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## **Cohort Profile**

## **Cohort Profile Update: The Young Lives study**

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## The original cohort

Young Lives is an international longitudinal study set up in 2001 to investigate the changing nature of childhood poverty in four low-and-middle-income countries [Ethiopia, India (Andhra Pradesh and Telangana), Peru and Vietnam] over a 15-year period. In each country, the cohort comprised 2000 children aged between 6 and 18 months and up to 1000 children aged between 7 and 8 years, gender balanced, recruited and first surveyed in 2002 and sampled from 20 sentinel sites.<sup>1–4</sup>

In the original cohort profile [https://doi.org/10.1093/ ije/dys082],<sup>5</sup> we described data collection and findings from three rounds of the quantitative survey up to 2009, and three rounds of qualitative data collection up to 2010/11.

# What is the reason for the new focus (or new data collection)?

Since 2009, two further rounds of in-person surveys have taken place in the four countries for both cohorts, in 2013 and 2016. The cohorts were aged 15 and 22 in the fifthround survey in 2016. The study evolved to incorporate issues that were relevant to young people rather than children—expanding on measurement of socio-emotional skills for the older cohort, as well as more detailed information on labour market participation, marriage and fertility. A further round of qualitative fieldwork took place in 2014 (and in 2019 in Ethiopia only), and since 2007, 17 qualitative sub-studies addressing specific policy themes have been conducted across the four countries.

Funding for a sixth and seventh round of in-person data collection was secured in 2019, with data collection planned for 2020 and 2023. The new phase of the study focuses more on labour market participation and family formation but still preserves the holistic approach of the previous survey rounds.

Due to the Covid-19 pandemic, the 2020 round was converted into a telephone survey in all four countries. The 'Listening to Young Lives at Work: Covid-19' phone survey consists of three phone calls. The first call took place between June and July 2020, the second call between August and October 2020 and the third one between November and December 2020. The two cohorts were aged approximately 19 and 26 years in 2020, and the focus of the survey was repurposed to collect timely and relevant information about the effect of the pandemic on participants with phone numbers. In Ethiopia and India, the phone survey was able to reach respondents without access to mobile phones via local guides living in the sample villages.

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### Key Messages

- Young Lives is a longitudinal study tracking two cohorts of children in four low-and-middle-income countries [Ethiopia, India, Peru and Vietnam].
- Young Lives is a longitudinal study tracking two cohorts of children in four low-and-middle-income countries [Ethiopia, India, Peru and Vietnam].
- The survey started in 2002 and three rounds were completed by 2009. Two further rounds took place in 2013 (round 4) and 2016 (round 5). Most recently the round planned for 2020 was conducted by telephone.
- More than 91% of the original sample (10,724 out of 11,784 respondents, aged 15 and 22) took part to (in) round 5 and 84% of the original sample participated in the COVID-19 phone survey (9,864 respondents, aged 19 and 26).
- The last two in-person rounds incorporate measures relevant to young people rather than children (expanding on of socio-emotional skills, labour market participation, marriage and fertility). The phone survey includes questions related to COVID-19, economic experiences, education, labour market, mental health, domestic violence, food insecurity.
- Data are publicly archived on the UK Data Service [http://doi.org/10.5255/UKDA-SN-8678-2].

#### What will be the new areas of research?

In rounds 4 and 5 (2013 and 2016), the survey evolved to cover issues that were relevant to the age of the cohorts including higher education, labour market participation and economic activities, family formation and fertility and digital skills, as well as a more comprehensive set of measures of personality and psychosocial skills.<sup>6</sup> Overall participation rate in 2016 was 91% of the original 2002 sample.<sup>7</sup>

The Young Lives Covid-19 phone survey in 2020 included information on beliefs and behaviours about the virus, as well as effects of the economic crisis on households and individuals, using new modules developed for the survey. Modules from previous survey rounds were also incorporated to allow a cross-cohort and cross-round comparison. The main areas of research covered by the phone survey data include:

- Covid-19 beliefs and prevention measures;
- Covid-19 infections, illness and death in the household;
- economic experiences during the pandemic;
- food insecurity;
- education activities and remote learning;
- labour market participation and economic activities;
- mental health and well-being;
- experiences of domestic violence (List Experiment) (Peru and India only).

