

# The Impact of Growth on Childhood Poverty in Andhra Pradesh

Initial findings from INDIA

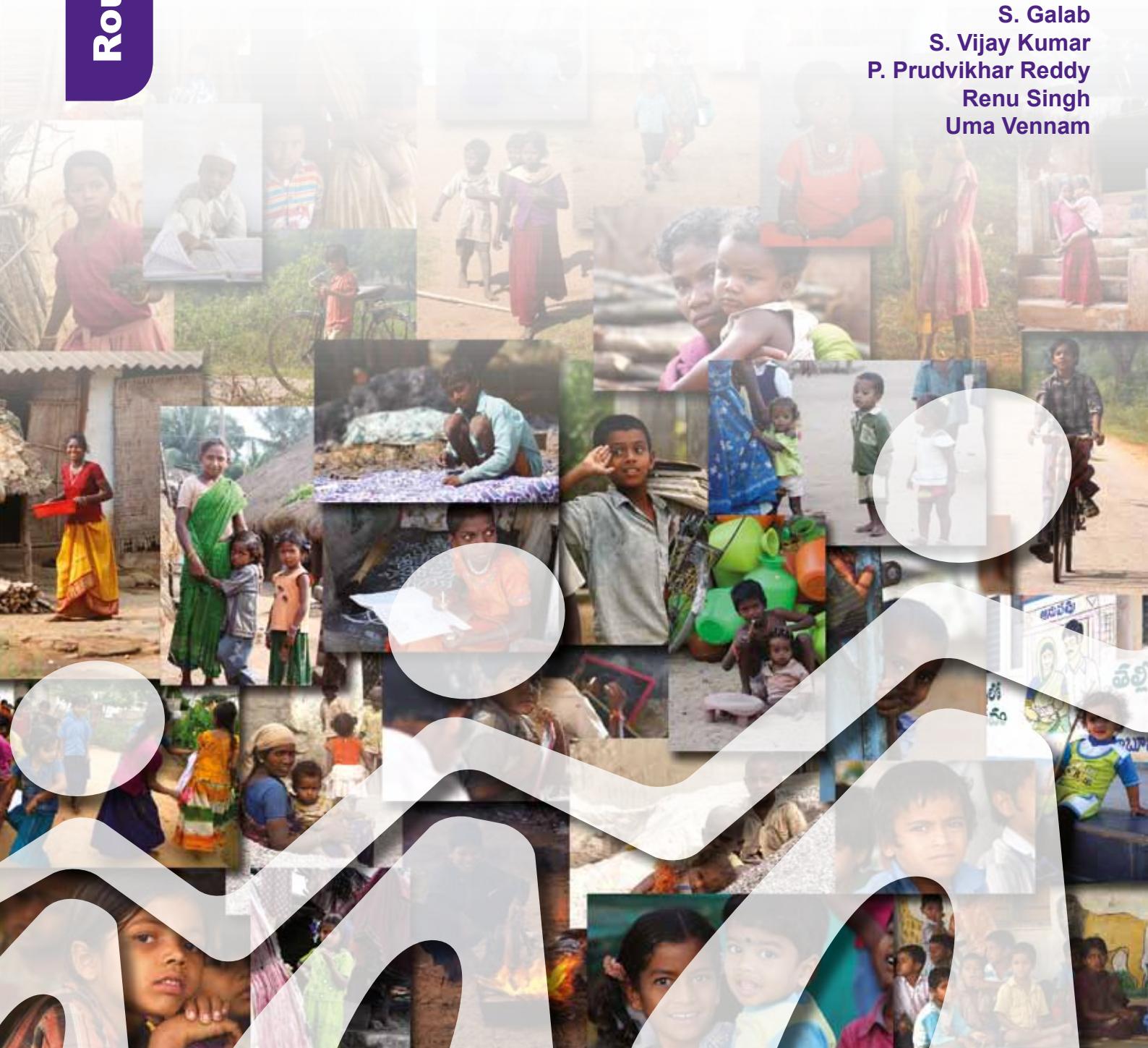
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An International Study of Childhood Poverty

## **Round 3 Survey Report**

# **The Impact of Growth on Childhood Poverty in Andhra Pradesh**

Initial findings from India

**September 2011**

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First published by Young Lives in September 2011

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ISBN: 978-1-904427-78-0

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# Acknowledgements

Among the innumerable people who have helped make this study possible, we would especially like to thank the Young Lives children and their families for their time and cooperation, and allowing us a glimpse into their lives since 2002. Also, members of the village panchayats, other local government officials, schoolteachers, anganwadi workers, community leaders, the SSA staff in Andhra Pradesh and other respondents for extending their generous cooperation during the field surveys.

We thank all members of our India Advisory Board who read the initial draft of our report meticulously and gave us invaluable comments, especially the external reviewer Dr Ramya Subrahmanian. Our thanks are due to Professor Manoj Panda, Director of CESS, for his whole-hearted support for the study. We would like to express our gratitude to the Young Lives researchers at the University of Oxford: Paul Dornan, Andreas Georgiadis, Caroline Knowles, Sofya Krutikova and Abhijeet Singh for providing their input and support in preparing and finalising the report.

We would like to thank several individuals who helped in the preparation of the survey questionnaires, and indeed, at various points through the study. D.S.R. Raju, Data Advisor, and K.T. Syam Sunder need special mention for their work in improving the questionnaire, supporting the field supervisors, and generating tables for the report. We also thank P. Raja Narendra Reddy, B. Srinivas, and other data entry staff (Panchakshari, Bhushana, Laxmi, Ramadevi) and our data entry operators for their timely completion of the work. Our field supervisors, T. Mahender Reddy, K. Prasada Rao, V. Malla Reddy, B. Narasaiah, M. Bhaskar Reddy, K. Prabhavathi and T. Dastagiri, contributed to the preparation of the questionnaires and provided administrative support for the fieldwork. Special thanks are due to our committed field team, who worked hard, sometimes in difficult circumstances, to carry out the survey. Without their efforts neither the tracking nor the extensive data collection would have been possible, and the attrition rates would have been higher.

The qualitative research team based at Sri Padmavathi Mahila Visvavidyalayam (SPMVV, the Women's University) in Tirupati: Professor Anuradha Komanduri, Dr K. Hymavathi, M.S.D. Udaya, and B. Radhika, along with their field team, deserve our sincere thanks.

Finally, we wish to thank Piyali Sarkar and Isabel Tucker for their help in editing the report.

Young Lives is core-funded from 2001 to 2017 by UK aid from the UK Department for International Development (DFID), and co-funded by the Netherlands Ministry of Foreign Affairs from 2010 to 2014. Sub-studies are funded by the Bernard van Leer Foundation and the Oak Foundation.

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.

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# Abbreviations and acronyms

APDPIP	Andhra Pradesh District Poverty Initiative Programme
BPL	Below the Poverty Line
BMI	Body Mass Index
DHS	Demographic and Health Survey
DISE	District Information System for Education
GPI	Gender Parity Index
GOI	Government of India
GSDP	Gross State Domestic Production
HDI	Human Development Index
ICDS	Integrated Child Development Services
ITDA	Integrated Tribal Development Agency
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MDMS	Midday Meal Scheme
MHRD	Ministry of Human Resource Development
NFHS	National Family Health Survey
NRHM	National Rural Health Mission
NREGS	National Rural Employment Guarantee Scheme
RTE	Right to Education Act
SSA	Sarva Shiksha Abhiyan ('Education For All', universalisation of elementary education programme)
SGSY	Swarnajayanti Gram Swarozgar Yojana
SHG	Self Help Group
TPDS	Targeted Public Distribution System

# Executive summary

This report presents initial findings from the third round of data collection by Young Lives in the Indian State of Andhra Pradesh, carried out from late 2009 to early 2010 with two age cohorts of children. It gives a broad outline of some of the key indicators of childhood poverty and changes that have taken place in the children's lives between the earlier survey rounds in 2002 and 2006 and this third round. Data are mainly presented for the entire age group, in most cases separated into gender, wealth groups, rural/urban location, caste and ethnicity. In particular, we are able to make comparisons between the older children at age 8 in 2002 (in Round 1), and the Younger Cohort at age 8 in 2009 (Round 3) – to highlight changes that have happened in the study communities over that time.

In 2002 Young Lives collected data on 2,011 children who were aged 6 to 18 months (the Younger Cohort) and 1,008 children aged 7.5 to 8.5 years (the Older Cohort) for the first survey round. The Young Lives sampling strategy was based on randomly selecting 150 children within 20 clusters or geographic sites, spread across Andhra Pradesh. Overall attrition by Round 3 was 2.2% over the eight-year period. The Young Lives study has also carried out three rounds of qualitative fieldwork, in 2007, 2008 and 2010, and the data collected are used to explain some of the findings in this report.

## **Context**

India is home to 1.2 billion people of whom 30 per cent are children. India today is witnessing an economic boom and if current trends continue, it is on course to become one of the world's most powerful economies. Yet this vast country is characterised by stark disparities between regions and social groups related to wealth and consumption, access to welfare programmes and education, and mobility out of poverty. Given the scale of poverty (75 per cent of the population lives on less than \$2 per day) and that a quarter of all child deaths globally occur in India, tackling child poverty has global significance. The Young Lives study in India is being carried out in Andhra Pradesh, the fifth largest state in India, with a total population of 84.66 million (Census 2011).

## ***Levels of wealth, consumption and poverty***

Real per capita consumption (at 2006 prices) has risen from Rs.812 in 2006 to Rs.942 in 2009 for all the households in the Young Lives sample, an increase of 16% over three years. Urban consumption is higher than rural consumption in both the rounds: consumption for urban households has risen from Rs.964 in 2006 to Rs.1123 in 2009 (an increase of 16.5%), while it has risen from Rs.759 to Rs.881 for rural households (an increase of 16%). The distribution of growth in consumption across social groups reveals that the 'Other Castes' (which include Upper Castes) had the highest consumption, while the Scheduled Tribes had the lowest consumption in all three rounds.

Absolute poverty has declined from 24% of Young Lives households in 2006 to 16% in 2009. The decline in poverty was little faster in rural than urban communities between 2006 and 2009, with more people poor in rural areas. Changes in the wealth index, which reflects the ownership of basic consumer durables and access to basic services, has also registered a greater improvement for rural areas than urban areas. This may be due to economic growth,

as well as the implementation of rural poverty reduction programmes and social protection schemes.

### ***Shocks and adverse events***

The movement of households in and out of poverty is often influenced by adverse events which may affect their incomes and livelihoods, force the sale of assets, undermine consumption, or cause families to incur debt. There is a significant variation in the prevalence of some shocks between rounds. In particular drought, which affected over a quarter of the sample households between 2002 and 2006 only affected 7.5% of the households in the succeeding three years. This pattern is important, not only to highlight the unpredictability of shocks (and their severity), but also to interpret the changes in many patterns seen in the data thus far. The second major pattern to note is the widespread effect of inflation in food prices between 2006 and 2009: over three-quarters of the sample households report being affected during this period.

A larger proportion of rural households report shocks of various kinds. To a large extent, this is a reflection of the multiple risks inherent in rain-dependent agriculture. However, it is important to note that this pattern is not true across all types of shock: for example, similar proportions of the sample report having suffered from food price rises, or the death of a household member, in urban and rural areas.

### ***Access to services***

At a general level, there was some improving access for households to both water and sanitation. However what is most noticeable is that although by 2009, nearly all households report access to safe drinking water, only a third of households report access to improved sanitation, and the increase over the period was much smaller. There has been the strongest growth in access to safe water in rural areas (from a much lower base), and by 2009 the difference between rural and urban areas was small. A wide gap persists, however, in access to sanitation: while nine in ten households in urban areas have access to improved sanitation, fewer than one in five children in rural areas live in households reporting access to sanitation. Children in rural areas did see improving access to sanitation (by 7 percentage points between 2002 and 2009), but it remains low. Examining patterns in other social groupings reflects this overall urban–rural story, with disparities existing between poor and non-poor households, and by social group (fewer than one in five Scheduled Tribe children reported access to safe sanitation, compared to around two thirds of other caste children). Developing better access to safe sanitation therefore continues to be of policy importance.

### ***Health and nutrition***

Stunting (low height-for-age) and low BMI-for-age are indicators of poor nutrition and long-term malnutrition and are widely accepted to be linked to other child development outcomes. Stunting suggests long-term under-nutrition particularly experienced in the early years of life and low BMI-for-age is a short-term indicator of poor nutrition. Around one in four (27% of the Younger Cohort children have low BMI-for-age), while almost one in three (29%) were stunted at age 8 (although that has fallen from 33% at age 5 years). In 2009, Younger Cohort children in rural areas were experiencing a higher prevalence of low BMI-for-age (29%) as well as stunting (34%) than children from urban areas (for whom the corresponding figures were 22% and 16%). Comparing the Older and Younger Cohorts at age 8 years suggests a very slight decline in stunting rates between 2002 and 2009 (3 percentage points). What

is most worrying, however, is how high these figures remain, and that there has been limited improvement despite the increase in consumption levels and considerable economic growth. Measures to reduce child stunting, require improving access to food and improving health and sanitation infrastructure.

## ***Education***

In Round 2 (2006) 96% of Younger Cohort children (then aged around 5) were enrolled either in primary school (45%) or some form of pre-school (51%). The average age at which children started formal schooling was 5.51 years. By Round 3, when the same children were aged around 8, enrolment in primary school had increased to 98%.

Enrolment is high in both urban and rural areas, and although there was little difference in the average age children started school, around double the proportion of children in rural areas had repeated a grade in the first five years of primary school compared with children in urban areas. It is very likely there are differences around the quality of education experienced. In the context of a rapidly expanding private sector in Andhra Pradesh, it is also important to note that a wide variation exists among low-fee private schools (often unregulated) in rural and urban areas and recognised high-fee schools in urban areas. A second factor is how much time children are able to spend in school, and the quality of education they receive. Both the survey and the qualitative data show that more boys than girls were being sent to the private schools, with a particularly high differential in rural areas. Gender-based decisions such as these were recorded during the qualitative research, where the caregivers justified the preference as investing in a child who remains with them, since girls get married and move to new family, whereas boys contribute to the family and support their parents in old age.

The data also demonstrate the association between maternal education and a number of indicators of children's education (which could be explained either by the direct effect of mother's education or by some other factor which is associated with maternal education, such as more educated mothers being more affluent). Children whose mothers had received no education were less likely to have attended preschool (44% compared to 72% of children whose mothers had received 10 or more years of education), and were four times more likely to have repeated a grade by age 8 (16% compared with 4%).

