518	75.0	0.012	73.3	0.003
Urban - Highest Wealth group (R5)	38.8		60.5		57.7		53.8	
Individuals	630		587		339		799	

Notes: Figures are based on the Older Cohort only. The p-values report on the statistical significance of the difference between the two groups.

the pandemic, with the strict imposition of social distancing requirements being one important factor. Although still very serious, the economic impact was noticeably lower in Ethiopia than in the other three countries, with only 38.4% experiencing income or job losses. This was the case in both urban and rural areas. One important factor here may have been the less stringent restrictions on movement imposed by the Ethiopian government at the onset of the pandemic.

With the exception of India, job and income losses were highest in urban areas (43.1% in Ethiopia, 66.2% in Peru and 63.0% in Vietnam). In India, the percentage of both urban and rural respondents suffering income or job losses was similar (approximately 66%). Considering only the sample of respondents who were employed before the outbreak, males experienced a higher percentage of job and income losses than females in all countries other than Peru (43.7% in Ethiopia, 70.6% in India and 63.4% in Vietnam). In Peru, however, around 7 out of every 10 workers lost employment or income, regardless of gender.

In the urban areas of all four countries, the rates of job or income losses were higher for those in the lower wealth group, relative to the highest wealth group, these differences being statistically significant in Peru and Vietnam. To a lesser extent, and with the exception of Ethiopia, poorer individuals were also found to be more at risk of losing income or employment in rural areas, especially in Peru.

During our second survey call, when asked if they had worked for at least one hour in the previous week (or had a job but had not worked), the majority of those who reported losing their job during the pandemic were back in employment (68.3% in Ethiopia, 90.4% in India, 69.7% in Peru and 77.0% in Vietnam). However, except for India, recovery was incomplete. Figure 1 reports the (partial) employment recovery experienced in all countries by the second survey call[19].

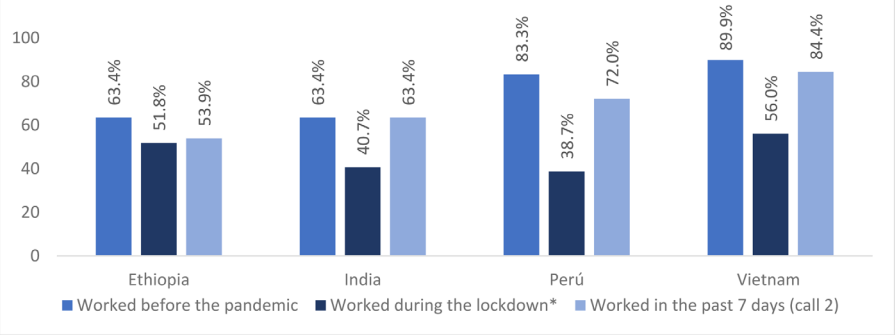
[19] As Ethiopia did not impose a national lockdown, respondents to the call 2 survey were instead asked to refer to the time of the Ethiopian Government's COVID-19 response, which involved school closures, bans on public gatherings and stringent hygiene regulations.

Among those who lost jobs as a result of the crisis, there was no significant difference between the urban poor and rural poor in the probability of being back in employment. There is some evidence though that the nature of work has changed for many individuals, as in all countries more were engaged in own-account work in call 2 (often agriculture in the case of India) than had been the case before the pandemic. Thus, though many had returned to work, the quality of the new job may often be lower than what they had done before.

7. Food security and other impacts of COVID-19

A serious concern for respondents in at least three of the countries studied was the risk of running out of food during the pandemic (Favara *et al.*, 2021). Based on call 1 (Younger and Older cohort combined), the highest proportion who reported running out of food was in Ethiopia, where around 16.7% said that this had occurred on one or more occasion. Here it is important to note, however, that there are many other factors which may also account for this. The country had also experienced severe locust infestations and food price inflation prior to the survey in June-July 2020l; there was political instability in Oromia, Amhara and SNNP regions and riots in Oromia. The corresponding figures for India and Peru were, respectively, 15.2% and 13.7% (in Vietnam, this figure was 4%). The extent of food insecurity in the India and Peru appeared to follow the patterns of infection between rural and urban areas (see Section 4). Running out of food affected a higher proportion of those in the urban sample in Peru (14.5% in urban areas, and 8.6% in rural areas), in line with the relatively more severe impact of the pandemic in these areas. In India, it was the rural sample who were most at risk of food shortages (17.5% ran out of food compared to 9.6% in the urban sample), again reflecting the relatively higher infection rates among this sample.