### Who is in the cohort?

In 2020, the participants were aged 18–19 years (Younger Cohort) and 25–26 years (Older Cohort). Follow-up rates by cohort are shown in Figure 1.

Across the four Young Lives countries, of the original 11 784 subjects, 9864 were surveyed in 2020 (83.7% total retention rate). Table 1 presents follow-up rates for all

four countries in 2020 according to selected characteristics measured in round 1. Losses to follow-up were highest in Peru and lowest in India.

### What has been measured?

The Young Lives Covid-19 phone surveys covered variables related to the virus, economic shocks due to the pandemic, schooling, labour markets, food security, mental health, domestic violence, behaviour and lifestyle. Table 2 shows the main categories assessed and the primary variables collected.

Subjective well-being has been measured using the Cantril (1965) Self-anchoring Scale (also known as the Cantril Ladder).<sup>8</sup> Symptoms of depression and anxiety were measured using the Patient Health Questionnaire depression scale-8 (PHQ-8)<sup>9</sup> and the Generalized Anxiety Disorder scale-7 (GAD-7),<sup>10</sup> respectively. To measure domestic violence, we applied the double List Experiment Randomization method,<sup>11–14</sup> an approach used to correct for biases in surveys where respondents are asked questions on sensitive topics. We measured food insecurity using the Food and Agricultural Organization of the United Nations (FAO) Food Insecurity Experience Scale (FIES),<sup>15</sup> which asks 8 yes/no questions regarding people's ability to access food.

# What has it found? Key findings and publications

Table 3 shows preliminary findings from the 2020 phone survey, and headline reports are available on the Young Lives website. There are particularly striking differences between the experiences of young people in Peru and Vietnam. Research is under way and some early findings, including Favara *et al.* (2021),<sup>16</sup> show a significant fall in

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OLDER COHORT	Age:	* *	12	15	19	22	26
Intervie	ewed	N=3722	N=3658	N=3605	N=3382	N=3254	N=3004
Rates		100%	98.3%	96.9%	90.9%	87.4%	80.7%
Deaths			N=14	N-19	N=32	N=40	N=53
YOUNGER COHORT	Age:	1 7	5 *	8 *	12	15	19
Intervie	ewed	N=8062	N=7795	N=7720	N=7624	N=7510	N=6680
Rates		100%	96.7%	95.8%	94.6%	93.2%	82.9%
Deaths			N-119	N=135	N=152	N=166	N=175
Housel and ch survey	hold ild	Round 1 2002	Round 2 2006	Round 3 2009	Round 4 2013	Round 5 2016	Covid-19 phone survey 2020
Qualita data co	ative		Qual 1 2007	Qual 2 Qu 2008 20	al 3 Qual 4 011 2014	(Eth	Qual 5 2019

Figure 1 Young Lives survey rounds: cohorts' age, sample size and response rates.

well-being of the younger cohort compared with the older cohort at the same age (measured in 2013), and Porter *et al.*  $(2021)^{17}$  show significant impacts of pandemic-related stressors on mental health.

The Young Lives website links to almost 500 working papers and academic publications, as well as policy reports and technical notes produced during the lifetime of the study. Some notable findings since the publication of the cohort profile have been as follows.

- Child growth during the first 1000 days of life, and also after this period, has an impact on cognitive achievement in adolescence, some of this effect manifesting through growth in interim periods.<sup>18</sup>
- A high proportion of children with growth deficits as infants continued to suffer poor growth through child-hood and adolescence. However, there is significant amount of recovery from stunting and growth faltering, with most recovery occurring before the age of 15.<sup>19–23</sup>
- Climate shocks (extreme weather events), poverty, and other adverse events experienced in early childhood have long-term impacts on children's cognitive as well as noncognitive (psychosocial skills).<sup>24,25</sup>

• Social protection programmes have mitigated the effect of childhood shocks on nutrition and cognitive outcomes but may have unintended consequences.<sup>26–30</sup>

All the documentation from the study is in English. Data are publicly archived on the UK Data Service [http://doi.org/10.5255/UKDA-SN-8678-2]. More information is available at [https://www.younglives.org.uk/content/ young-lives-work-ylaw]. For more information for proposed collaboration or queries, potential partners should e-mail the corresponding author.