In the Older Cohort enrolment has fallen from 98% in Round 1 (age 8), to 90% in Round 2 (age 12), and further declined to 77% in Round 3 (age 15). Ten per cent of children have repeated a grade, while 13% left school between the ages of 12 and 15. The drop-out rate for children from the Scheduled Castes and Scheduled Tribes groups was almost double the rate of drop-out for the Other Caste groups. The proportion of children from non-poor households who were still enrolled in Round 3 is higher than the proportion of children from poor households; as importantly, children from non-poor households drop out at later points of their educational trajectory and thus tend to receive more years of education than children from poor households. As well as beginning school slightly later than boys, more Young Lives girls have left education between Round 2 and Round 3 (15%), compared to boys (11%). Qualitative work was done with Older Cohort children and during the interviews and group exercises, girls reported that distance to school, inadequate transport facilities and lack of basic amenities like toilets at school are some of the reasons why older girls drop out of school.

### ***Children's work and time-use***

Children in the Older Cohort report overall slightly less time in school and more time in paid and unpaid work (which includes caring for family members and unpaid work in family business) than children in the Younger Cohort. In the Older Cohort the percentage of children who were working (either paid or unpaid) rose from 22% in 2006 to 28% in 2009, with a higher incidence of work in rural areas (33%) compared to urban areas (12%) and highest among the Scheduled Tribes and Scheduled Castes, followed by Backward Castes and 'Other Castes'. In 2009 the children from poor households were more likely to work (34%) than children from non-poor households (27%).

Children from land-owning households often work on the family farm during the peak agricultural season, which will affect time spent in school. Unable to strike a balance between the different forms of work, some children missed school and then found it difficult to continue attending school. Not only does this show the seasonal pressures on children, but that children may be formally enrolled in school and yet miss much tuition.

### ***Subjective well-being***

In keeping with its multidimensional approach to poverty, Young Lives assesses children's subjective well-being. Children in the Younger Cohort reported higher self-evaluations of their lives than Older Cohort children. Children from 'Other Castes' reported higher self-evaluation of their life compared to children from all other castes. Similarly, children from non-poor households, urban areas, girls and children with mothers with more education reported having a 'better life' than those from poor households, rural areas, boys and children with mothers with little education. Education and not being poor are therefore positively correlated with subjective well-being.

### ***Conclusions***

Young Lives key findings have a number of important implications for policy.

- *Delivering pro-poor growth.* Although typically households saw consumption levels increase, the gaps between groups remain large and in some cases widened. Much more therefore is needed to encourage pro-poor growth, including investments in education or health services which help ensure poorer people are able to participate in growth; ensuring people have access to land; and social protection measures which help protect households from risk.
- *Combating the high burden of ill-health on poor families.* A high burden of illness experienced by children is likely to undermine their nutrition or other aspects of their physical development and ability to attend and learn in school. Although Young Lives evidence shows high take-up of health cards as part of the Arogysri health insurance programme, there is little reported use of the services (around 3.2% of households). Qualitative evidence from Young Lives demonstrates the impacts of costs in causing debt traps and proving a barrier for accessing decent primary healthcare. Alongside these concerns over disease prevention is the lack of progress in improving access to safe sanitation. Stronger emphasis is needed on improving access to primary health care and preventative health strategies alongside the secondary care services on which the Arogysri scheme focuses.

- *Improved enrolment but many children have left school by 15 years.* Rising enrolment rates at primary level are a great success but there are concerns as even by age 8, more than one in ten children had repeated a year and only three-quarters of the Older Cohort were still in education by the age of 15. Further, although education is important for its own sake, and a predictor of later outcomes, for children's life chances to improve it is also necessary that new livelihood options are open to children leaving school or college to take advantage of their skills.
- *Building on increased enrolment to deliver better learning for children.* Measures include access to preschool, improving the quality of schooling (such as teacher training; teacher absenteeism; the quality of teaching materials; and the quality of infrastructure), as well as keeping children in school and ensuring that other pressures (including poverty) do not undermine children's ability to learn. Social protection and livelihood measures which reduce risk and increase household incomes are also important to help ensure children can stay within the education system.
- *A growing private sector in education may be increasing differences between boys and girls.* Comparing the two cohorts when they were the same age demonstrates the proportion in the private sector nearly doubling. The rise may well also reflect parental concerns over quality in government schools (including over the use of English as the teaching medium, which is highly regarded and typical in private schools). The perceived need to send children to private schooling is likely to put further pressure on family budgets, stretching existing resources and forcing parents to choose between children. For equity reasons it is important to maintain a strong public system in order to avoid exacerbating existing inequalities.
- *Helping poorer families cope with risk and reducing chronic poverty.* Eight in ten (77%) households reported food price increases in 2006 to 2009, the period coinciding with the food, fuel and financial crisis. The Mahatma Gandhi National Rural Employment Guarantee Scheme has now been rolled out and provides both a wage floor in rural areas and elements of insurance by guaranteeing a certain number of days work to households. Almost 70% of households reported doing some work under the scheme but only one in ten reported working the full 100 days (the average was 40). Families with low levels of maternal education were much more likely to be using the scheme, as were Scheduled Tribe, Scheduled Caste and Backward Classes households.

More data are available from Young Lives than is reflected in this preliminary report, but we hope that it contains enough information to prompt other researchers, policymakers and stakeholders to engage with the data and to view Young Lives as a resource to help inform policy and practice to improve children's life chances.

# 1. Introduction

This report presents initial findings from Round 3 of the Young Lives survey of children and poverty carried out in Andhra Pradesh in late 2009, supplemented by information from more in-depth interviews with a sub-sample of the children in 2008 and 2010. The main objectives of the report are to describe the key preliminary results obtained from Round 3, analyse the changes in the profile of child poverty in Andhra Pradesh since Round 1, and identify the key policy messages. The report does not aim to give a comprehensive overview of all the findings from Young Lives. Rather it gives a broad outline of some of the key indicators of childhood poverty and changes that have taken place in lives of the children in the sample over the seven years between Round 1 of data collection in 2002 and Round 3 in 2009.

India is home to 1.2 billion people, of whom 40 per cent are children. India today is witnessing an economic boom and if current trends continue, it is on course to become one of the world's most powerful economies. Yet this vast country is characterised by stark disparities and a quarter of all child deaths globally occur in India. Given the scale of poverty in India, tackling child poverty has global significance.

The Young Lives study in India is being carried out in Andhra Pradesh. Andhra Pradesh was one of the first Indian states to initiate the reform process for fiscal and institutional restructuring at the state level, and was the model for several new poverty reduction initiatives taken during the 1990s. Thus it is particularly interesting to see what progress has been made in the level of poverty and on individual indicators of child poverty. For this purpose data on various child-related indicators can be compiled from different sources (such as the Census, Demographic and Health Survey, National Family Health Survey and state-level Human Development Reports, etc.) to serve as a point of comparison for the data from Young Lives.

We present data mainly for the entire age group cohort, in most cases separated into wealth groups and/or by rural/urban location. The full richness of the Young Lives data are not reflected in this preliminary report, but we hope that it contains enough information to prompt other researchers, policymakers, practitioners and other stakeholders to start to engage with the data.

## **1.1 Report structure**

The next section of the report gives an overview of the methodology used by Young Lives to collect this third wave of data. Section 3 introduces the socio-economic context of Andhra Pradesh and some of the issues and policies that are currently affecting children and childhood poverty in the state. Section 4 presents and analyses data from Round 3 – which shows both changes that have occurred for the children over the three rounds of data collection since 2002, and compares the situation of the Younger Cohort children in 2009 with that of the Older Cohort in 2002, when both were aged 8. Indicators of child well-being including household wealth and consumption, health, education, access to services, children's time use and subjective well-being are examined. Section 5 examines the impact of government programmes on Young Lives children, and section 6 concludes the report, highlighting key findings and looking at the implications for policy.

## About Young Lives

Young Lives is a long-term international research project investigating the changing nature of childhood poverty in four developing countries – Ethiopia, Peru, India (in the state of Andhra Pradesh) and Vietnam – over 15 years. This is the timeframe set by the UN to assess progress towards the Millennium Development Goals. Through interviews, group work and case studies with the children, their parents, teachers, community representatives and others, we are collecting a wealth of information not only about their material and social circumstances, but also their perspectives on their lives and aspirations for the future, set against the environmental and social realities of their communities.

We are following two cohorts of children in each country: 2,000 children who were born in 2001–02 and 1,000 children who were born in 1994–95. These groups provide insights into every phase of childhood. The younger children are being tracked from infancy to their mid-teens and the older children from childhood through into young adulthood, when some will become parents themselves. When this is matched with information gathered about their parents, we will be able to reveal much about the intergenerational transfer of poverty, how families on the margins move into and out of poverty, and the policies that can make a real difference to their lives.

The longitudinal nature of the survey and our multidimensional conceptualisation of poverty are key features of Young Lives. Much existing knowledge about childhood poverty is based on cross-sectional data that reflect a specific point in children's lives, or relate to only one dimension of children's welfare. Children's own views on poverty and well-being are seldom explored. Research is rarely tied in a systematic way to investigation of broader societal trends or policy changes.

The potential of the study lies in its focus on tracking children's progress throughout childhood – over 15 years. We collect quantitative data and qualitative data at the individual, household and community levels. Quantitative data is gathered through comprehensive surveys that include interviews with the children themselves as soon as they are old enough to participate directly, with their parents and caregivers, and with key community members (such as teachers, village elders or elected council representatives). Data are collected in each round on households' economic circumstances, livelihoods, assets and social capital. The questionnaires also collect evidence relating to coping strategies such as migration, parental education and other experiences, child outcomes and the extent to which children and their parents and caregivers use services (e.g. healthcare, pre-school care or education programmes). In this way we can create a detailed picture of children's experiences and well-being linked to information about their households and communities and set within the national context. This provides us with data suitable for in-depth analysis of children's poverty and the effectiveness of government policies on their lives and well-being.

Young Lives is a collaboration between key government and research institutions in each of the study countries and the University of Oxford and the Open University in the UK, alongside the international NGO, Save the Children UK. The research partners in India are the Centre for Economic and Social Sciences (CESS) in Hyderabad, responsible for carrying out the household and child surveys, data management and quantitative analysis, and a team from Sri Padmavathi Mahila Visvavidyalayam (SPMVV, the Women's University) in Tirupati which coordinates the qualitative research. Staff based at Save the Children India (BRB) carry out the policy research and policy engagement activities.

## 2. Young Lives methodology

Young Lives is designed as a panel study that is following the lives of 12,000 children in four countries over 15 years. The sample in each country consists of two cohorts: a Younger Cohort of 2,000 children 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 and aspirations, 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 – means that we are also able to examine how children change over time, whether growing up in rural or urban contexts, poor or not-so-poor areas, large or small households, or as migrants, as well as taking into account a variety of other factors.

We completed Round 3 of household data collection in early 2010 and this report presents initial findings from that survey. Round 3 will be followed by further rounds of the survey in 2013 and 2016, making Young Lives a unique cross-country longitudinal dataset exploring the causes and consequences of childhood poverty.

**Table 2.1. Survey dates and ages of Young Lives sample children**

	Year	Younger Cohort age	Older Cohort age
Round 1 survey	2002	6–18 months	7–8 years
Round 2 survey	2006–07	4–5 years	11–12 years
Qualitative Round 1	2007	5–6 years	12–13 years
Qualitative Round 2	2008	6–7 years	13–14 years
Round 3 survey	2009	7–8 years	14–15 years
Qualitative Round 3	2010	8–9 years	15–16 years
Round 4 survey	2013	11–12 years	18–19 years
Qualitative Round 4	2014	12–13 years	19–20 years
Round 5 survey	2016	14–15 years	21–22 years

The children were selected from 20 sentinel sites that were 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 early signs of 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.

### 2.1 The Young Lives sample in India

Young Lives was set up in India in 2001, when the research team selected the study sites using a semi-purposive sampling strategy. First the districts and the 20 sentinel sites from within the chosen districts were selected following a set of criteria. Then, in each sentinel site, 100 households with a child born in 2001–02 and 50 households with a child born in 1994–95 were selected randomly.

In India, a sentinel site was defined as a *mandal*. Andhra Pradesh state is divided into 23 administrative districts, which are each subdivided into a number of mandals, depending upon the size of the district. There are 1,125 mandals and around 27,000 villages in Andhra Pradesh. Generally, there are between 20 and 40 villages in a mandal, although in tribal mandals there can be as many as 200 villages. Villages are normally composed of a main village site with a small number (two to five) of associated hamlets. Tribal villages tend to have a large number of dispersed hamlets.

Andhra Pradesh has three distinct agro-climatic regions: Coastal Andhra, Rayalseema and Telangana. The sampling scheme adopted for Young Lives was designed to identify regional variations with the following priorities:

- a uniform distribution of sample districts across the three regions to ensure full representation of the regions
- the selection of one poor and one non-poor district from each region, with poverty classification based on development ranking
- when selecting poor districts and mandals, consideration was given to issues which might impact upon childhood poverty, including the presence or non-presence of the Andhra Pradesh District Poverty Initiative Programme (APDPIP).

Hyderabad district is urban and metropolitan and therefore different selection criteria were applied.

### *Selection of districts*

The first step was to select the districts where the sites would be located. The selection attempted to ensure that (1) there was a uniform distribution of sample districts across the three geographical regions and (2) that one poor and one non-poor district were selected from each region.

In order to classify districts from the three regions according to their poor/non-poor status, districts were ranked according to their relative level of development, based on three categories of indicators: economic, human development, and infrastructure. Economic indicators included percentage of gross irrigated land, per capita income, and percentage of urban population. Human development indicators included the proportion of the population who belong to Scheduled Castes and Scheduled Tribes, female literacy rate, infant mortality rate and percentage of children aged 5 to 14 who do not attend school. Infrastructure development indicators included total road length per 100km<sup>2</sup>, number of banks per 10,000 people, and number of hospital beds per 10,000 people. A relative development index was constructed using a ranking method. Rankings were aggregated using the following weightings: economic 30, human development 40 and infrastructure 30. Based on these rankings, a representative group of poor and non-poor districts was selected.

From Coastal Andhra, three poor districts were initially selected: Srikakulam, Prakasam and Vizayanagaram, with the APDPIP being implemented in two of the three districts. The APDPIP baseline survey (Dev et al. 2002) identified migration as an important issue in Srikakulam. Therefore, Srikakulam was the final choice because the longitudinal aspect of Young Lives will enable exploration of whether a key policy intervention such as APDPIP, and a significant demographic phenomenon such as migration, impact upon child well-being. West Godavari was selected as representative of the non-poor districts of Coastal Andhra.

