

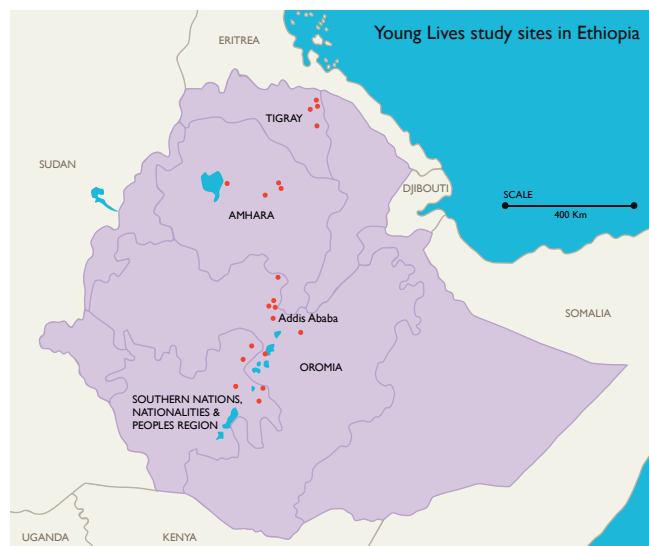
Young Lives Survey Design and Sampling in Ethiopia

Preliminary Findings from the 2013 Young Lives Survey (Round 4)

This is the first of four factsheets to describe preliminary results from Round 4 of the Young Lives survey to show the changing outcomes for children in Ethiopia since 2002. The factsheets do not aim to give a comprehensive overview of all the findings from Young Lives, but rather a broad outline of some of the key indicators and changes that have taken place in the lives of the children in the sample over the eleven years between the first round of data collection in 2002 and the fourth in 2013. This fact sheet describes the survey methods and sample design in Ethiopia, while the other fact sheets present preliminary findings about Education and Learning, Health and Nutrition, and Youth and Development.

Ethiopia is one of the poorest countries in the world with a population of over 94 million. Over the past decade it has witnessed rapid economic growth and improvements in infrastructure and services. Child mortality has fallen, access to healthcare has improved and advances have been made in primary education. The Government has introduced a number of Poverty Reduction Strategy Programmes and more than 60 per cent of government spending now goes to what it calls pro-poor sectors, namely education, health, roads, water and agriculture. But the United Nations still ranks Ethiopia 173 out of 187 countries in terms of human development. By talking to children and their families, and conducting school and household surveys, we are building a comprehensive picture of what it is like for children living in a country where almost a third of the population is living below the poverty line and one in every eleven children dies before reaching their fifth birthday.

Figure 1. *Young Lives study sites in Ethiopia*



About Young Lives

Young Lives is designed as a panel study that is following the lives of 12,000 children in four low and middle-income countries – Ethiopia, India (in the states of Andhra Pradesh and Telangana), Peru and Vietnam – over 15 years. The sample in each country consists of two cohorts of children: a Younger Cohort who were aged between 6 and 18 months when Round 1 of the survey was carried out in 2002, and an Older Cohort of 1,000 children then aged between 7.5 and 8.5 years.

Through a large-scale household survey of all the children and their primary caregiver, interspersed with more in-depth interviews, group work and case studies with a sub-sample of the children, their caregivers, teachers and community representatives, we are collecting a wealth of information, not only about their material and social circumstances, but also their perspectives on their lives and their aspirations for the future, set against the environmental and social realities of their communities.

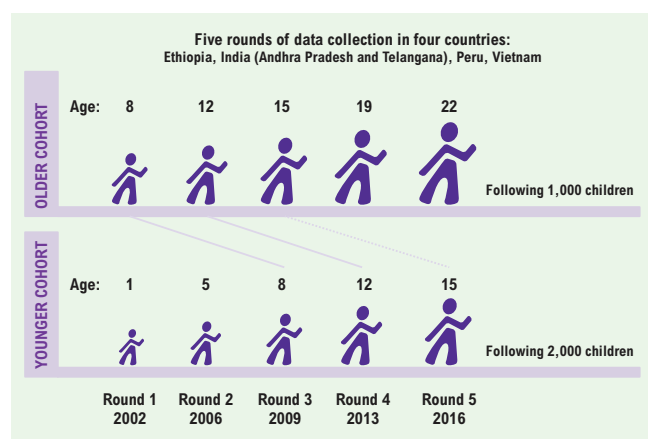
The fact that our work spans 15 years in the lives of these children – covering all ages from early infancy into young adulthood when some will become parents themselves – means that we are also able to examine how children's lives change over time, whether growing up in rural or urban contexts, poor or not-so-poor neighbourhoods, large or small households, or as migrants, as well as taking into account a variety of other factors. The five rounds of survey data, supplemented by the nested qualitative case studies from the sub-sample of children, make Young Lives a unique cross-country longitudinal dataset exploring the causes and consequences of poverty in childhood.

