

Title page

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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 was comprised of 2,000 children aged between 6 and 18 months and up to 1,000 children aged between 7 and 8 years, gender balanced, recruited and first surveyed in 2002 and sampled from 20 sentinel sites.¹⁻⁴

In the original cohort profile [<https://doi.org/10.1093/ije/dys082>]⁵, 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 fifth-round 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, seventeen 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.

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, digital skills, as well as a more comprehensive set of measures of personality and psycho-social skills.⁶ Overall participation rate in 2016 was 91% of the original 2002 sample.⁷

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 wellbeing
- 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.

[Figure 1 here]

Across the four Young Lives countries, of the original 11,784 subjects, 9,864 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.

[Table 1 here]

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.

[Table 2 here]

Subjective well-being has been measured using the Cantril (1965) Self-anchoring Scale (also known as the Cantril Ladder).⁸ Symptoms of depression and anxiety were measured using the Patient Health Questionnaire depression scale-8 (PHQ-8)⁹ and the Generalized Anxiety Disorder-7 scale (GAD-7)¹⁰ respectively. To measure domestic violence, we applied the double List Experiment Randomization method¹¹⁻¹³, 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 Organisation of the United Nations (FAO) Food Insecurity Experience Scale (FIES)¹⁵, which asks eight 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 underway and some early findings, including Favara *et al.* (2021)¹⁶, show a significant fall in wellbeing of the younger cohort compared to 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.

[Table 3 here]

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:

- 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.¹⁸
- A high proportion of children with growth deficits as infants continued to suffer poor growth through childhood and adolescence. However, there is significant amount of recovery from stunting and growth faltering, with most recovery occurring before the age of 15.¹⁹⁻²³
- 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 non-cognitive (psychosocial skills).^{24,25}
- Social protection programmes have mitigated the effect of childhood shocks on nutrition and cognitive outcomes but may have unintended consequences.²⁶⁻³⁰

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 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 allows

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

Weaknesses

The enrolment of children aged 6–18 months and reliance on maternal reports of early infancy, including birthweight, remains 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 e.g. mental health.

Declarations section

Ethical approval: Ethical 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 1A/ 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)), 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.

Data availability: 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 here: <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.

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Conflict of Interest: None declared

References

1. Young Lives. *Young Lives Survey Design and Sampling (Round 5): United Andhra Pradesh*. Round 5 Factsheets. https://www.younglives.org.uk/sites/www.younglives.org.uk/files/INDIA-SurveyDesign-Factsheet-Oct17_0.pdf (October 2017, date last accessed).
2. Young Lives. *Young Lives Survey Design and Sampling (Round 5): Ethiopia*. Round 5 Factsheets. https://www.younglives.org.uk/sites/www.younglives.org.uk/files/ETHIOPIA-SurveyDesign-Factsheet-Jan18_0.pdf (January 2018, date last accessed).
3. Young Lives. *Young Lives Survey Design and Sampling (Round 5): Peru*. Round 5 Factsheets. https://www.younglives.org.uk/sites/www.younglives.org.uk/files/PERU-SurveyDesign-Factsheet-Jan18_0.pdf (January 2018 date last accessed).
4. Young Lives. *Young Lives Survey Design and Sampling (Round 5): Viet Nam*. Round 5 Factsheets. <https://www.younglives.org.uk/content/survey-design-and-sampling-round-5-vietnam> (January 2018 date last accessed).
5. Barnett I, Ariana P, Petrou S *et al*. Cohort Profile: The Young Lives Study. *Int J Epidemiol* 2013; **42**:701–708. doi:10.1093/ije/dys082
6. Yorke L, Ogando Portela MJ. Psychosocial Scales in the Young Lives Round 4 Survey Selection, Adaptation and Validation. *Young Lives Technical Note* 2018; **45**. <https://www.younglives.org.uk/sites/www.younglives.org.uk/files/YL-TN45.pdf> (May 2018 date last accessed).
7. Sánchez A, Escobal J. Survey attrition after 15 years of tracking children in four developing countries: the Young Lives study. *Rev. Dev. Econ* 2020; **24**(4):1196-1216. <https://doi.org/10.1111/rode.12660>
8. Cantril H. *The pattern of human concerns*: New Brunswick, N. J.: Rutgers University Press, 1965.