Anantapur was selected as the poor district of Rayalaseema region. It has a pattern of low rainfall (553mm per annum) and is a desert-prone area. Anantapur is the only district in Rayalaseema region where APDPIP is being implemented. In addition, the UNDP South Asia Poverty Alleviation Programme (UNDP-SAPAP) was launched in Anantapur in 1995. These community mobilisation programmes have enjoyed considerable success, with a measurable reduction in poverty and an increase in women's empowerment, whilst strengthening social capital (Galab and Rao 2003). Two non-poor districts were initially selected in Rayalaseema: Chittor and Cuddapah. Chittor has a higher level of urbanisation and development than the other non-poor districts in the region and therefore finally Cuddapah was chosen as being more representative of the non-poor, non-APDPIP districts.

In Telangana region, three poor districts were initially selected, with APDPIP being implemented in two of them: Adilabad and Mahaboobnagar. Adilabad is a largely tribal district and not representative of the region as a whole, therefore Mahaboobnagar was chosen for the survey. It should be noted that tribal communities were captured from a number of other districts throughout the regions. Three non-poor districts were selected in Telangana. Rangareddy is located on the outskirts of Hyderabad. Since poor slum communities were to be surveyed within the city, it was deemed unsuitable to work in a district within such close proximity of the city sites. The other two non-poor selections were Karimnagar and Nizamabad. Following close consultation with NGO agencies working in the region, Karimnagar was selected as the non-poor region in Telangana.

The districts selected for sampling cover approximately 28 per cent of the state population and include around 318 of the 1,119 mandals (excluding Hyderabad).

### *Selection of sentinel sites/mandals*

The second step was the selection of sentinel sites. A sentinel site was defined as equivalent to an administrative mandal area. A mandal was considered to be urban if more than two-thirds of its population lived in urban areas. Since there are relatively few urban mandals, the district capital was invariably chosen for urban sentinel sites.

One sentinel site was chosen from the urban slums of the state capital, Hyderabad. The remaining 19 sentinel sites were selected from the six poor and non-poor identified districts. In order to select rural sentinel sites, mandals were classified according to their relative level of development. The development indicators differ from those used for district-level selection because of the scarcity of data at the mandal level, although mandal ranking was carried out in the same way as district ranking.

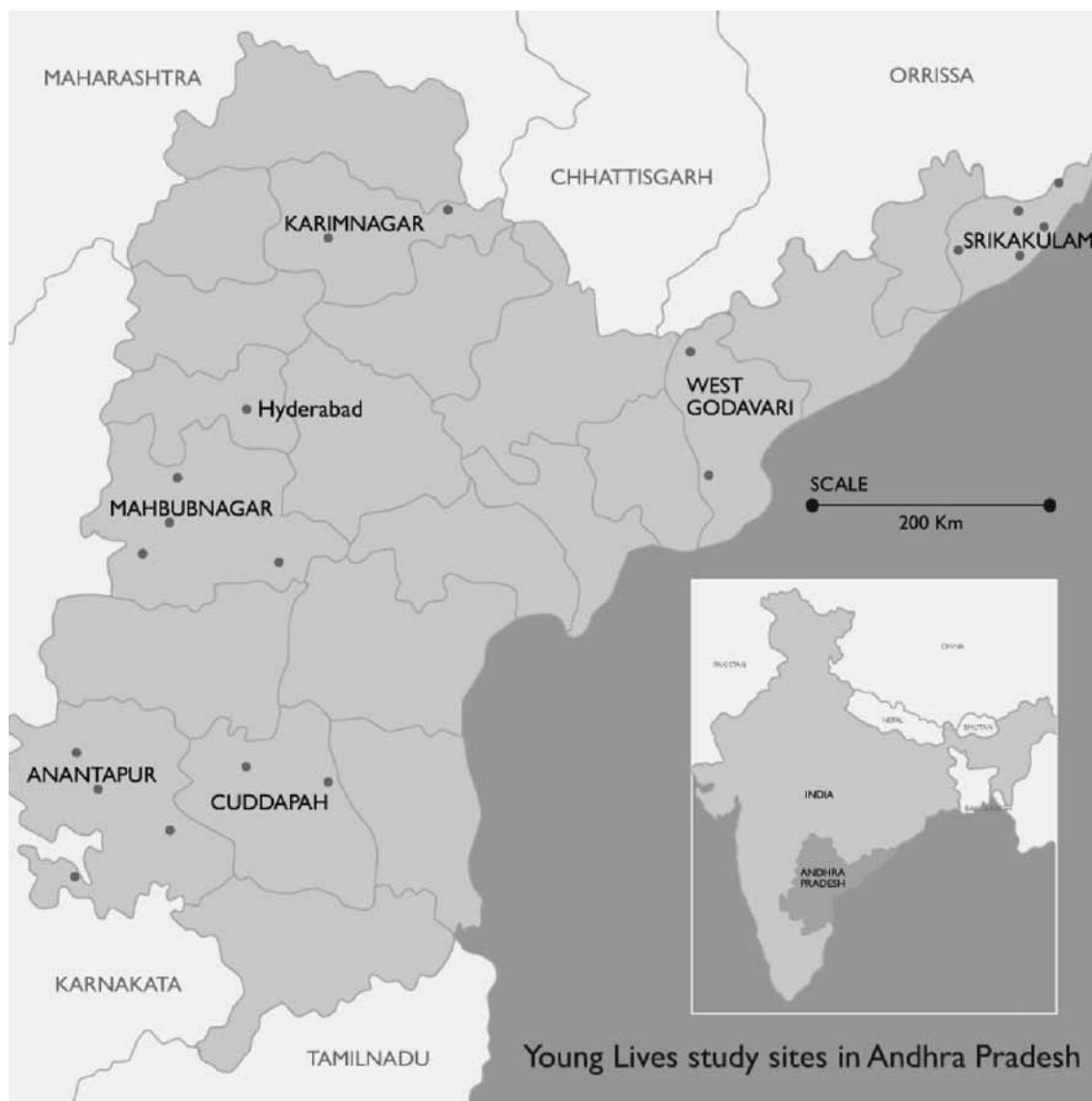
### *Selection of villages*

The next stage of sampling was the selection of villages within sentinel sites. Villages and their associated hamlets were defined as communities in rural areas. Mandals/sentinel sites cover between 20 and 40 villages, so it was important that the sample was distributed uniformly across the sentinel site. Each mandal/sentinel site was divided into four contiguous geographical areas and one village was randomly selected from each area. Care was taken to ensure that the four villages selected from each mandal had threshold populations sufficient to include 100 1-year-old and 50 8-year-old children. In order to estimate the threshold population sufficient to generate this sample size, the prevalence of 1-year-old children in the general population was estimated to be 2 per cent, requiring a base population of 5,000. Village sizes were estimated from population projections and mandal-level growth rates based

on 1991 India Census data. In a number of cases, additional villages had to be included, where sufficient children were not identified from the selected sample villages.

In urban areas, municipal wards were defined as communities and sample wards were identified also using the census codes. In Hyderabad city, three slum areas were selected in different areas of the city, and included neighbourhoods with an ethnic and religious composition representative of the cultural diversity characteristic of Hyderabad.

**Figure 2.1. Young Lives study sites in Andhra Pradesh**



### *Representativeness of Young Lives sample in Andhra Pradesh*

To assess the representativeness of the Young Lives sample, it was compared with the Demographic and Health Survey (DHS) 1998/9, a nationally representative survey (Kumra 2008). Examination of the common variables in the different surveys – household characteristics and assets, access to electricity and safe drinking water – indicates that the Young Lives sample includes households with better access to basic services and more ownership of assets and thus includes some biases. A comparison of wealth index scores reveals that the Young Lives households seem to be slightly wealthier than the average household in Andhra Pradesh. Nevertheless, households in the Young Lives sample are less

likely to own their house. These differences could be partly accounted for by the earlier data collection year of the nationally representative survey. Despite these biases, it is shown that the Young Lives sample covers the diversity of children in poor households in Andhra Pradesh. Therefore, while not suited for simple monitoring of child outcome indicators, the Young Lives sample is an appropriate and valuable instrument for analysing causal relations, and modelling child welfare and its longitudinal dynamics in Andhra Pradesh.

Here it is important to note that Young Lives data are not representative of the state as a whole, as indeed they cannot be because they only cover households with children born in 1994–95 and 2001–02. Among other things, these households are found at a particular stage of the life cycle, which affects labour market participation, livelihood security, etc. Thus one should be cautious in drawing inferences from our data as our sample cannot be used to speak of overall urban/rural trends or about Andhra Pradesh as a whole. Further, the different phases of the life cycle explain for example why the households in the Older Cohort are richer than the households in the Younger Cohort. However, as Kumra (2008) shows, the data are broadly representative of the population of households which have children of a similar age to our cohort children.

**Table 2.2. General characteristics of Young Lives sample in India (%)**

	Younger Cohort	Older Cohort	Total
Boys	53.6	49.0	52.1
Girls	46.4	51.0	47.9
Urban	26.1	25.4	25.9
Rural	73.9	74.6	74.1
Maternal education: no education	51.3	60.3	54.3
Maternal education: up to 5 years	17.9	18.1	18.0
Maternal education: 5 to 10 years	24.6	17.2	22.1
Maternal education: more than 10 years	6.2	4.3	5.6
Coastal Andhra	35.4	34.7	35.2
Rayalaseema	29.8	30.0	29.9
Telangana	34.8	35.2	35.0
Christian	0.9	1.3	1.0
Muslim	7.2	6.5	7.0
Buddhist	0.1	0.0	0.0
Hindu	91.9	92.2	92.0
Scheduled Castes	18.5	20.5	19.2
Scheduled Tribes	12.2	9.8	11.4
Backward Classes	49.2	50.5	49.6
Other Castes	20.1	19.2	19.8

## 2.2 Round 3 data collection

Data collection for Round 3 started in September 2009 and was completed in January 2010. Separate questionnaires with age-appropriate questions were used with the two cohorts of children, while the same questionnaire was used with caregivers for both cohorts and to collect community-level data:

- Child questionnaire for Younger Cohort children
- Child questionnaire for Older Cohort children
- Household questionnaire for caregivers
- Community questionnaire (context instrument).

**Table 2.3. Contents of Round 3 core questionnaires**

<b>Child questionnaire – Younger Cohort</b>
Section 1 School, school meals, and work activities
Section 2 Feelings, attitudes and perceptions
Section 3 Social networks, social skills and social support
Section 4 Risk aversion and time discounting tests
Section 5 Achievement tests (Peabody Picture Vocabulary Test; reading and writing; mathematics)
<b>Child questionnaire – Older Cohort</b>
Section 1 Time use and activities (including work)
Section 2 Feelings and attitudes
Section 3 Schooling and school environment
Section 4 Child health
Section 5 Social networks, social skills and social support
Section 6 Migration
Section 7 Household issues
Section 8 Children's children
Section 9 Risk aversion and time discounting tests
Section 10 Achievement tests
<b>Household questionnaire (both cohorts)</b>
Section 1 Parental background
Section 2 Household education and educational history of child
Section 3 Livelihoods and asset framework
3a Land and crop agriculture
3b Relative importance of income sources
3c Time use of adults and children
3d Productive assets
3e Income from agricultural and non-agricultural activities
3f Transfers, remittances and debts
3g Credit provision and livelihoods
3h National Rural Employment Guarantee Scheme (NREGS)
Section 4 Household food and non-food consumption and expenditure
4a Household food consumption and expenditure
4b Non-food expenditure
Section 5 Social capital
Section 6 Shocks and subjective well-being
Section 7 Socio-economic status
Section 8 Time use
Section 9 Health
9a Child health
9b Healthcare
9c Food security
Section 10 Anthropometry
Section 11 Caregiver perceptions and attitudes
Section 12 (for Younger Cohort only) Child development

Several new research topics were added to the Round 3 questionnaires to accommodate the fact that, as children get older, several new factors become important and relevant. For example, questions on schooling and children's time use were added for the Younger Cohort, and several country-specific topics were added to the household questionnaires to cover government policies, programmes and schemes specific to India.

### *Data collection, tracking and attrition*

Seven teams were deployed for collection of data – two teams per region and one for Hyderabad city. Each team comprised three men and three women enumerators with one supervisor. The survey commenced in August 2009 and continued into the first quarter of 2010. Two rounds of data entry were conducted and consistency checks run with help of Epi-*info*.

We have learned from previous research that seasonality and the timing of visits to the communities play an important role in keeping attrition low. Bearing this in mind, we conducted the survey during the *kharif* and *rabi* seasons (June to December) as the rural households can be expected to be available in their home communities for agricultural activity. Because they are busy with their work, we plan our interviews at their convenience. In contrast, the households in urban areas are busy throughout the year and do not have the same slack or peak seasons. We made repeated visits to fix interview appointments with them. As a result we were able restrict the attrition rate to 3.3 per cent between Round 1 and Round 3 for the Older Cohort and 2.3 per cent for the Younger Cohort.

We found some of the households had moved since we visited them for the Round 2 survey. Reasons for this were: (1) moving to less expensive housing in the same community or another community; (2) migrating out of the state for work; (3) moving to a more convenient location for work or for the children's schooling; and (4) movement due to displacement by development projects.

Ninety-six per cent of Round 1 households were interviewed in Round 3. Of the other households, 35 Young Lives children had died before Round 2 and a further 7 before Round 3. Twenty-eight were located but did not wish to continue with the study, and 40 could not be located. The attrition rate (excluding deaths) across the whole sample (both cohorts) from Round 1 to Round 3 was only 2.2 per cent. It was higher in the urban areas (3.9 per cent) than rural areas (0.5 per cent). At this point it is worth mentioning that the Young Lives field team goes to much trouble to track individuals even when they have moved out of their original communities; the low attrition rates are partially a reflection of these efforts.

**Table 2.4. Attrition status at the end of Round 3 survey**

	No. in sample (R1)	Traced (R3)	Child had died (R1 to R3)	Refused to participate	Untraceable	Attrition rate (R1 to R3) (%)	Attrition rate (excl. deaths) (%)
Younger Cohort	2,011	1,933	35	12	31	3.9	2.1
Older Cohort	1,008	977	6	16	9	3.1	2.5
All children	3,019	2,910	42	28	40	3.6	2.2

We find thus that attrition rates are not only small in absolute terms, but are also very low when compared with attrition rates for other longitudinal studies in less-developed countries.<sup>1</sup>

<sup>1</sup> See the Technical Note Outes-Leon and Dercon (2008). They look at attrition rates from all four countries, comparing Young Lives to other longitudinal studies from developing countries, evaluating means of several variables between lapsed households and those continuing with the study, and looking at the factors predicting the probability and potential biases of attrition.