Young Lives cohort study

A cohort study is one which collects information over time on a group of people who share a common characteristic (such as age). It allows us to see how circumstances at an earlier time-point relate to later outcomes.

Four rounds of quantitative surveys of children, households and communities have been conducted in Ethiopia. The first round was carried out between October and December 2002 when the children were aged around 1 year and 8 years. The following surveys have always been carried out at the same time of year in 2006 (Round 2), 2009 (Round 3), and 2013 (Round 4) – when the children were aged between 11 and 12 years (the Younger Cohort) and between 18 and 19 years (the Older Cohort). The survey rounds have been interspersed with four rounds of qualitative data collection with a sub-sample of 50 of the children, resulting in a series of nested longitudinal case studies.

Figure 1. Young Lives longitudinal and cohort study



Sample design

The children were selected from 20 sentinel sites that we defined specifically in each country. The concept of a sentinel site comes from health surveillance studies and is a form of purposive sampling where the site (or 'cluster' in sampling language) is deemed to represent a certain type of population, and is expected to show typical trends affecting those particular people or areas. For example, monitoring a typical slum of a given city may detect events and trends that will have an impact on most slums in that city.

The twenty study sites in Ethiopia were selected in 2001 following a three-stage process based on the national administrative structures. First, the regions where the study would take place were selected, then the woredas (districts) within each region, and then a kebele (the lowest level of administrative structure) within each woreda as a sentinel site. Finally 100 young children and 50 older children were randomly selected within the chosen sites.

The methodology in the first stage was purposive because the sentinel sites were chosen such that: (1) districts with food-deficit status were oversampled, (2) the profile of the selected districts/sites captured Ethiopia's diversity across regions and ethnicities, in both urban and rural areas, and (3) the cost of tracking children in the future was manageable, to reduce the probability of attrition in remote pastoralist areas.

Regions: First, four regional states – Amhara, Oromia, SNNPR, Tigray, and one city administration (Addis Ababa) – were selected out of the country's 9 states and 2 city administrations. The main criterion was national coverage, and the five regions selected account for 96% of the national population.

Woredas: Between three and five woredas (districts) were selected in each region (20 in total), with a balanced representation of poor and less-poor households, urban and rural areas, and a selection of urban site types: capital city, intermediate city, and small urban areas (district centres). Among the woredas with food deficit status within each region, three were selected with the highest proportion and one with the lowest proportion.

Kebeles: In the third stage, at least one kebele (local administrative area) in each woreda was chosen. The selected community could either be considered a sentinel site in its own right or as a centre for creating a sentinel site along with adjacent kebeles, depending on the number of eligible households residing there.

Households: Finally in the fourth stage, 100 households with a child born in 2001-02 and 50 households with a child born in 1994-95 were randomly selected in each site. If a selected family had both 1-year-old and 8-year-old children, the younger child was included (since a greater number needed to be enrolled).

Principles and methods of the Young Lives sampling approach

- It was decided that a range of children should be sampled, not only the poorest children, although poor families were over-sampled.
- The children were sampled in geographic clusters, which were selected through a semi-purposive approach.
- Within each cluster, children were randomly selected.
- In each country, 2,000 children aged between 6 and 18 months were selected to be followed as they grew up over 15 years. This was considered an appropriate number given the duration and scope of the study. It was also considered to be sufficiently large for statistical analysis in general, allowing for the detection of moderate-sized differences between sub-groups of children.
- A similar sample of 1,000 children per country aged between 7.5 and 8.5 years were selected as an Older Cohort for comparison.

There was no non-response in Round 1, which is typical of Ethiopian surveys where households are unlikely to refuse in the first round of data collection. In Round 1 there were 26 communities, which decreased to 24 in Round 2 as two communities were merged. In Round 3, the number of communities increased to 27 because three of the previous communities became six.