## What are the main strengths and weaknesses?

#### Strengths

The main strengths of the Young Lives study design have been the prospective, multidisciplinary nature of the data and the mixed methods research design. Over 20 years the study has had extremely low rates of attrition: more than 91% of the original sample took part to the last in-person round in 2016 and 84% of the original sample participated in the Covid-19 phone survey. The broad geographical

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Table I Follow-up rates for the COVID-19 phone survey (2020) according to baseline characteristics, Young Live	Table 1	Follow-up rates	for the COVID-19	phone survey	(2020) according	to baseline characteristics,	Young Lives
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	Ethiopia			India		
Variable	Original sample (2002)	% interviewed in 2020	P-value	Original sample (2002)	% interviewed in 2020	P-value
Total	2999	82.1		3019	91.4	
Cohort	2999			3019		
Older cohort	1000	77.6	0.000	1008	88.3	0.000
Younger cohort	1999	84.4		2011	93.0	
Sex	2999			3019		
Male	1559	84.3	0.001	1572	91.3	0.781
Female	1440	79.8		1447	91.6	
Area of residence	2999			3019		
Rural	1948	84.5	0.000	2260	94.6	0.000
Urban	1051	77.6		759	81.9	
Mother's education	2885			2986		
Incomplete primary	2491	82.7	0.968	2484	92.4	0.042
At least complete primary	394	82.7		502	89.6	
Wealth tercile	2974			3014		
Lowest wealth tercile	1002	83.9	0.034	1012	94.8	0.000
Middle wealth tercile	985	82.8		998	93.4	
Top wealth tercile	987	79.6		1004	86.1	
		Peru			Vietnam	
Variable	Original sample (2002)	% interviewed in 2020	P-value	Original sample (2002)	% interviewed in 2020	P-value
Total	2766	75.3		3000	85.3	
Cohort	2766			3000		
Older cohort	714	66.7	0.000	1000	84.5	0.362
Younger cohort	2052	78.3		2000	85.8	
Sex	2766			3000		
Male	1413	74.9	0.653	1528	82.9	0.000
Female	1353	75.7		1472	87.9	
Area of residence	2766			3000		
Rural	830	72.0	0.009	2400	87.0	0.000
Urban	1936	76.7		600	78.8	
Mother's education	2611			2946		
Incomplete primary	966	74.0	0.000	1006	83.6	0.013

Interviewed in 2020 sample refers to whether a participant was included in any of the three Young Lives Covid-19 phone surveys. *P*-values reflect t tests/f tests of equality between % interviewed in 2020 means.

79.9

71.2

75.5

79.2

base and the diversity of the populations included in each country also make this cohort study unique. The data on country-specific policies and social protection programmes allow us to study their impacts on health and well-being; and the careful changes made between survey rounds, without compromising the overall integrity of the longitudinal data, are also strengths. Since round 3, we have been

1645

2755

924

913

918

At least complete primary

Lowest wealth tercile

Middle wealth tercile

Top wealth tercile

Wealth tercile

able to compare between the two cohorts, surveyed 7 years apart at the same age.

87.0

84.8

87.9

83.3

0.013

1940

2998

1000

1008

990

#### Weaknesses

0.000

The enrolment of children aged 6–18 months and reliance on maternal reports of early infancy, including birthweight,