## 2.3 Qualitative sub-sample research: methodology

Our qualitative research with a sub-sample of the children is a major feature of Young Lives, and draws on a range of qualitative and participatory methods to understand the diverse aspirations and experiences of children from different geographical, socio-economic and cultural locations.

The qualitative research component is premised on the notion that children are social actors in their own right, capable of providing essential information about the way in which poverty impacts upon their lives and well-being. Children's own understandings and perspectives serve as a major component of the qualitative data, along with the views of key adults in their lives. The aim has been to produce a series of longitudinal case studies that provide detailed and grounded descriptions of children's lives and the dynamic processes that underlie their life trajectories in ways that will complement the survey data analysis in order to inform policy and communications work. The research investigates the interaction of resources, capabilities, structures and children's agency, and focuses on the meanings children and caregivers give to their actions and experiences in the context of the opportunities and constraints that shape their lives.

Qualitative data collection was carried out with a sub-sample of Young Lives children, as well as members of their families and communities. Both the Younger and Older Cohorts have been included in this research. Following an intensive period of planning and pilot work during June 2007, the first round of qualitative data collection was undertaken during the last quarter of 2007, the second round during September to November 2008, and the third round during October to November 2010, providing a powerful source of longitudinal qualitative data. This report contains preliminary analysis of the data collected in Andhra Pradesh during 2008 and 2010, covering children, caregivers, teachers, health-workers and community representatives from the four Young Lives sites selected as a sub-sample from the original 20 included in the quantitative study.

The qualitative research is focused around two central themes: (1) *Resources, choices and transitions*, which includes time use, service access and service quality, and (2) *Risk, protective processes and well-being*, which includes resilience. It seeks to address the following key questions:

- What are the key transitions in children's lives, how are they experienced (particularly in relation to activities, relationships, identities and well-being) and what influences these experiences?
- How is children's well-being understood and evaluated by children, caregivers and other stakeholders? What shapes these different understandings, and what causes them to change? What do children, caregivers and other stakeholders identify as sources of and threats to well-being, and what protective processes can enable children to minimise these threats?
- How do policies, programmes and services shape children's transitions and well-being? What are the different stakeholder perspectives on these processes? What is the interplay between public, private and not-for-profit sectors and the sampled communities within these processes?

In addition, the third round of qualitative research in 2010 was guided by the core Young Lives themes which look at the dynamics of childhood poverty, children's experiences of poverty, and transitions in learning, work and life.

### *Sampling for the qualitative research*

The India qualitative research was conducted by a team based at Sri Padmavati Mahila Visvavidyalayam (SPMVV, the Women's University) in Tirupati. Fieldwork was carried out in four selected sites across Andhra Pradesh: Polur in Hyderabad; Poompuhar in Mahabubnagar district; Katur in Anantapur district; and Patna in Srikakulam.

Sites were selected to cover two rural, one urban and one tribal area. The spread across the three regions of Andhra Pradesh (Coastal Andhra, Telangana and Rayalaseema) was also taken into account, as well as the number of Young Lives children within each community and the extent to which they were characteristic of the community. Children were also selected to ensure a mix of gender, caste, parental absence, school attendance, pre-school attendance, and school type (e.g., government or private).

Based on these criteria, a total of 48 children were selected for the longitudinal case-study work: 12 from each research site (six from each age cohort equally split according to gender). Eight further children were selected as stand-by respondents. The 48 children were covered in the first two rounds, although in the third round one Older Cohort girl could not be located as her family had moved (and she also was not found for the Round 3 household survey).

### *Methods*

The methods employed during the qualitative research included:

- *Individual interviews* with children, caregivers and other key stakeholders, e.g., pre-school, primary and high school teachers, health workers, and the village head (*sarpanch*);
- *Group-based interviews and focus groups* with caregivers and other key stakeholders, such as teachers, staff of government hospitals and community representatives;
- *Participatory group exercises* with children from both the Younger Cohort (mixed) and Older Cohort (separately for boys and girls);
- *Semi-structured observations* in the home, school and community setting, which provided the context for analysing and understanding the data.

### *Management of qualitative data*

The interviews are recorded after obtaining respondents' consent. The audio files are transcribed and translated and the transcripts checked against the audio files for accuracy. The focus group discussions and group exercise reports are written up based on the audio files and notes taken by observers. All these documents (including the individual interviews) are then coded in Atlas-Ti using a coding framework developed for all four Young Lives countries. We use pseudonyms to protect the children's identity and that of their communities. Qualitative analysis in this report is based on data from the second and third rounds of the qualitative research.

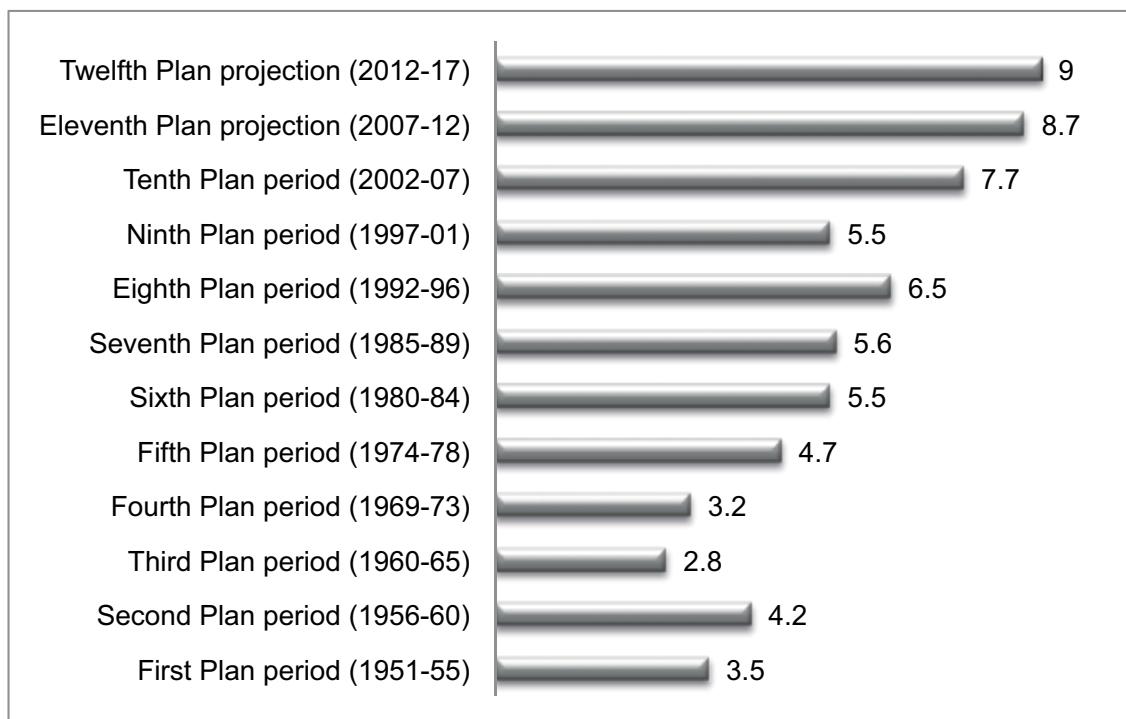
### 3. Socio-economic context: the State of Andhra Pradesh

Andhra Pradesh is the fifth largest state in India, with a total population of 84.66 million and an average annual growth rate of 1.06 per cent over the last 10 years, the sixth lowest in the country (Census 2011). Andhra Pradesh now has 8,644,686 children under the age of 6 (10.2 per cent of the population), of which 4,448,330 are boys and 4,196,356 girls. The overall child gender ratio has declined by 18 percentage points during the decade – there are now 943 girls per 1,000 boys, which has fallen from 961 girls in 2001. However, it is slightly higher than the ratio for India as a whole (927 girls per 1,000 boys in 2001 which declined to 914 in 2011) (Census 2011; Census 2001). Adult literacy, a major indicator of poverty, has improved, with a total literacy rate of 67.6 per cent in 2011 (75.6 per cent male literacy and 59.7 per cent female literacy) up from 60.5 per cent total literacy in 2001 (Census 2001; Census 2011).

#### ***3.1 ‘Inclusive growth’: the government’s vision***

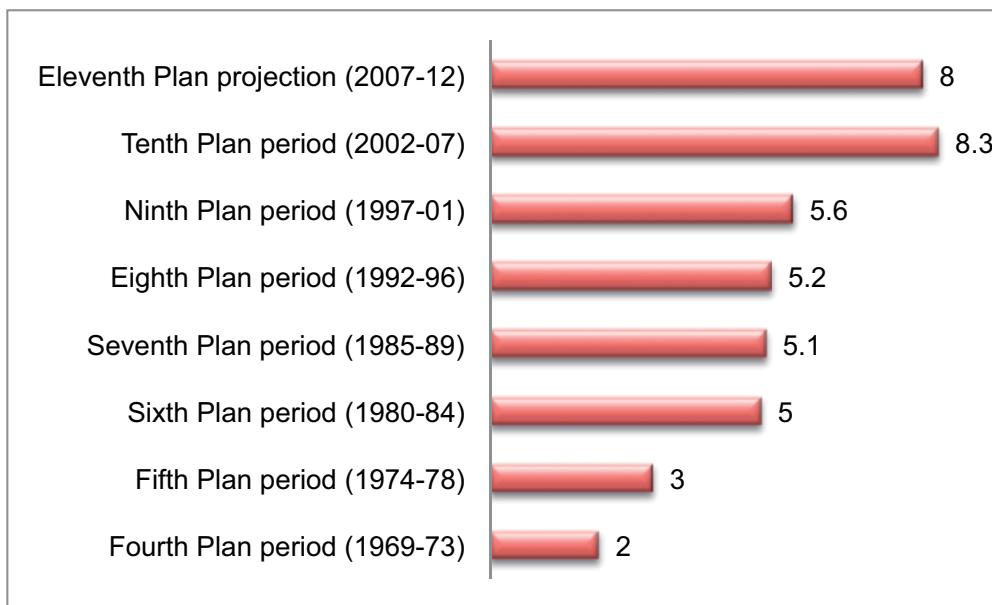
India entered the Eleventh Five-Year Plan period (2007–12) with a vision of ‘inclusive growth’. It can claim impressive economic growth and is now the world’s fourth largest economy in purchasing power parity terms (World Bank 2010). The Eleventh Five-Year Plan aimed at an average growth rate of 9 per cent per annum, beginning with 8.5 per cent growth in 2007. This accelerated to 10 per cent in 2010–11 and has so far averaged 8.7 per cent. Figure 3.1 shows growth from 1950, over the periods of twelve five-year plans (the final two being projections), with actual and projected growth increasing significantly from the Tenth Five-Year Plan period (2002–07). The Government responded to the global recession in 2009 by introducing fiscal stimulus and monetary measures which continued into 2009–10 when the economy was further hit by a severe drought. The growth rate in 2008–09 declined to 6.7 per cent but recovered to about 7.4 per cent in 2009–10, despite the fact that agriculture showed minimal growth at 0.2 per cent (Planning Commission 2010). The Government is currently expecting 9 per cent growth during the Twelfth Five-Year Plan period (2012–17).

Figure 3.1. Indian economic growth since 1950 (%)



### *Economic growth in Andhra Pradesh*

Andhra Pradesh demonstrated remarkable aggregate growth during the Tenth Five-Year Plan period (2002–07). The average growth rate of Gross State Domestic Product (GSDP) was higher, at 8.3 per cent, than the all-India GDP growth rate of 7.7 per cent over the five years. The agricultural sector grew at 4.7 per cent, while industry and the service sector grew at 11.5 per cent and 8.4 per cent respectively. The state economy (GSDP) on average grew at 7.9 per cent during the first two years of the Eleventh Five-Year Plan (2007/8 and 2008/9) – a little more than the all-India GDP growth rate of 7.8 per cent for the same period (Government of Andhra Pradesh 2010).

**Figure 3.2. Economic growth in Andhra Pradesh since 1969 (%)**

During the first two years of the Eleventh Five-Year Plan (2007–12), average economic growth in Andhra Pradesh has continued to exceed that at the national level, at a record 10.6 per cent (Government of Andhra Pradesh 2010). For the first time in its history, Andhra Pradesh has achieved a double-digit growth. This is because of the strong performance of all sectors (industrial, agricultural and service). Rapid growth has also been accompanied by sectoral changes: the contribution of the primary sector (agriculture, forestry, fishing, mining and quarrying) has declined continuously (from 32 per cent in 1999–2000 to 27 per cent in 2006–07), while that of the service sector has grown, mirroring the trend in the country as a whole. Real GSDP growth in 2008–09, however, fell to 5.5 per cent because of a large drop in agricultural growth from 14.8 per cent to 2.3 per cent. Following the global economic slowdown, growth in industry and the service sectors slowed dramatically in 2008–09. The industrial growth rate in particular was nearly zero in 2008–09 compared to 11 per cent in the previous year (CESS 2011).

However, even though the Indian economy has grown considerably, this growth is not evenly distributed across socio-economic groups, geographical regions, and areas (rural and urban). Furthermore, state revenue, which grew at more than 19 per cent per annum in the period 2004–08, fell to 10 per cent in 2008–09.

### *Poverty in India*

Despite high rates of economic growth that exceeded expectations, and the introduction of several poverty alleviation programmes, India has the largest number of poor people in the world. Although methods of estimating the poverty line are much debated, the Planning Commission has now accepted the recommendations made by the Tendulkar Committee (2009), which suggested that poverty be estimated on the basis on the cost of living index rather than calorie intake, and that the basket of goods should also include services such as health and education. Its report estimated all-India poverty rates in rural areas to be 41.8 per cent, and 25.7 per cent in urban areas. Thus 37.2 per cent of the Indian population overall was living below the poverty line in 2004–05. According to Planning Commission data from 2009–10, poverty has fallen from 37.2 per cent in 2004–05 to 32 per cent in 2009–10 (Sen 2011).