Table 1. Young Lives sentinel sites

Cluster ID	District	Anonymised name*	Short description
1	Addis Ababa	Bertukan	An overcrowded area in the centre of the capital city, Addis Ababa
2	Addis Ababa	Duba	An industrial area in the southern part of the capital city, Addis Ababa
3	Addis Ababa	Menderin	A slum area in the capital city, Addis Ababa
4	Amhara	Kok	A tourist town in the Amhara region, with some extremely poor neighbourhoods
5	Amhara	Muz	A poor rural community in the Amhara region
6	Amhara	Enkoy	A rural area near Lake Tana in the Amhara region
7	Amhara	Tach-Meret	A rural food-insecure area in the Amhara region
8	Oromia	Leki	A rural area near lake Ziway in the Oromia region
9	Oromia	Lomi	A drought-prone rural area in the Oromia region
10	Oromia	Ananas	A fast-growing town in the Oromia region
11	Oromia	Dinich	A relatively rich rural area in the outskirts of Debrezeit town in the Oromia region
12	SNNP	Timatim	A densely populated rural area growing enset (false banana) in the SNNP region
13	SNNP	Shenkurt	A densely populated town in the SNNP region
14	SNNP	Leku	A fast-growing business and tourist town in the SNNP region
15	SNNP	Buna	A coffee-growing rural area in the SNNP region
16	SNNP	Weyn	A poor and densely populated rural community in the SNNP region
17	Tigray	Zeytuni	A drought-prone rural area highly dependent on government support in the Tigray region
18	Tigray	Selata	An extremely poor rural area dependent on the Productive Safety Net Scheme and other government support in the Tigray region
19	Tigray	Gomen	A small, very poor town in the Tigray region
20	Tigray	Beles	A model rural area in the Tigray region known for its success in soil and water conservation

*Note: Pseudonyms are used for all site names in order to protect the children's anonymity.

Longitudinal qualitative research is also being undertaken in four of these communities with a sub-sample of about 50 children covering both age cohorts to produce nested case studies across a seven-year period from 2007 to 2014.

Comparing Young Lives to other datasets

Young Lives is not intended to be a nationally representative survey such as the Demographic and Health Survey (DHS) or Welfare Monitoring Survey (WMS). Rather, as a longitudinal study, it is intended to show changes for individuals over time and the impact of earlier circumstances on children's later outcomes. A comparison to the DHS and WMS from 2000 (the year closest to Round 1 of Young Lives in 2002), indicates that the Young Lives sample includes a wide range of living standards, akin to the variability found in the Ethiopian population as a whole. However, even if poor children have been deliberately over-sampled, the Young Lives sample covers the diversity of children in the country in a wide variety of attributes and experiences. Therefore while not suited for monitoring child outcome indicators, the Young Lives sample is an appropriate and valuable instrument in analysing causal relations and examining child welfare and its dynamics over time.

Tracking and attrition

Sample attrition occurs when children who were interviewed in the first round of a survey are either not found or refuse to take part in later rounds. Young Lives, like all longitudinal surveys, is concerned to minimise attrition bias since if we were to lose touch with some types of children more than others (such as children from poorer families or from particular ethnic groups), this could bias results. We take care to ensure that we can track as many children as possible between the survey rounds to minimise the risk of drop-out.

The attrition rate is low compared to other longitudinal studies and is slightly lower than in the other study countries: 2.2% for the Younger Cohort and 8.4% for the Older Cohort since the start of the study. The main reasons for attrition are migration (internal or abroad), household moves, and the feeling that the study has not brought any tangible benefits. Working with the same field supervisors since Round 1 has enabled us to build stable relationships with the families, helping to minimise attrition.

Table 2. Attrition between Round 1 and Round 4

	Younger Cohort		Older Cohort	
Initial sample in Round 1 (2002)	1999		1000	
Died	81	4.1%	8	0.8%
Refused	10	0.5%	12	1.2%
Untraceable	3	0.2%	7	0.7%
Living abroad	30	1.5%	64	6.4%
Interviewed in Round 4 (2013)	1875	93.8%	909	90.9%
Attrition		2.2%		8.4%

Note: we do not include deaths within attrition.

Key topics covered by survey (Round 4, Ethiopia)

The survey is based on a core questionnaire for each child and a questionnaire for his or her primary caregiver that focuses on household circumstances. There is also a questionnaire for community representatives, to gather information about the local economy and environment, access to services, and other issues affecting child well-being within the community.