Figure 2 indicates that it was not necessarily the poorest who were at risk of running out of food. While the difference between the proportion of food insecure respondents in the lowest and highest wealth tercile was significant (at 5%) for most groups, the proportion of the relatively wealthier groups who experienced food insecurity was non-negligible in all cases. For example, in the urban sample from Peru, 3.4% of the richest



* With no national lockdown imposed in Ethiopia, respondents were asked to refer to the time of the Ethiopian Government's coronavirus disease 2019 (COVID-19) response.

Figure 1. The percentage of respondents in employment before and during the pandemic.

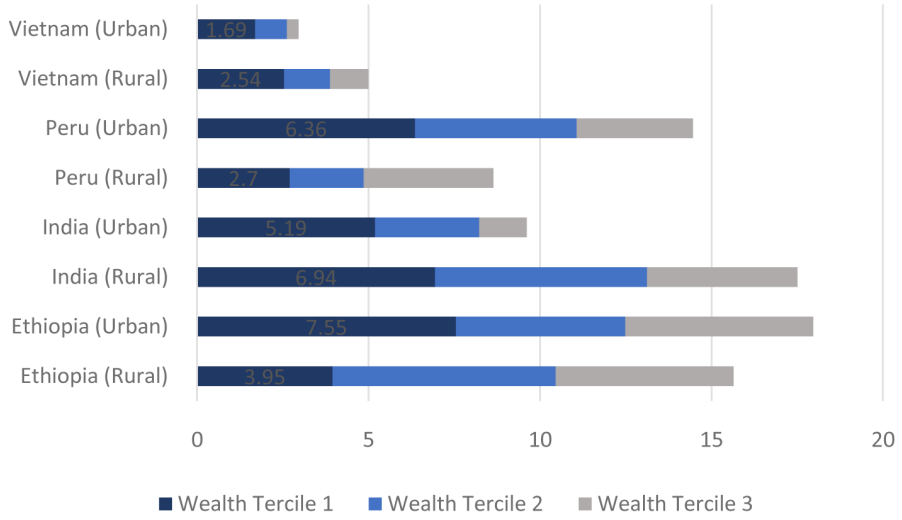


Figure 2. The percentage of respondents who ran out of food during the pandemic.

tercile still reported food shortages during the pandemic, alongside 6.4% of the poorest group. In rural Ethiopia, the second tercile group reported higher percentage running out of food during the pandemic than the first and third terciles.

The extent and coverage of government support varied substantially between countries. For example, over 90% of the surveyed respondents in India received some form of government support, compared to only 5.5% of those in Ethiopia, suggesting that existing social protection programmes there are not benefiting victims of the pandemic. Also, in India, the responses were limited. The majority of recipients only received a small basket of food, small amounts of cash transfer or face masks. In Peru and Vietnam, government support generally took the form of cash transfers to vulnerable households. In Peru, approximately 40% of the sample reported receiving this form of support. Similarly, 17.7% of the Vietnam sample received some form of cash transfer. While these interventions were mostly well targeted, with a higher proportion going to the poorest households or those who reported experiencing issues of food insecurity, many of the poorest did not receive support or received support with a substantial delay (in the case of Peru, for example).

In the second call, the most common shock reported by respondents in Ethiopia, India and Peru was increasing food prices; a majority in these countries also report increased expenses (at the same time as facing reduced income). Food price increases were not reported to be a major issue in Vietnam.

Respondents to the phone survey also raised a number of other concerns, discussed in more detail in the analysis by Ford *et al.* (2021). In most countries, there was evidence of a return to more traditional gender roles, with young females disproportionately involved in additional childcare and household activities. Respondents also reported decreased levels of subjective well-being and more symptoms associated with mental health conditions (anxiety and depression), especially in Peru. Evidence also emerged of increases in domestic violence during the lockdowns in Peru and India (the two countries where we could assess this). In other words, the impact of the pandemic on young people goes substantially beyond the education, work and food security issues discussed in more depth here.