### *Poverty in Andhra Pradesh*

In terms of income poverty based on consumption expenditure, Andhra Pradesh is showing a remarkable reduction in the level of poverty, particularly rural poverty, which has gone down from 48.4 per cent in 1973–74 to 11 per cent in 2004–05 (Dev et al. 2007; Galab and Reddy 2010). Methodological concerns over how poverty rates are calculated continue to create confusion about the exact levels of poverty. Following the Lakdawala Committee's methodology (1993), poverty rates in Andhra Pradesh in 2004–05 were 11.2 per cent in rural areas and 28.0 per cent in urban areas, with an overall rate of 15.8 per cent for the state. The corresponding figures for the whole of India during the same period were 28.3 per cent (rural), 25.7 per cent (urban) and 27.5 per cent average. By contrast, the Tendulkar methodology suggests a slightly higher overall poverty rate of 29.9 per cent, with 32.3 per cent in rural areas and 23.4 per cent in urban areas (Planning Commission 2009), highlighting concerns over poverty in rural areas.

According to the 2007 Human Development Report for Andhra Pradesh, poverty is higher in urban areas than in rural areas. The rate of decline in urban poverty was slower (up to 1993–94) but the pace of decline subsequently increased, especially between 1993–94 and 2004–05. While rural poverty declined significantly from about 27 per cent in 1983 to 11 per cent in 2004–05, urban poverty declined from 37 per cent to 28 per cent during the same period, which was still high and higher than the all-India figure. This indicates that urban areas contribute about half of the total poor in Andhra Pradesh (CESS 2008).

Among the social groupings defined by the Government of India (Scheduled Castes, Scheduled Tribes, Backward Classes and Other Castes),<sup>2</sup> Scheduled Castes and Scheduled Tribes are the poorest, with a poverty ratio of 16 per cent in rural areas and 41 per cent in urban areas, while among Muslims the poverty ratio is 7 per cent in rural and 35 per cent in urban areas. The poverty level, for groups other than Backward Classes, was closer to the general average in rural areas (Government of India 2006). The available estimates of poverty at regional level within Andhra Pradesh show variations across regions and that there are rural–urban differences within each region. The recent slowdown in the rate of poverty reduction, especially in urban areas, can be attributed to rising inequalities (CESS 2011).

Inflation is one of the significant factors that adversely affect poorer groups. Inflation in rural areas was, on average, around 8 per cent per year from 1983 to 1994 and 8.3 per cent from 1993 to 2000. However, it fell rapidly between 2000 and 2005 to 2.2 per cent. The rapid decline in poverty between 1999 and 2005 could be due to low inflation and relatively low food prices (Government of Andhra Pradesh 2010). In rural Andhra Pradesh monthly per capita expenditure (MPCE) on food during 2009–10 was 84 per cent above the level recorded in 2003 while the total MPCE had risen 75 per cent. In 2005–06, the food MPCE in rural AP had risen 30 per cent, while the total MPCE had increased 24 per cent (Goswami 2010). High inflation as experienced with fast-rising food prices, is a serious concern and undermines the purchasing power of poor households, forcing families to buy cheaper, lower-quality food with poorer nutritional content (for example more calories and less protein). Such choices will have particularly negative impacts on pregnant women and on children (Dev 2010).

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2 The caste system is still extremely important in India in various spheres, not least politically. The 'other castes' category comprises mostly of 'forward castes' (sometimes also called 'upper castes') who traditionally enjoy a more privileged socio-economic status; on the other end of the spectrum, Scheduled Castes and Scheduled Tribes are traditionally disadvantaged communities.

Even though human development indicators have improved in Andhra Pradesh, there are significant divides, for example by region, rural or urban location of residence, social class/caste or gender. The Andhra Pradesh Human Development Report (2007) indicates that some areas are showing signs of improvement while in others the divides are sharp and persistent. Nonetheless, there are strong, social, economic and political reasons for raising human development and following an inclusive growth approach (CESS 2008).

### **3.2 Challenges and obstacles**

The foremost economic challenge facing India is inflation. Rising food and fuel prices could damage growth and push millions more people into extreme poverty. A recent report from the Asian Development Bank (2011) says that India will be badly affected by high food prices, and a 10 per cent increase could push almost 30 million Indians below the poverty line. Annual inflation in food items stood at 9.47 per cent in March 2011, driven by a 23 per cent increase in the price of fruit and a 13.6 per cent rise in the price of eggs, meat and fish. The price of cereals rose 3.9 per cent while that of pulses declined by 4.17 per cent.

Another serious problem facing India is the wide disparity and regional imbalances between and within the states and between and within districts. Similarly between and within social classes imbalances are widespread (Mid-Term Appraisal of Tenth and Eleventh Five-Year Plans, Planning Commission 2010). As we shall see, Young Lives data indicate that there are regional variations and variations between social groups related to consumption levels, accessibility of welfare programmes, and mobility out of poverty.

In India, more than 800 million people, or 75.6 per cent of the population, live on less than \$2 per day (World Bank 2010). This segment of the population lacks education, skills, social capital and access to the country's basic infrastructure and services such as primary healthcare, that would allow them to benefit from its economic growth. In spite of rapid recent growth India ranks 119 out of 169 countries on the HDI 2010, way below China (ranked 89) and Sri Lanka (91). Although India came in tenth position as far as improvement in the income index was concerned, in terms of education and healthcare it is lagging behind neighbouring countries like Bangladesh and Pakistan.

Although economic growth is at record levels, at the same time inequality is on the rise (Gosh 2010; Planning Commission 2008; Swaminathan 2010). This is evident from the 2011 UNDP Human Development Report which shows that there is a 30 per cent loss in HDI value when it is adjusted for inequality, including 41 per cent in education and 31 per cent in health. Inequality for women remains a major challenge and the Gender Inequality Index which captures gaps in reproductive health, empowerment and workforce participation, places India 122 out of 138 countries (UNDP 2011).

The other key challenges are deprivation in living conditions, including food deprivation; access to improved sanitation; school dropout; and child malnutrition. The aim of the fourth Millennium Development Goal is that the number of underweight children below the age of 3 should be reduced to 26.8 per cent by 2015, but present trends predict that 40 per cent of children will still be underweight by 2015. Out of the 26 million children born every year in India, 2 million die before the age of 5, and under-5 mortality was 69 deaths per 1,000 live births in 2008 (UNDP 2010). According to the National Family Health Survey 3 (2006), 48 per cent of children under 5 were stunted, 20 per cent wasted, 43 per cent underweight, and 43 per cent were moderately or severely anaemic. Although India launched the Universal Immunisation Programme in 1985, full immunisation had reached only 43.5 per cent by

2005–06 (Arnold et al. 2009). Antenatal and postnatal care is also inadequate, with nearly 350,000 women dying each year due to pregnancy- or childbirth-related complications (Million Death Study 2010), and only about 26 per cent of pregnant women in India using public health services for delivery (Arnold et al. 2009).

Furthermore, although there has been an improvement in the child gender ratio (for children aged 0 to 6) in some states (Gujarat, Haryana, Himachal Pradesh, Punjab, Tamil Nadu, Mizoram and Andaman, and Nicobar Islands), the 2011 Census shows that in all remaining 27 states, the ratio has declined since the 2001 Census. Despite a spate of laws to prevent female foeticide and schemes to encourage families to value girls, the gender ratio has declined from 927 girls per 1,000 boys born in 2001 to 914 in 2011, which is a matter of grave concern, and calls into question the effectiveness of the Pre-conception and Pre-natal Diagnostic Techniques Act.

More than 60 per cent of women are chronically poor, as are 43 per cent in Scheduled Tribes and 36 per cent in Scheduled Caste populations. More than 90 per cent of the overall workforce is employed in the informal economy where no focused social security measures exist, and 96 per cent of women are in this category. About 48.6 per cent of farmer households are in debt, and only 27 per cent have access to formal credit. Roughly 296 million people are illiterate and 233 million are undernourished (Swaminathan 2010).

Young Lives data mirror these trends, showing that there are high levels of absolute poverty among rural communities and that the impact of food price increases has been keenly felt. Rural children suffer from significantly poorer nutritional outcomes than their urban counterparts, with only poor-quality food grains available and an irregular supply of rations. There is also increasing school dropout and trends towards child work. How to address these issues remains as one of the key challenges for the Twelfth Five-Year Plan (2012–17).

### ***3.3 Policy responses***

To address some of these challenges the government has introduced several focused policies. Most were framed during the Ninth Five-Year Plan (1997–2002) and have been continued in subsequent plans. These anti-poverty programmes focus mainly on rural employment creation and infrastructure development, promotion of self-employment and national social assistance programmes, rural housing, programmes for drought-prone areas and food subsidies.

**Table 3.1. Main social support programmes introduced by the Government of India, 1997–2002**

<b>Year</b>	<b>Plan period</b>	<b>Policy programmes and schemes from state and central government</b>
1997–2002	Ninth Five-Year Plan	Swarnajayanti Gram Swarozgar Yojana (SGSY) (universal rural employment programme) Nehru Rozgar Yojana (NRY) (urban employment scheme) Urban Basic Services for the Poor (UBSP) Urban Self-Employment Programme (USEP) Prime Minister's Integrated Urban Poverty Eradication Programme (PM IUPEP) Jawahar Gram Samridhi Yojana (JGSY) (rural infrastructure programme) Pradhan Mantri Gramodaya Yojana: Gramin Awaas (PMGY: GA) (subsidy scheme for rural housing) Samagra Awaas Yojana (SAY) (rural housing and sanitation scheme) National Social Assistance Programmes (NSAP) Annapurna (Food security programme for elderly people) Targeted Public Distribution System (TPDS) Sarva Shiksha Abhiyan (SSA) ('Education for All' programme for universal elementary education) Velugu/Indira Kranthi Pathakam (IKP) (programme for women's self-help groups)
2002–2007	Tenth Five-Year Plan	Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) Swarnajayanti Shahari Rozgar Yojana (SJSRY) (urban employment scheme) Midday Meal Scheme (MDMS) (with revised cooked food option) National Rural Health Mission (NRHM) Jawaharlal Nehru National Urban Renewal Mission (JNNURM) (city modernisation scheme) Food for Work Programme (FWP)
2007–2011	Eleventh Five-Year Plan	Rajiv Arogyasri (health insurance scheme) Indiramma (rural housing scheme)

### *Self-employment, wage-employment, and livelihoods*

Given the current unemployment across the country, the Eleventh Five-Year Plan concentrated on rapid growth in employment opportunities along with improvement in the quality of employment. The employment-generation strategy contained in the Eleventh Five-Year Plan also envisaged a reduction in underemployment and a movement of surplus low-wage labour in the agriculture sector to higher-wage employment in the non-agricultural sector.

In this process the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was enacted in 2005, alongside the Swarnajayanti Gram Swarozgar Yojana (SGSY) and Sampoorna Gramin Rozgar Yojana (SGRY) (rural and urban employment schemes). The Act provides a guarantee of 100 days of wage employment in a financial year to a rural household whose adult members are willing to do manual, unskilled work. This programme is an important step towards the realisation of the right to work and the livelihood security of households in rural areas. By February 2011 roughly 116.2 million households had registered themselves under this scheme and 42.5 million households were provided with employment at the national level. Out of the total beneficiaries of this scheme in 2010–11, 47 per cent are women, 24 per cent from the Scheduled Castes and 28 per cent from the Scheduled Tribes

(IM4Change 2011). During 2010–11 Andhra Pradesh provided 274.8 million person days of employment.

From January 2011 the Government of India increased the wage rates (which vary at state level from Rs. 119 to Rs. 181 per day). The key achievements of this scheme are: (1) a reduction in the out-migration of labour; and (2) a rise in expenditure on food and non-food items. The mid-term evaluation report says that majority of the female-headed households benefited from the scheme (Ministry of Rural Development 2011).

Since its inception MGNREGS has covered 12 million households through issuing job cards in 22 districts of Andhra Pradesh. Implementation has been improving over time, as is evident from the utilisation of funds and the amount of employment provided. The utilisation of funds increased from 60 per cent in 2006–07 to 98 per cent in 2009–10. The number of days of employment provided per registered household went up from 37 to 46, and the percentage of households provided with 100 days of employment increased from 3 per cent to 12 per cent during this period (CESS 2011).

In addition to these programmes from central Government, the Government of Andhra Pradesh is implementing a state-wide rural poverty eradication programme based on the social mobilisation and empowerment of rural poor women. This programme is popularly known as Velugu/Indira Kranthi Pathakam (IKP) and aims at enhancing the assets and capabilities of poor women and their ability to deal with shocks and adverse events. The programme, which operates through the self-help group (SHG) movement, has contributed to an improvement in the women's empowerment at the household and community levels by reaching out to about 3 million of the poorest households. There are currently almost 477,000 SHGs functioning in Andhra Pradesh. Another important scheme operated by the IKP is food security for the poorer members of SHGs. This initiative supports SHGs to purchase commodities in bulk to sell to their members at a lower price than the market. Until 2009 more than 206,000 SHGs had benefited from this intervention.

### *Food security and nutrition*

The National Food Security Mission was established in 2007 with the objective of increasing the production of rice, wheat and pulses. The Targeted Public Distribution System (TPDS) is another important food security programme which sells wheat, rice, sugar, kerosene and dal at subsidised rates mainly to people living below the poverty line (BPL). With a network of more than 462,000 'fair-price shops' distributing commodities worth more than 300 billion annually to about 160 million families, the TPDS in India is perhaps the largest distribution network of its kind in the world. Through the TPDS every poor family is entitled to 10kg of food grains per month at the subsidised price of Rs. 4 per kilo. This was expected to benefit about 60 million poor families. In Andhra Pradesh the TPDS covers 22,580,494 families, 79.4 per cent of whom are living below the poverty line.

The Integrated Child Development Services (ICDS) is the only major national programme that addresses the health and nutrition needs of children under the age of 6 years. It seeks to provide young children with an integrated package of services, including supplementary nutrition, healthcare and pre-school education. Since the needs of a young child cannot be addressed in isolation from those of his or her mother, the programme also extends to adolescent girls, pregnant women and nursing mothers. ICDS services are provided through a vast network of ICDS centres, better known as Anganwadi centres. Although the coverage of children under 6 in the Supplementary Nutrition Programme of the ICDS increased from

58 million in 2006–07 to 68 million in 2007–08, this is still less than 60 per cent of the under-6 population in India, as identified by the Anganwadis. Data from the National Family Health Survey, phase 3 (NFHS-3) show that 81 per cent of children under the age of 6 were living in an area served by an Anganwadi. According to the Women and Child Welfare Department (2010), 73,944 Anganwadis (61,880 in rural areas, 7,021 in urban areas, and 5,043 in tribal areas) are operating in Andhra Pradesh covering 6,070,620 children and 11,702,400 women. Kishori Shakti Yojana is another programme targeting adolescent girls (aged 11 to 18) in order to improve their health and nutrition. This programme also functions through the Anganwadi centres and in March 2010 was operating in 6,118 blocks across the country (Sen 2010).