9. Kroenke K, Strine TW, Spitzer RL *et al.* The PHQ-8 as a measure of current depression in the general population. *J Affect Disord* 2009; **114**(1-3):163-73.
10. Spitzer RL, Kroenke K, Williams JB *et al.* A brief measure for assessing generalized anxiety disorder: the GAD-7. *Arch Intern Med* 2006; **166**(10):1092-7.
11. Raghavarao D, Federer WT. Block total response as an alternative to the randomized response method in surveys. *J R Stat Soc B, Series B, Methodological*, 1979; **41**(1):40–5.
12. Miller, JD. A new survey technique for studying deviant behavior. PhD diss, The George Washington University, 1984.
13. Droitcour J, Caspar RA, Hubbard ML *et al.* The Item-Count Technique as a Method of Indirect Questioning: A Review of Its Development and a Case Study Application. In *Measurement Errors in surveys*. Biemer, PP, Groves, RM, Lyberg, LE *et al.* (Eds.). New York: John Wiley & Sons, 1991: 185–210.
- 14 Porter C, Favara M, Sanchez A, Scott D. The impact of COVID-19 lockdowns on the experience of domestic violence among young people in Peru: Evidence from a list randomization experiment”. *Soc Sci Med - Pop Health*, 2021, **14**-100792.
15. Ballard TJ, Kepple AW, Cafiero, C. *The Food Insecurity Experience Scale: Developing a Global Standard for Monitoring Hunger Worldwide*. Technical Paper. Rome, FAO, 2013. http://www.fao.org/fileadmin/templates/ess/voh/FIES_Technical_Paper_v1.1.pdf (August 2017 date last accessed).
16. 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.

17. Porter C, Favara M, Hittmeyer A *et al.* Impact of the COVID-19 Pandemic on anxiety and depression symptoms of young people in the Global South: evidence from a four-country cohort study. *BMJ Open* 2021; **11**. e049653. doi: 10.1136/bmjopen-2021-049653.
18. Crookston B. J., W. Schott, S. Cueto, K. A Dearden, P. Engle, A. Georgiadis, E. A Lundeen, M. E Penny, A. D Stein, and J. R Behrman, 2013. Post infancy growth, schooling, and cognitive achievement: Young Lives. *Am J Clin Nutr* 2013; **(98)**:1555–63.
19. Outes I, Porter C. Catching up from early nutritional deficits? Evidence from rural Ethiopia. *Econ Hum Biol* 2013; **11**(2):148-163.
20. Georgiadis A, Benny L, Galab S *et al.* Growth recovery and faltering through early adolescence in low-and middle-income countries: Determinants and implications for cognitive development. *Soc Sci Med* 2017; **179**:81-90.
21. Fink G, Rockers PC. Childhood growth, schooling, and cognitive development: further evidence from the Young Lives study. *Am J Clin Nutr* 2014; **100**(1):182-188.
22. Georgiadis A, Penny ME. Child undernutrition: opportunities beyond the first 1000 days. *Lancet Public Health* 2017; **2**(9): e399.
23. Lundeen EA, Behrman JR, Crookston BT *et al.* Growth faltering and recovery in children aged 1–8 years in four low-and-middle-income countries: Young Lives. *Public Health Nutr* 2014; **17**(9):2131-2137.
24. Dercon S, Sánchez A. Height in mid childhood and psychosocial competencies in late childhood: Evidence from four developing countries. *Econ Hum Biol* 2013; **11**(4):426-432.
25. Sánchez, A. The structural relationship between early nutrition, cognitive skills and non-cognitive skills in four developing countries. *Econ Hum Biol* 2017; **27**:33-54.
26. Dasgupta, A. Can the major public works policy buffer negative shocks in early childhood? Evidence from Andhra Pradesh, India. *Econ Dev Cult Change* 2017; **65**(4):767-804.

27. Singh A, Park A, Dercon S. School meals as a safety net: an evaluation of the midday meal scheme in India. *Econ Dev Cult Change* 2014; **62**(2):275-306.
28. Andersen CT, Reynolds SA, Behrman JR *et al.* Participation in the *Juntos* conditional cash transfer program in Peru is associated with changes in child anthropometric status but not language development or school achievement. *J. Nutr* 2015; **145**(10):2396-2405.
29. Porter C, Goyal R. Social protection for all ages? Impacts of Ethiopia's Productive Safety Net Program on child nutrition. *Soc Sci Med* 2016; **159**:92-99.
30. Favara M, Porter C, Woldehanna T. Smarter through social protection? Evaluating the impact of Ethiopia's safety-net on child cognitive abilities. *Oxf Dev Stud* 2019; **47**(1):79-96