8. COVID-19 and the SDGs

The initial findings from our phone surveys show that the economic effects of the COVID-19 pandemic have been more severe than the health consequences for the young people in Ethiopia, India, Peru and Vietnam. It is clear that the effective containment of the virus in Vietnam has paid off in the well-being of young people and in terms of their food security, though they have not been immune to job losses.

It is important to acknowledge that this paper does not attempt to make any causal claims regarding the magnitude of the impact of the pandemic on the variables considered, and it is of course very early to judge the consequences of the impacts of COVID-19 described in this paper for the SDG targets set for 2030. But the results here raise serious grounds for concern. In all countries, the impacts over this relatively short period of time have been substantial on three very important outcomes closely related to the SDGs: education, work and food security (corresponding most obviously to SDG Goals 4, 8 and 2, respectively). While there is some evidence of recovery between the first and second calls, in relation to education and work outcomes, it is equally clear that this recovery is far from complete. There have also been further reversals since the time the phone survey was conducted in all four countries.

Another key feature of these results is that in all countries, the inequalities that we observed in previous surveys (and which were already substantial) have widened in most cases. Those

with less ability to self-isolate or work from home are subjected to higher risks to their health, and those in rural areas or without internet access have been unable to effectively engage with education. Education of course is a key escape route from poverty, and it is not clear that those who abandoned education will return. In relation to the SDGs, inequality is a central concern across the board and is a key factor underlying poor development outcomes; the fact that COVID-19 is causing inequality to increase makes the challenge of meeting the SDGs all the greater. Increased gender inequality is also a serious concern, also directly related to the SDGs.

Another feature of the extent of government support for victims of the pandemic. This was weakest in Ethiopia, but there were serious limitations in India and Peru as well. Social protection programs are meant to support the poor and vulnerable in the face of shocks; but COVID-19 pandemic victims are not fully supported by these schemes. A key policy recommendation is for governments to make their social protection programs flexible and able to handle major shocks such as COVID-19.

It is also important to recognise that the crisis in some of these countries will not end until massive vaccination is achieved, which in most cases will take a long time to achieve. As such these results are likely to underestimate the real impact of the crisis, even if specific policy responses are implemented.

Data availability

Underlying data

Data are deposited at the UK Data Service. The data are available on a safeguarded basis due to ethical and security reasons. Users must register with the UK Data Service to access the data and commercial use is prohibited without permission from the owner. If required, this permission can be arranged through the UK Data Service.

To access the data a non-commercial user would need to register with the UK Data Service. Information on how to register is available at UK Data Service » Registration/Order.

Extended data

UK Data Service: Listening to Young Lives at Work: COVID-19 Phone Survey, First Call, Second Call and Third Call, 2020. https://doi.org/10.5255/UKDA-SN-8678-3 (Tuc *et al.*, 2021).

This project contains the following extended data:

- First Call Codebooks – Ethiopia
- First Call Codebooks – India
- First Call Codebooks – Peru
- First Call Codebooks – Vietnam
- First Call Consent Process and Further Ethical Considerations
- First Call Questionnaire
- First Call Survey Manual
- Home Environment for Protection Index
- Second Call Codebooks – Ethiopia
- Second Call Codebooks – India
- Second Call Codebooks – Peru
- Second Call Codebooks – Vietnam
- Second Call Consent Process and Further Ethical Considerations
- Second Call Home Environment for Protection Index Technical Note
- Second Call Questionnaire
- Second Call Survey Manual
- Second Call Technical Note
- Third Call Codebooks – Ethiopia
- Third Call Codebooks – India
- Third Call Codebooks – Peru
- Third Call Codebooks – Vietnam
- Third Call Consent Process and Further Ethical Considerations
- Third Call Home Environment for Protection Index Technical Note
- Third Call Questionnaire
- Third Call Survey Manual
- Third Call Technical Note
- UK Data Archive Citation File for Study 8678
- UK Data Archive Data Dictionaries
- UK Data Archive ReadMe File for Study 8678

References

Brown CS, Ravallion M, Van De Walle D: **Can the World's Poor Protect Themselves from the New Coronavirus?** (No. w27200). National Bureau of Economic Research, 2020.
Publisher Full Text

Coates J, Swindale A, Bilinsky P: **Household Food Insecurity Access Scale (HFIAS) for Measurement of Household Food Access: Indicator Guide (v. 3)**. Washington, D.C.: FHI 360/FANTA. 2007.
Reference Source