According to the NFHS-3 (Arnold et al. 2009) almost half of all children under 5 years of age (48 per cent) are stunted, 19.8 per cent wasted and 43 per cent are underweight – and this is spread almost equally among girls and boys. Under-nutrition is substantially higher in rural than urban areas. In the latter, 40 per cent of children are stunted, 16.9 per cent wasted and 32.7 per cent underweight, while in rural areas 50.7 per cent are stunted, 20.7 per cent wasted and 45.6 per cent underweight. Children belonging to Scheduled Castes, Scheduled Tribes and Backward Castes have relatively high levels of under-nutrition according to all three measures. Children from Scheduled Tribes have the poorest nutritional status on almost every measure, and the high prevalence of wasting among ST children (27.6 per cent) is a concern. In Andhra Pradesh stunting is observed in 38.4 per cent of all children, with 14.9 per cent of children suffering from wasting and 29.8 per cent underweight. These levels are lower than those for the whole of India, and between NFHS-2 and NFHS-3 a decreasing trend is observed for all three measures.

Andhra Pradesh is implementing the Girl Child Protection Scheme aimed at preventing gender discrimination by empowering girl children and protecting their rights through direct investment from the government. In 2010 nearly 21,370 beneficiaries were registered under this scheme.

The National Programme of Nutritional Support to Primary Education, popularly known as the Midday Meal Scheme (MDMS) has emerged as the world's largest school feeding programme. Through this scheme children in first to eighth grade are provided a midday meal which consists of 400 calories and 12 grams of protein. By the end of 2010, this programme was reaching about 120 million children in over 1.26 million schools throughout India. The key objectives of this important scheme are: improving the nutritional status of children; encouraging poor children from disadvantaged groups to attend school more regularly and helping them concentrate on classroom activities; and providing nutritional support to primary-age children in drought-affected areas during the summer holidays.

In Andhra Pradesh, according to the annual action plan 2009–10, the MDMS is reaching 4.88 million children from 58,274 primary schools and 2.38 million children from 10,016 upper primary schools (CESS 2011).

## *Education*

The universalisation of elementary education programme Sarva Shiksha Abhiyan (SSA, 'Education For All') is one of the most important programmes being implemented across India. Its key objectives are: to ensure all children are in school and complete eight years of education; to monitor and improve the quality of elementary education with an emphasis on education for life; to bridge gender and social category gaps; and to achieve universal retention by 2010.

The Right to Education (RTE) Act 2010 provides free and compulsory education to all children in the 6 to 14 age group. The key challenge in implementing RTE is the allocation of funds, and there is an immediate requirement for 500,000 trained teachers. However, the RTE Act only covers the ages of 6 to 14, so apart from some provision within the ICDS, early childhood education remains out of reach for many.

The private sector for education is growing rapidly across India, and in Andhra Pradesh, and is an important element of the context in which the RTE will operate, given the Act suggests that 25 per cent of private school places should be reserved for poorer or marginalised children. In addition to the model rules set by central government, the Andhra Pradesh state government has made several amendments to make the RTE more effective in the state (Government of Andhra Pradesh Order No.14, dated 22/02/2011). Statistics from the District Information System for Education (DISE) show that enrolment at elementary level in Andhra Pradesh increased from 168 million in 2005/6 to 185.7 million in 2009/10. In 2005/6, 125.7 million children were attending government schools, increasing to 129 million in 2009/10. In addition, another 17 million children were attending government-aided schools. Thus 78 per cent of all children in elementary school were benefiting from SSA interventions, with another 40 million attending private schools; or for every seven children enrolled in government or aided schools, two children were enrolled in private unaided schools. Enrolment data for the whole of India indicate that there was consistent improvement in the Gender Parity Index (GPI) and the percentage of girls enrolled in primary and upper primary grades between 2004/5 and 2007/8. The GPI reached 0.93 in primary grades and 0.89 in upper primary grades in 2007/8. At primary level no significant difference is noticed in the GPI in rural areas (0.94) and urban areas (0.91). At primary level, the share of SC and ST enrolment against total enrolment in 2007/8 works out to 20.08 per cent and 11.60 per cent respectively, which is higher than their percentage share in the total population. The prevalence of single-teacher schools is much lower in urban areas (covering 2.5 per cent of children) compared to 7.6 per cent in rural areas.

The Government of India has assigned priority to improving the infrastructure and standards of the state education system. The latest DISE data (2009/10) show that there are 1,048,046 government schools in India (80.3 per cent), with private schools now accounting for about 19.5 per cent of all schools. About 98 per cent of habitations are now covered by primary schools and while progress has been made in improving school infrastructure, states still have to make provision for extra classrooms to meet the new RTE model rules.

Overall, Andhra Pradesh has made impressive progress towards ensuring that all children are enrolled in school. School coverage has improved with 71,885 of the 74,946 hamlets in Andhra Pradesh having regular schools located in them; and 2,561 Education Guarantee Centres have been opened in most of the remaining 3,061 hamlets.

Enrolment trends in Andhra Pradesh show that overall enrolment is increasing. Enrolment of children from Scheduled Tribes increased from 9.6 to 9.8 per cent between 2007/8 and 2009/10 (DISE 2010), although enrolment of children from Scheduled Castes has slightly decreased, from 18.90 to 18.48 per cent.

On average 5 per cent of children from Grade 1 to 5 repeat a grade in Andhra Pradesh (2004/5 figures), compared with 7.8 per cent of children in India as a whole. Drop-out rates for the same period were high in Andhra Pradesh (22.4 per cent) compared to 10.6 per cent for the whole of India.

## *Health and health insurance*

Rashtriya Swasthya Bima Yojana (RSBY), a health insurance scheme for workers in the informal sector was launched in 2008. The scheme provides smart-card-based health insurance cover of up to Rs.30,000 annually to people living below the poverty line, as well as covering hospital stays. By February 2011, RSBY had issued smart cards to almost 23 million BPL families in India, although it does not yet cover Andhra Pradesh. Similarly Janani Suraksha Yojana (JSY), a conditional cash transfer scheme under the overall umbrella of the National Rural Health Mission (NRHM), combines cash assistance with antenatal and postnatal care by establishing a system of coordinated care by field-level health workers.

Another important programme is Rajiv Arogyasri initiated by the Arogyasri Health Care Trust, an agency of the government of Andhra Pradesh. This is a community health insurance scheme by which the government of Andhra Pradesh pays the health insurance premium for BPL families. Arogyasri is implemented as a cashless scheme for eligible Arogyasri card holders if they need hospital treatment.

### **3.4 Summary**

Resources generated from economic growth are now being invested in a set of very ambitious programmes to deliver services to poor people. These programmes aim to provide elementary education, basic healthcare and health insurance, rural roads, improved infrastructure and other services. However, the challenges still remain and even though record levels of economic growth have been achieved in recent decades, reduction in poverty is very slow.

One significant setback is social exclusion, with certain sections of population still not benefiting adequately from some schemes. Inputs under different programmes are not equally distributed between social groups, resulting in less socio-economic improvement among SC and ST populations, girls and geographically disadvantaged communities. According to the 2010 Mid-Term Appraisal by the Planning Commission, programmes like MGNREGS, SGSY, the rural housing programme IAY, and the total sanitation campaign need to improve both the quality and extent of their service delivery.

Poverty affecting children remains a key challenge for policymakers. Despite strong economic growth, children's nutrition remains a problem area. Stunting and thinness remain high among younger children in the Young Lives sample. Early intervention through measures such as ICDS and NRHM is therefore important, in both supporting child well-being and to enable children to achieve to their potential later in life. Much progress has been made in primary school enrolment rates, but ensuring children stay in school and are able to learn effectively remains an imperative. Education being the most effective instrument for socio-economic empowerment, efforts continue to be devoted to improving the educational status of SC, ST and disabled children, especially girls. Considerable concern remains over both disparities between social groups and school quality.

Some children (particularly girls) are leaving school after primary level. This is echoed in the data from the Young Lives Round 3 survey, which shows that enrolment levels of children between the ages of 12 and 15 fell by 10 percentage points for boys and 15 percentage points for girls, leaving only four in five boys and three in four girls in school by the age of 15.

Efforts need to be made in the Twelfth Plan to ensure better-quality and more accessible services for the poorest households. The mid-term appraisal of the Eleventh Plan (Planning Commission 2010) demonstrates that despite perceptible improvement in the socio-economic

status of disadvantaged groups, more needs to be done to ensure that these groups are in a position to benefit fully from India's growth. To do this means also improving access to quality education and helping children to remain in school at secondary level.

Young Lives data indicate that ensuring the quality as well as the reach of some of government programmes and schemes, for instance checking the quality of food grains and arranging timely distribution under TPDS, are important steps that could be taken. Similarly the government could reduce bureaucracy in the Girl Child Protection Scheme and enhance financial allocations to increase its scope and coverage In MGNREGS, Self Help Groups could be involved in identifying the work and overseeing programme implementation and more funds could be allocated to drought-prone and flood-affected areas. Poorer children are also at greatest risk from many forms of economic or environmental shocks. Adverse shocks can have a direct negative impact on children and households through debt traps or inadequate nutrition. There are many social protection programmes with the objective of reducing the effect of shocks on households e.g. MGNREGS or the potential to do so. However, it is noticeable that, although economic or health shocks can hit children in both urban and rural areas, much policy is restricted to rural areas, which is of concern given the risks of rising inequality in urban areas. The Planning Commission along with key stakeholders (in different departments) would need to consider how the effectiveness and coverage of these programmes can be improved (for instance in urban areas) in order to create an environment that would enable children to reach their full potential.

# 4. Round 3 survey results and discussion

This section analyses the household poverty dynamics of households in the Young Lives India sample as a prelude to understanding child well-being. To deepen this analysis we include both quantitative and qualitative evidence, drawing on group discussions of children's understandings of poverty which were conducted in 2008 with Older Cohort boys and girls (then aged 13–14), supplemented by some data from further qualitative research in 2010 (Crivello et al. 2011).

## **4.1. Dynamics of household consumption and poverty**

Section 3 discussed the context of economic growth and poverty reduction in India, showing that the Andhra Pradesh economy grew at an annual average of 7.9 per cent in 2007/8 and 2008. This section examines what can be observed around poverty rates and consumption growth experienced by Young Lives households, and its distribution among different groups. We consider in particular whether different groups experienced different consumption growth and economic mobility. The exposure of households to shocks and adverse events also adds an understanding of what may affect the dynamics of poverty. The well-being of children needs to be analysed against the backdrop of household poverty dynamics. The social protection programmes targeted at households and children also contribute to household-level poverty dynamics.

### *Measuring poverty, consumption and wealth*

In order to examine the connection between growth and poverty, we have used both absolute and relative poverty lines to estimate the proportion of households living in poverty, applying these lines to consumption data collected from Young Lives households in 2006 and 2009. Given the purposive sampling methods used by Young Lives to develop its panel data, is not surprising that poverty rates within the sample are not the same as state estimates. Key reasons for this include that Young Lives is a pro-poor, rather than representative, sample; that it includes only households with children of a specific age, not all households; and that there may be differences in the types of consumption data collected, which affect results.

Young Lives takes three measures to define household poverty: absolute poverty, relative poverty, and a wealth index. Absolute poverty is defined as households with monthly per capita consumption below Rs.563.16 for urban areas and Rs.433.43 for rural areas (in 2006 prices), based on the figures used by the National Sample Survey Organisation. Relative poverty provides an indication of the level of inequality in consumption expenditure, and is defined as households with below 50 per cent of the median consumption expenditure (adjusted for price differences between communities). Thirdly, a wealth index was constructed as a measure of household prosperity. By its nature, the wealth index is the result of a relatively long process of accumulation and is relatively static across time. The wealth index reflects the welfare of the household members in terms of the quality of their housing (the number of rooms and the materials the wall, roof and floor of the house are made from), and their use of durable

goods (such as radio, fridge, bicycle, TV, motorbike or scooter, motor car or truck, electric fan, mobile phone, landline phone, modern bed, table or chair and sofa).<sup>3</sup>

The consumption and wealth data help to examine the dynamics of poverty in terms of changes in household expenditure, mobility across expenditure quintiles, and mobility in household poverty status. The changes in vulnerability status of the households have also been assessed to analyse further existing poverty dynamics. All the parameters that characterise poverty dynamics at the household level are analysed for rural and urban communities, social groupings (SCs, STs, BCs and OCs), Younger Cohort and Older Cohort children. The same analysis is extended to poor and non-poor groups and gender groups wherever relevant.

### *Growth and distribution of consumption expenditure*

Real per capita consumption (at 2006 prices) has risen from Rs.812 in 2006 (Round 2) to Rs.942 in 2009 (Round 3) for all the households, an increase of 16 per cent over three years. Urban consumption is higher than rural consumption in both the rounds: consumption for urban households has risen from Rs.964 in Round 2 to Rs.1,123 in Round 3 (an increase of 16.5 per cent), while it has risen from Rs.759 to Rs.881 for rural households (an increase of 16 per cent).

**Table 4.1. Wealth index and monthly real per capita consumption expenditure (Rs.) (both cohorts)**

	Wealth Index*			Expenditure (Rs.)	
	Round 1	Round 2	Round 3	Round 2	Round 3
Urban	0.65	0.66	0.68	964.0	1,123.5
Rural	0.33	0.39	0.46	759.2	881.1
Scheduled Castes	0.35	0.39	0.45	757.6	842.9
Scheduled Tribes	0.27	0.32	0.38	587.9	652.8
Backward Classes	0.41	0.47	0.53	794.0	960.5
Other Castes	0.54	0.59	0.64	1,015.7	1,153.9
Younger Cohort	0.41	0.46	0.51	766.5	872.3
Older Cohort	0.41	0.47	0.52	899.6	1,076.7
Total	0.41	0.46	0.52	812.3	942.3

All figures are averages

\*See Appendix 1 for methodology of calculation of wealth index, which is constructed as a figure between 0 and 1.