Category	Variables			
Covid-19	Information about social distancing and self-isolation; knowledge of signs and symptoms; infections; frequency of testing; type of tests; preventive behaviour; behaviour during quarantine, self-per-ceived risk of infection; types of treatments			
Economic experiences	Job loss; non-farm business closure; loss of income source; total expenses movements; total monthly income movements, business input prices; food prices; new health expenses; less work; decreased business output; illness; theft			
Education	School enrolment; interrupted studies due to pandemic; online learning adopted; type of institute; major; highest level achieved; reasons for stopping education; remote learning activities; methods to contact teachers			
Labour market participation and economic activities	Worked before pandemic; worked in past week; reasons for no work; work modality; type of work activity; economic sector of activity; type of employer; number of hours; payment type; payment amount; ownership of health insurance; written contract; duration of contract; mobility for work-related reasons			
Well-being and mental health	Subjective well-being; symptoms of depression; symptoms of anxiety; self-reported level of anxiety			
Domestic violence	Increased physical violence during lockdown; ever experienced physical violence (in India and Peru)			
Time use	Time use on child care, household chores, working, studying, sleeping, doing nothing			
Trust	Whether most people can be trusted; community engagement			
Food insecurity	Food Insecurity Experience Scale (FIES) questions; food prices			

#### Table 2 Main categories of variables collected in the Young Lives Covid-19 phone surveys

## Table 3 Selected characteristics of the study sample in 2020: Covid-19, economic shocks, human capital, labour markets and mental health

Variable	Ethiopia	India	Peru	Vietnam
Covid-19				
Tested, %	7.0	11.1	19.0	5.3
Covid-19 positive, % of tested	1.2	5.9	17.2	0.0
Economic shocks: % of households that				
Increased household expenses (since the outbreak), %	73.9	82.9	64.8	11.7
Decreased monthly income (since the outbreak), %	55.0	81.8	77.2	58.2
Human capital				
Planning to attend or attending education, %	78.2	66.1	82.1	92.4
Labour markets				
Employed before pandemic, %	47.9	42.4	63.8	69.8
Employed in week before survey, %	46.4	55.3	59.0	64.4
Mental health				
Nervous about circumstances, %	64.7	89.3	49.2	65.0
At least mild depression, %	16.1	10.1	31.2	9.4
At least mild anxiety, %	19.3	11.3	40.6	9.3

All variables are from the second phone survey (August-October 2020) except 'nervous about circumstances', which is from the first (June-July 2020). All results merge both cohorts, except human capital which only uses the younger cohort who were enrolled in education at the time or were enrolled some time in 2020.

remain a disadvantage in the analyses of long-term health and nutrition-related issues. The translation and construct validity of the survey instruments has been a challenge, but also an opportunity to advance the field in validating measures (e.g. psychosocial measures), otherwise limited to developed country contexts. The pro-poor sampling design is a weakness when investigating issues related to inequality. Some newly introduced variables in the phone surveys have no baseline, for example mental health.

## **Ethics approval**

Ethics approvals for the Young Lives study were obtained in each study country and by the Social Sciences and Humanities Inter-Divisional Research Ethics Committee (IDREC) at the University of Oxford: in July 2007 (Ref.: SSD/CUREC2/07–026); in 2009 (Ref.: SSD/CUREC1/08– 283); in 2013 (Ref.: SSD/CUREC2/07–026, dated 2 May 2013); in 2016 (Ref. No.: R43389/RE002); in 2019 (Ref. No.: CUREC1A/ODID C1A\_19\_075 and Ref. No:. CUREC1A/ODID C1A\_19\_090); in 2020 (Ref. No.: CUREC1A/ODID C1A\_19\_090).

The phone survey was approved by the institutional research ethics committees at the University of Oxford (Ref. No.: CUREC 1 A/ODID CIA-20-034), the College of Health at the University of Addis Ababa (Ethiopia), the Centre for Economic and Social Studies in Hyderabad (India), the Instituto de Investigación Nutricional (Peru) and the Hanoi University of Public Health (Vietnam). Participants were asked for their verbal informed consent before the study commenced and were assured of confidentiality. The respondents received a small economic incentive[ETB 300 (7.6 GBP) in Ethiopia; INR 600 (6.5 GBP) in India; PEN 50 (12 GBP) in Peru; and VND 150,000 (5.2 GBP) in Vietnam], which replaced the gift given to participants during a standard round of data collection. A consultation guide was provided to all participants, with resources for support on issues raised by the survey questionnaire.

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## **Conflict of Interest**

None declared.

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