Crivello G, Favara M: **COVID-19 and the 'Ethics of Disruption': Current Dilemmas Facing Longitudinal Research in Low- and Middle-Income Countries**. Preprints 2020; 2020060262.
Publisher Full Text

Cueto SA, Pankhurst R, Singh N, *et al.*: **COVID-19: A Snapshot of the pandemic in Young Lives Study Countries**. Blog, 2020.
Reference Source

Favara M, Freund R, Porter C, *et al.*: **Young Lives, interrupted: Short-term Effects of the COVID-19 Pandemic on Adolescents in Low- and Middle-Income Countries.** *COVID Economics.* 2021; **67**: 172–198.
Reference Source

Ford K, Cueto S, Pankhurst A, *et al.*: **COVID-19 Could Reverse Two Decades of Progress: Emerging Policy Recommendations to Support Young People in Developing Countries**. Young Lives Snapshot Report, 2021.
Reference Source

Josephson A, Kilic T, Michler JD: **Socioeconomic impacts of COVID-19 in low-income countries**. *Nat Hum Behav.* 2021; **5**(5): 557–565.
PubMed Abstract | **Publisher Full Text**

Outhred R, Marshall L, Moore R: **Interrupted Education in Ethiopia: Support for Students During the COVID-19 School Closures**. Young Lives Headline Report, 2020a.
Reference Source

Outhred R, Marshall L, Moore R: **Interrupted Education in India (Andhra Pradesh and Telangana): Support for Students During the COVID-19 School Closures**. 2020b.
Reference Source

Tuc L, Revathi E, Sanchez A, *et al.*: **Listening to Young Lives at Work: COVID-19 Phone Survey, First Call, Second Call and Third Call, 2020.** [data collection]. 3rd Edition. UK Data Service. SN: 8678, 2021.
http://www.doi.org/10.5255/UKDA-SN-8678-3

WHO: **WHO Coronavirus (COVID-19) Dashboard**. World Health Organization. 2021; Accessed on 2nd July 2021.
Reference Source

Open Peer Review

Current Peer Review Status: ✔

Version 1

Reviewer Report 09 September 2021

https://doi.org/10.21956/emeraldopenres.15353.r27686

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Using telephone interviews this study describes the impact of COVID-19 on four developing countries, Ethiopia, India, Peru and Vietnam, to assess the potential impact on the Sustainable Development Goals (SDG). Lack of data is a huge challenge with respect to evaluating the impact that COVID-19 has had, and will have, on developing countries. While telephone interviews are not new, ensuring representative samples is often difficult. This study uses an existing randomly sampled dataset which helps overcome potential sample biases but also provides a plethora of baseline data to track changes over time. With longitudinal data available since 2002 this study embarks on describing an evolving crisis with reference to initial baseline statistics and how countries fared in outcomes in response to alternative government policies.
The paper presents summary descriptives by major outcomes important for meeting the SDGs, namely, schooling, work and food security. Without repeating the specific findings they conclude that the economic effects have been greater than the health consequences for their predominantly young sample. Where stricter government polices were in place which contained the virus the sample were impacted less, especially in terms of food security.

Given the wealth of data including pre-pandemic levels of the key outcome variables and importantly the differing polices implemented, the paper would have benefitted from a table summarising by country the government policy, deaths per 1m population, baseline statistics for one core variable for each outcome prior to the pandemic and then during. Teasing out the trajectory of countries would have aided the reader in digesting the quantity of statistics presented. While the conclusion is outcomes differed based on initial states and government policy, such a table could help identify patterns that could improve the impact of future interventions.

The message of the paper is important. Inequalities have widened. Recovery is far from complete. Poor vaccination rates imply this is not over. A call for flexible social recovery programmes is imperative in dealing with the shock of this crisis and potential future crises.

Is the work clearly and accurately presented and does it cite the current literature?

Yes

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
Yes

If applicable, is the statistical analysis and its interpretation appropriate?
Yes

Are all the source data underlying the results available to ensure full reproducibility?
Yes

Are the conclusions drawn adequately supported by the results?
Yes

Is the argument information presented in such a way that it can be understood by a non-academic audience?
Yes

Does the piece present solutions to actual real world challenges?
Yes

Is real-world evidence provided to support any conclusions made?
Yes

Could any solutions being offered be effectively implemented in practice?
Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Associate Professor in Development Economics

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.