Within the Young Lives sample households, the distribution of growth in consumption expenditure across social groups reveals that the 'Other Castes' (which include Upper Castes) had the highest consumption, while the Scheduled Tribes had the lowest consumption in all three rounds. The order of consumption levels among the social groups remained the same in Round 3 as it was in Round 2. Within our sample, the consumption of the Backward Classes group was the second highest at around 21 per cent whereas other caste groups have all seen rather slower growth of about 11 to 13 per cent between 2006 and 2009. Consumption was higher for the households of Older Cohort in both the rounds, probably because these households (with older children) are at a later stage of the life-course and may have more

3 See Appendix 1 for a description of the method of calculation of the index, which takes a value between zero and one, with a higher value reflecting higher household wealth.

labour available within the household, improving their relative position. The consumption of Older Cohort households has also increased more rapidly than that of the Younger Cohort (Table 4.1).

Qualitative case studies help us to deepen our understanding of how children and young people experienced these broad survey trends. As part of the qualitative research, a sub-sample of the Older Cohort children and their caregivers were asked to reflect on the changes that had taken place in their household circumstances since our first visit in 2007 to 2008 (our second visit) and the third round of qualitative research in 2010. In line with the Round 3 household survey data most young people and caregivers reported that their situation had improved, described in terms of increased income due to availability of work opportunities, better food, more clothes, and having money for school books and other equipment. Households also reported having purchased some consumer durables (e.g. TV, DVD, mobile phone, utensils, etc.).

The two case studies presented here reflect a number of ways that consumption is growing, but also show that despite this apparently positive sign, young people and their families are still forced to make difficult choices. In both cases, the young people gave up their education over this period. Access to government programmes and services, and availability of paid labour within the household both appear important.

#### **Box 4.1. How young people contribute to household income**

When we interviewed Ravi, a Scheduled Caste child aged 12 in 2008 he had been working as a farmhand, mostly weeding in the fields of the local high-caste families. At home he also did various chores: he swept, fetched water and firewood, and 'took care' of his parents. He explained: "I took good care of my parents and protected my mother ... If there were any debts I tried to clear them."

Ravi's father had taken a loan from a *Kamma* (agricultural class) family, which he had been working off through bonded labour, but his worsening arthritis made it difficult for him to work. Ravi recalled the day his father's 'master' came to their home and shouted at his father for not repaying the loan. Ravi worried that: "Everyone will laugh at me", and decided to take over from his father to clear the family debt. He did not like to work in the fields, but he felt he had little choice. When the *Kamma* family came to his house they said: "Either pay or we will have him [Ravi] as a farmhand under us. He will serve us." Ravi had to start work and left school.

Earning money is important to Ravi and the way he sees his role within his family. It enables him to buy new clothes for festivals and also support the education of his elder brother and nephew. He explained: "When someone makes some money ... they are really proud to show it off." He earns approximately Rs2,500 a month.

Ravi's older brother, however, continued school until he completed Grade 10 and at the time of our third visit in 2010 had recently started working in Bangalore where he is paid Rs5,000 per month.

Ravi said: "We have cleared the debt to the *Kamma* family, now. I can even work outside Katur." And his mother added: "Ravi even went to Tirupati to work as a stonemason because the wages are better there. Now we work in NREGS and the self-help group has also given us loans."

There are now four working members in the household (and no other dependants) and Ravi's mother says: "Now, the children are grown up. Before, when they were very small children, we had to provide for and feed them. Now two more pairs of hands have joined mine."

Sarada, on the other hand, was unable to access social protection schemes because of the family's commitment to work on a cotton farm to pay off the loan they had taken to build a new house after heavy rains had destroyed their home. Sarada's mother stopped attending her women's self-help group as she was not happy with the way in which it was functioning. However, Sarada has been able to access help from the local disability organisation of which she is a member, in order to return to school, although her siblings had to leave school.

#### **Box 4.2. Living with debt**

Sarada, aged 15, lives with her father, his two wives, her younger sister and two brothers. One of her older sisters is studying in Mumbai, and the other is married and also lives in Mumbai.

Her father, who belongs to the Backward Classes, was determined to educate all his children and the three adults have worked hard to bring them up. Now the children are older, expenses in the household have increased, especially since their house in the village collapsed following heavy rains and they needed to build a new house because they cannot afford to rent a house over a long period. Sarada's father had managed to save just Rs 20,000 from a period he had spent working in Mumbai, but this meant that he had to take a loan, and the best option available was to send Sarada to work in the cotton fields, even though she has a disability. In return, the landowner advanced money to build their house. Sarada's father had lost all hope of being able to get an allocation for a house under the Indiramma scheme.

Interviewer: Since the last time we came to see you, have there been any days when you went to work?

Sarada: I worked once for eight days picking [cotton] buds. I went because my father took a loan from there, otherwise I wouldn't have gone.

Soon Sarada fell ill: "I used to feel cold. My head used to spin. I used to find it very difficult. Sometimes I used to feel I had to work, no? Other times, when everyone used to be at the bus stop to go to school and I was going to the cotton fields, I felt very bad that I was the only one doing this when everyone else was going to school. They would all say: 'See, Sarada is going, Sarada is going [to work]'. When so many of the others who were going to school were saying this, I just couldn't go to work. I didn't feel like going to work at all. I started hating the work and wanted to be with my friends, and spend time with my teachers ..."

With the support of the self-help group for the disabled (of which she is a member), her schoolteachers and her friend, Sarada lodged a complaint with the labour inspector against her parents and the landowner. As a result she was withdrawn from work. Unfortunately, her younger sister and older brother have had to leave school and work on the cotton farm to clear the debt. Thus the family continues to struggle with the burden of the debt.

In addition to the factors described above, for the tribal households another factor seems to be influencing the increase in household consumption. It was reported by the tribal women in Patna that in their community the increase in income can be attributed mainly to the National Rural Employment Guarantee Scheme (NREGS) (forerunner of the MGNREGS). It was also mentioned that a large proportion of the increased income went towards better food, clothing and a few consumer durables.

Analysis of the data from interviews and focus group discussions with caregivers and village elders suggests that several factors have improved consumption levels, including participation in the new MGNREGS, which has been reported as the key factor responsible for the relatively better status of the households, with other factors being relatively better crop yields and

increased numbers of household members working, now that some of the Older Cohort children have joined the workforce.

#### Box 4.3. Parental attitudes to money

In our discussions with women in Patna, the participants talked of the practices that guided the expenditure patterns in their households.

"If we [Tribals] have one rupee, we will spend whole rupee in one go. In their case [Other Castes] they save the one rupee and never splurge it. But it's common in our community. If our children have taken 100 rupees to Patna, they won't bring even one rupee back. But their children spend two or three rupees out of 100 and will bring the balance home or buy a schoolbook. In such a case how can both of them develop equally?" (woman from Tribal group)

Another woman responded immediately: "You have faith that if you spend this money you can earn again, so you can spend as you wish. But we are not like that, we can't do such hard physical work. We have to save the money and use those savings to run our business. So we are afraid to spend money lavishly." (Other Caste woman)

It was reported during the focus group discussions that any increase in income in the tribal households would first result in improvement in food consumption, "...both in quantity and quality. There is more variety in food now, since children demand for these and refuse to eat if not prepared. The frequency in the consumption of meat has increased to two or three times a week." Alcohol consumption, clothes and celebrations (festivals and special events) are the other areas of expenditure reported by the caregivers.

## 4.2 Absolute and relative poverty and poverty mobility

Our estimates suggest that the percentage of Young Lives households living below the poverty line declined from 24 per cent in Round 2 to 16 per cent in Round 3.

Absolute poverty was higher among households in rural communities than in urban communities in both survey rounds, although it is worth noting the poverty line is different between rural and urban areas to account for the costs of living. The decline in poverty between Round 2 and Round 3 was a little faster in rural communities than in the urban communities (see Table 4.2). This pattern possibly reflects the fact that rural households are poorer and so, even though the growth rate of consumption is similar to urban areas, more people have been raised above the poverty line. Changes in the wealth index, which in part reflects the ownership of basic consumer durables and access to basic services, have also registered a greater improvement for households in rural areas than those in urban areas (see Table 4.1). This may be due to economic growth, and/or the implementation of rural poverty reduction programmes on a massive scale, programmes like MGNREGS and TPDS, and improved access to credit in the rural areas.

**Table 4.2. Young Lives children living in households below the poverty line (%)**

	<b>Absolute poverty</b>		<b>Relative poverty</b>	
	R2	R3	R2	R3
Urban	20.5	14.0	8.5	9.4
Rural	25.1	17.0	7.5	8.5
Scheduled Castes	22.8	17.5	6.2	4.8
Scheduled Tribes	48.4	37.7	12.8	14.5
Backward Classes	23.2	14.1	5.9	7.3
Other Castes	14.3	8.6	8.7	7.7
Younger Cohort	26.0	17.7	7.4	8.1
Older Cohort	19.9	13.5	7.7	10.8
Total	23.9	16.3	8.2	9.2

To explore this further, Table 4.3 ranks households by consumption levels, and splits the distribution into five equally sized groups of households (quintiles) to examine which households have moved between quintiles between 2006 and 2009. Because more households are in the middle of the distribution (quintiles 2, 3 and 4) than at either end (quintiles 1 and 5) the 'width' of the middle three quintiles is smaller and so movement up and down is more common in the middle of the consumption distribution (Table 4.4).

**Table 4.3. Distribution of households according to real per capita consumption (Younger Cohort, %)**

<b>Round 3 consumption quintiles</b>	<b>1 (poorest)</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5 (richest)</b>	<b>Total</b>	
Round 2 consumption quintiles	1 (poorest)	46.4	20.8	16.7	11.3	4.8	100
	2	22.8	27.2	24.0	17.3	8.7	100
	3	17.0	21.6	26.3	20.2	14.9	100
	4	10.0	19.4	18.8	25.5	26.4	100
	5 (richest)	4.5	12.7	14.2	26.3	42.3	100

**Table 4.4. Household poverty transitions (Younger Cohort) (%)**

<b>All</b>	<b>Poor in R3 (2009)</b>	<b>Non-poor in R3 (2009)</b>
Poor in R2 (2006)	37.2	62.8
Non-poor in R2	10.8	89.2
<b>Urban</b>	<b>Poor in R3</b>	<b>Non-poor in R3</b>
Poor in R2	34.0	66.0
Non-poor in R2	8.9	91.1
<b>Rural</b>	<b>Poor in R3</b>	<b>Non-poor in R3</b>
Poor in R2	38.0	62.0
Non-poor in R2	11.5	88.5

Of those Younger Cohort households that were poor in Round 2 (2006), just under two-thirds had moved above the poverty line by 2009. One in ten non-poor households in 2006 slipped had below the poverty line by 2009. The chances of moving out of poverty were slightly higher in urban than rural areas. This scenario is slightly different for the Older Cohort, with the gains being more noticeable in rural areas, where three-quarters of people who were poor in

2006 had moved over the poverty line by 2009.<sup>4</sup> This is further evidence that there are life-course differences for households in escaping poverty – the chances of consumption growth are higher for households with older children, possibly explained by the greater number of potential workers in such households.

**Table 4.5. Household poverty transitions (Older Cohort) (%)**

All	Poor in R3 (2009)	Non-poor in R3 (2009)
Poor in R2 (2006)	30.0	70.0
Non-poor in R2	8.6	91.4
Urban	Poor in R3	Non-poor in R3
Poor in R2	50.0	50.0
Non-poor in R2	5.35	94.65
Rural	Poor in R3	Non-poor in R3
Poor in R2	24.0	76.0
Non-poor in R2	9.8	90.2

In the third round of qualitative research we saw that in households where the caregiver had assured employment status or an assured source of income, they were able to improve their position. In some cases this was coupled with employment opportunities, such as NREGS/MGNREGS in the rural areas. In the urban areas there are many more opportunities and options than in rural communities, although there was usually no guarantee of long-term work. However these jobs gave most people only enough to feed the family members.

Young people contributing to the household economy was common, particularly if there was no adult member to earn for the family, as in the case of Akshay whose father died when he was very young.

<sup>4</sup> The same has been found in a recently concluded study based on panel data (Galab and Reddy 2010).

**Box 4.4. Working to support the family**

"I don't work on Sundays. I just go out. To the park or the movies. I go to see movies," says Akshay.

Akshay Khan lost his father when he was quite young. Realising that Akshay was not very interested in school and because of the situation at home, his mother sent him to work at quite an early age. He worked in different shops until he was old enough to drive and now he is a driver.

His mother says: "Until two years ago things were not good; problems and troubles come and go. We don't know what's going to happen tomorrow. Only one thing is sure – financially the situation is tight. Akshay is earning and he brings home money once a month." Talking about the present she says: "I can say now it is better. My son Akshay has started working. He has become very responsible and caring."

Akshay's younger brother was also working in a hotel. Akshay says: "Me and my brother will save money and build a house."

Akshay's mother works as a maid in the neighbourhood. She says that she wants to get her elder daughter married: "I have lot of people willing to help me. They said they will do everything for me. I've already got the sarees and other clothing ready for her. My relatives have said they will get all the household items she needs. The people who know me and the people for whom I have worked are also waiting for the wedding day."

In the last two years, the family has bought a DVD player because: "The children were going to other people's houses to watch films. My sister, who lives with my mother, bought a DVD and the children were going to her house all the time. So I said: 'We will not buy new clothes but will buy a DVD player.' My mother gave me 1,500 rupees for Ramadan. I thought it would be useful if I could buy an item for the house. So I purchased this."

She added: "... Akshay's life has become better over the past eight months, because he has got better work and has become much more mature in thinking and awareness." Finally, she said: "Allah Miya provides for me and my children."

### **4.3 Mobility and intergenerational transfer of poverty**

Evidence from the interviews carried out by our qualitative research team shows how a family which has started on a positive note (with endowments and no debts) and has moved into the later stages of the family life cycle) is more likely to move out of poverty than a family which started off with debts or is still in the early stages of the family cycle, as in the case of Chandani from Patna (a Younger Cohort girl and the elder of two children). The parents of another girl, Sravanti, also started off without any debts but had to borrow later for various reasons. Like Chandani's family, they hardly had any support networks – both of these households were on their own, with little support from relatives.

Alisha is the fourth of five siblings and her mother reported that the family's situation was now slightly better. Alisha's father and older brother work and have a steady income, while the family also enjoys the support of her maternal uncle. The case studies presented below show clearly how factors such as household composition, poverty level when the family is formed, and the availability or non-availability of support systems affect the household.

#### **Box 4.5. Ways families make ends meet**

Chandani is a Younger Cohort girl, the elder of two children, and comes from Patna, the tribal community. Her mother says: "Our position has never improved; we wanted to save but couldn't. We work in the NREGS and repay our debts. The money we earn is used to repay debts so we have never saved. In these ten years [since marriage] we have tried very hard to do better but haven't been able to. We've faced lot of hardships in these ten years, so we haven't been able to improve."