- **Household Questionnaire (both cohorts):** includes sections on Parental background; Household and child education; Livelihoods and asset framework; Household food and non-food consumption and expenditure; Social capital; Economic changes and recent life history; Socio-economic status. For the Younger Cohort only, there are also sections on Child health; Anthropometry; Caregiver perceptions and attitudes.
- **Older Cohort Child Questionnaire (age 19):** includes sections on Parents and Caregiver's update; Mobility; Subjective well-being; Education; Employment, earnings, and time-use; Feelings and attitudes; Household decision-making; Marital and living arrangements; Fertility; Anthropometry; Health and nutrition; Cognitive tests (reading comprehension in 7 languages; English and Amharic reading items; Maths in 7 languages; Self-Administered Questions).
- **Younger Cohort Child Questionnaire (age 12):** includes sections on Schooling; Time-use; Health; Social networks; Feelings and attitudes; Cognitive tests (Peabody Picture Vocabulary Test; reading comprehension in 7 languages; English, Amharic, and mother-tongue reading items; Maths in 7 languages, Sibling PPVT Test; Executive Functioning for the study child and a younger sibling).
- **Community Questionnaire:** includes sections on General characteristics of the locality; Social environment; Access to services; Economy; Local prices; Social protection; Educational services; Health services; Migration

Table 3. General characteristics of the Young Lives sample

Round 4 (2013)	Younger Cohort		Older Cohort		Total	
	Number	%	Number	%	Number	%
Gender						
Male	990	52.8	488	53.7	1478	53.1
Female	885	47.2	421	46.3	1306	46.9
Total	1875		909		2782	
Location						
Urban	765	40.8	432	47.5	1197	43.0
Rural	1,109	59.2	477	52.5	1586	57.0
Wealth Index						
Bottom tercile	620	33.1	303	50.1	923	33.2
Top tercile	614	32.7	302	49.9	916	32.9
Region*						
Addis Ababa	272	14.5	130	14.3	402	14.4
Amhara	373	19.9	186	20.5	559	20.1
Oromia	378	20.2	185	20.4	563	20.2
SNNPR	472	25.2	217	23.9	689	24.7
Tigray	380	20.3	191	21.0	570	20.5
Caregiver's education						
No education	970	51.7	438	48.2	1408	50.6
Lower primary	433	23.1	278	30.6	711	25.5
Upper primary	289	15.4	121	13.3	410	14.7
More than Grade 8	183	9.8	72	7.9	255	9.2
Religion of child						
Orthodox	1323	70.6	664	73.0	1987	71.4
Muslim	310	16.6	130	14.3	440	15.8
Protestant	200	10.7	102	11.2	302	10.8
Other	40	2.2	13	1.5	53	1.9

Note: There are 4 YC children and 1 OC boy for whom we have incomplete data.

FURTHER READING

- Ingo Outes-Leon and Alan Sanchez (2008) *An Assessment of the Young Lives Sampling Approach in Ethiopia*, Technical Note 1, Oxford: Young Lives.
- Ian Wilson, Sharon Huttley and Bridget Fenn (2004) A Case Study of Sample Design for Longitudinal Research: Young Lives, *International Journal of Social Research Methodology* 9.5: 351-365.
- Tassew Woldehanna (2005) Young Lives Sampling Procedure in Ethiopia, unpublished document.
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- Young Lives (2012) Young Lives Methods Guide, available at: <http://www.younglives.org.uk/what-we-do/research-methods/methods-guide>

ACKNOWLEDGEMENTS AND CREDITS

This is the first of a series of fact sheets giving a preliminary overview of some of the key data emerging from Round 4 of the Young Lives household and child survey. The factsheets – which cover *Education and Learning*; *Health and Nutrition*; and *Youth and Development* – were written by Tassew Woldehanna and Alula Pankhurst. We would like to thank our fieldwork teams and Chanie Ejigu who coordinated the survey fieldwork, Tirsit Asresse, the Young Lives Data Manager, and Maria Ogando Portela for support with initial data analysis. In particular, we thank the Young Lives children and their families for their willingness to be part of our sample and answer our many questions.

In Ethiopia, Young Lives is a partnership between the Ethiopian Development Research Institute (EDRI), Pankhurst Development Research and Consulting plc, and Save the Children. Young Lives is funded by UK aid from the Department for International Development (DFID) and co-funded from 2010 to 2014 by the Netherlands Ministry of Foreign Affairs and from 2014 to 2015 by Irish Aid. In Ethiopia, the Oak Foundation is funding a sub-study of research into practice. The views expressed are those of the author(s). They are not necessarily those of, or endorsed by, Young Lives, the University of Oxford, DFID or other funders.

Funded by



Ministry of Foreign Affairs of the Netherlands



Irish Aid

An Roinn Gnóthaí Eachtracha agus Trádála
Department of Foreign Affairs and Trade

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