Sravanthi attends the local government school while her younger brother is enrolled in a private school and hostel costing 10,500 rupees a year. "We sent our boy there to the convent... For that we took a loan and pay... we borrowed 10,000 rupees from the self-help group. We work where we can, here and there, to pay the instalments."

As well as the new loan they also have part of an old loan that still has to be repaid: "We purchased an acre of land ... from our own relatives ... for 16,000 rupees ... We also bought a jinna [flour mill]... some part of that loan is still to be cleared."

"Things are not good now... Now I go out to work... As the children grow up, our difficulties are also increasing," says Sravanthi's mother.

Alisha's mother says: "There have been small changes in the family in past two years. Our income has increased slightly, by 500 rupees a month. Yes, the house has changed. We now keep the schoolbags and books there. Our two sons sleep here ... They sit and read here. Therefore to make the place bigger, we have made some changes. We are getting 20kg of rice through our ration card; it is not enough because there are seven of us, so we use my brother's card as well."

We also collect caregivers' life histories to understand their perceptions about poverty is transmitted. Barring a small number of households, all the caregivers thought that their children's lives were undoubtedly better than theirs were at a similar age. Their childhoods had been difficult, with little or no education, hard work (paid or on their family land), no entertainment at all, poor food, just one set of clothes, poor housing, etc., and in remote villages with little infrastructure. Parents want a different life for their children, one which is much better than theirs was. "*The children nowadays are too delicate and cannot bear the hardships that we went through*", claims a rural mother.

The factors that helped them improve their lives, they said, included the various government programmes (TPDS, NREGS etc.), changing cropping patterns and improved agricultural practices, increased mobility due to better transport and access to markets, and relatively improved access to services. Health problems are a cause of concern for many households and private medical care is a drain on their limited resources.

#### **4.4 Vulnerability and shocks**

The movement of households into and out of poverty is often heavily influenced by adverse events which may affect their incomes and livelihoods, force the sale of assets, undermine consumption, or cause them to incur debt. Even though the shock itself may be transitory, the effects of shocks can be very long-lasting.

In the Young Lives survey, we collect information from households on a range of different shocks that may have affected them. In Tables 4.6 and 4.7, we show the prevalence of the shocks or adverse events most frequently reported in Rounds 2 and 3. It is interesting to note

that there is a significant variation in the prevalence of some shocks in different rounds. In particular, drought, which affected over a quarter of the sample households between 2002 and 2006, only affected 7.5 per cent of the households in the succeeding three years. This pattern is important, not only to show the unpredictability of shocks (and their severity), but also to interpret the changes in many patterns that we see in the data between the three rounds of data available thus far.

**Table 4.6. Households suffering from various shocks between Rounds 1 and 2 (%)**

	Large increase in input prices	Large decrease in output prices	Death of livestock	Drought	Too much rain or floods	Pests or diseases before harvest	Crop failure	Illness of parent/caregiver	Death of household member
Urban	8.4	0.5	0.5	5.2	0.9	0.5	1.1	9.4	9.8
Rural	10.2	5.1	8.0	35.9	7.4	9.9	19.3	17.4	8.4
Coastal Andhra	9.0	1.8	4.5	10.2	3.9	3.7	13.2	13.9	11.1
Rayalaseema	15.3	3.2	5.6	47.1	3.2	4.3	15.2	18.2	4.3
Telangana	5.6	6.8	8.1	30.0	9.9	14.2	15.7	14.5	10.1
Non-poor	9.4	4.2	6.5	30.1	5.8	8.7	15.2	16.3	8.3
Poor	9.3	3.1	4.7	24.5	6.1	4.0	14.9	12.4	8.9
Total	9.7	4.0	6.1	28.1	5.8	7.5	14.6	15.4	8.7

**Table 4.7. Households suffering from various shocks between Rounds 2 and 3 (%)**

	Large increase in input prices	Large decrease in output prices	Death of livestock	Drought	Too much rain or floods	Pests or diseases before harvest	Crop failure	Illness of parent/caregiver	Death of household member	Large increase in food prices
Urban	4.4	3.7	3.3	1.5	0.8	0.8	4.6	9.8	6.0	76.0
Rural	15.5	13.0	15.1	9.9	3.5	14.9	35.8	13.9	8.1	77.9
Coastal Andhra	9.1	4.5	7.1	1.8	2.8	7.3	13.5	9.8	9.2	83.0
Rayalaseema	17.9	20.6	13.7	14.9	1.4	20.1	44.3	4.0	4.1	80.9
Telangana	14.7	11.4	20.0	7.8	4.0	14.5	43.3	23.5	9.0	68.8
Non-poor	14.8	12.4	14.4	8.4	2.8	14.8	34.6	14.0	7.2	77.0
Poor	8.0	6.6	12.7	5.4	2.7	8.5	29.6	7.4	9.4	80.7
Total	13.5	11.3	14.1	7.7	2.8	13.8	33.4	12.8	7.6	77.4

The second major pattern to note is the widespread effect of inflation in food prices between 2006 and 2009 with over three-quarters of the sample households report being affected. The possible effects of this can be very serious:

First, there is the direct effect of constrained household budgets that mean that not only is less food likely to be available or poorer quality cheaper food is purchased (affecting children's short- and longer-term nutritional outcomes), there is also less money for non-food items such as healthcare and education. Second, the impact of poor nutrition can have serious long-term implications for children's health and psycho-social well-being, as well as their educational achievements. This in turn can lead to lower aspirations, lower life chances and lower earning potential later in life, catching children in a poverty trap. (Dercon 2008)

Disaggregating these shocks by region reveals some distinct regional patterns in our sample. The dispersion is, as we expect, greatest for shocks caused by environmental factors such as droughts and excessive rain or floods. For example, in both rounds, households in Rayalaseema were much more likely to be affected by drought than households in the other two regions. Also in both rounds households in Coastal Andhra were least vulnerable to drought (though not illness or death of household members). While our sample is heavily clustered and pro-poor, and thus not representative of these regions individually, it is clear that these variations reflect regional differences, for example in the pattern of agriculture and rainfall in different parts of the state.

In general, our data seem to suggest higher vulnerability of rural populations. A larger proportion of rural households in our sample report having suffered from shocks of various kinds. To a large extent, this is merely a reflection of the occupational pattern in rural areas, with the multiple risks inherent in rain-dependent agriculture. However, it is important to note that this pattern is not true across all types of shock: for example, similar proportions of the sample report having suffered from food price rises or the death of a household member, in urban and rural areas.

It is important to note that whether a shock happened is not necessarily very informative of its severity, its impact on children and their families, the response of households to shocks, or the effectiveness of policy in helping families to cope. Within Young Lives, we have tried to answer these fundamental questions more fully using advanced econometric studies as well as detailed qualitative work. Singh (2008) for example, documents the effect of the MDMS in schools in mitigating the nutritional deprivation threatening young children as a result of the widespread drought between Rounds 1 and 2. Similarly, Uppal (2009) looks at the effect of the NREGS in cushioning households and children from the effects of drought for the same period.

The second round of the qualitative research in 2008 captured children's perspectives on the impact of price increases. The Older Cohort boys from Patna reported that price rises had resulted in a scarcity of food grains, thereby increasing dependency on the TPDS to meet the food requirements of all household members on all days in the month. Sania from Polur maintained that the TPDS helped poor people "to lead life without starvation" and told us that "children are able to eat full meals regularly". Another girl described the impact of the programme in terms of "giving the poor a new life". Rahamatullah, a boy from Polur thought that: "The rich are all right in spite of the price rises. It is only the poor who suffer."

We used focus group discussions to elicit young people's views on the changes that had affected their households and communities in the year since we had previously visited them (in 2007), including in relation to the broader economic crisis. They identified both negative and positive changes in their households and communities, including the significant increase in food prices, which they viewed as a risk to child well-being. They described how the food price rises and financial crisis had impacted on their time use, for example, how they balanced school and work, as well as how they experienced various government programmes (the MDMS, the MGREGS, child sponsorship, etc). Their experiences demonstrated that children are not only affected by crisis, but that they are also active in managing the risks associated with poverty (Vennam et al. 2010).

**Box 4.6. Death of a sibling, and loss of an income**

When the qualitative research team visited the children in 2010, some households reported death of a key household member as an adverse event. Rahamatullah's elder brother, the key earning member, had died a year ago. Rahamatullah said: "Because of that, when I finished ninth grade there were financial difficulties here [at home]. I had to work even in the holidays, so I started working in a shop. I had to take care of the house. My sister is there too."

His mother says: "He started working when school opened this year. He is working in a clothes shop." His father had a paralytic attack a couple of years ago and just manages to walk: "What can I say? We don't have the money to pay his school fees. And we need to pay for tuition too. Monthly school fees are 400 rupees a month and tuition fees are 200 rupees a month. Where can I get that kind of money? I couldn't say anything. He went and started work."

The elder son's death is an irreparable loss to the family: "There is no one earning. So we are facing a lot of problems. When he [the elder son] was alive, he used to earn 700 to 800 rupees a day. He used to take care of every responsibility concerning the house. He used to run the house."

**4.5 Summary: poverty and vulnerability**

The growth in consumption and its distribution among different groups and within groups assume significance in regard to poverty reduction. The exposure of households to shocks, especially the food price increase and environmental shocks, also add to the dynamics of poverty at the household level. Real per capita consumption data indicate that while consumption has grown for all groups within Andhra Pradesh, large inequalities remain both between urban and rural areas and between different caste groups.

One key driver of increases in our wealth index, but not consumption gain, is in the progressive development of public services, particularly drinking water, sanitation facilities and electricity. The extent to which consumption growth results in a reduction in absolute poverty is affected by how far households are below the poverty line. Thus if households are clustered just below the line, consumption growth will result in relatively fast poverty reduction, whereas if households are far below the poverty line it will result in a reduction in the poverty gap.

Further examination of these different changes is important for considering how inclusive growth has been and how effective policy programmes are in reaching the poorest households. It is not surprising that it is easier to move those who are close to the poverty line across it, but it is equally important to help those in deeper poverty, to prevent marginalisation. Rapid food price inflation has affected over three-quarters of the sample households and thus has very important implications for the future of food security and nutrition in the state.

**4.6 Access to services: improved sanitation and safe water**

In this section we look at how access to safe drinking water and improved sanitation has improved, across a range of household characteristics. Since these improvements have taken place at site level, data are presented for both cohorts together. They allow an exploration of changes between 2002 and 2009 within the panel and an examination of inequalities between groups over this period.

At a general level, there was improving access to both safe drinking water and improved sanitation. However what is most noticeable is that, though by 2009 nearly all households report access to safe drinking water, only a third of households report access to improved

sanitation, and the increase over the period was much smaller. It is worth stating here, that these figures demonstrate access using quantitative measures, and do not include qualitative analysis (for example whether toilets/latrines, where they exist, are maintained, kept clean and therefore used by children).

There has been the strongest growth in access to safe drinking water in rural areas (from a lower base), and by 2009 the difference between access in rural and urban areas was small. Although this is a considerable success for government, and is important in considering child health, it is noticeable that households from Scheduled Tribe communities continue to report lower access to safe drinking water than other groups. (We are cautious in interpreting this, as the sample composition means these children come from a small number of communities, but it does raise a question as to what else remains to be done to increase access to safe drinking water in rural areas.)

Although we find reasonably high access to improved sanitation in urban areas (nine in ten households, although this did not improve between 2002 and 2009 and may even have fallen slightly), fewer than one in five children in rural areas live in households reporting access to improved sanitation (and since most Young Lives households live in rural areas, this affects the sample average considerably). Children in rural areas did experience greater access to improved sanitation (by 7 percentage points between 2002 and 2009), but it remains low. Examining patterns in other social groupings reflects this overall urban–rural story, with disparities existing between poor and non-poor households, and by social group (fewer than one in five Scheduled Tribe children reported access to improved sanitation, compared to around two-thirds of Other Caste children). Developing greater access to improved sanitation therefore continues to be of policy importance.

**Table 4.8. Access to safe drinking water (both cohorts, %)**

	Round 1 (2002)	Round 2 (2006)	Round 3 (2009)
Urban	94.7	99.6	99.7
Rural	79.8	95.4	96.5
Poor	–	91.3	90.2
Non-poor	–	98.5	98.8
Scheduled Castes	85.5	98.3	96.6
Scheduled Tribes	75.2	80.9	86.1
Backward Classes	82.6	98.4	99.4
Other Castes	88.7	99.3	99.5
Younger Cohort	83.8	96.3	97.2
Older Cohort	82.7	96.9	97.6
Total	83.4	96.5	97.4

**Table 4.9. Access to improved sanitation (both cohorts, %)**

	<b>Round 1 (2002)</b>	<b>Round 2 (2006)</b>	<b>Round 3 (2009)</b>
Urban	90.2	89.0	87.2
Rural	10.4	14.2	16.5
Poor	–	23.0	20.3
Non-poor	–	36.9	36.8
Scheduled Castes	17.0	19.6	20.5
Scheduled Tribes	10.5	15.0	17.2
Backward Classes	28.4	30.5	32.5
Other Castes	56.5	61.8	64.8
Younger Cohort	29.1	32.4	34.7
Older Cohort	30.7	34.6	35.2
Total	29.6	33.1	34.8

#### **4.7 Nutrition and health**

There are major concerns about insufficient food consumption and under-nutrition in India. Evidence suggests that intake of cereals, a staple food in the Indian diet and the main source for calories, declined from around 15kg per month in 1983 to 12kg in 2004–05 (consumption in urban areas was lower). Despite the existence of food-based safety net programmes for many years, malnutrition remains a problem (Nandakumar et al. 2010).

Young Lives looks at nutrition using indicators of stunting (low height-for-age) and thinness (low BMI-for-age), both of which are widely accepted to be linked to other child development outcomes. Stunting suggests long-term under-nutrition, and/or poor living conditions particularly experienced in the early years of life, and thinness is a short-term indicator of poor nutrition. Around one in four (27 per cent) of the Younger Cohort children were classified as thin, while almost one in three (29 per cent) were stunted at the age of 8 (although that has fallen from 33 per cent when they were aged 5). Comparing the Older and Younger Cohorts at the age of 8 suggests a very slight decline in stunting rates between 2002 and 2009 (3 percentage points). What is most worrying, however, is how high these figures remain, and that here has been limited improvement despite the improvements we have observed in consumption expenditure levels and economic growth.

**Table 4.10. Thinness/stunting of both cohorts at age and stunting of Younger Cohort from R1 to R3 (%)**

	Thin		Stunted			
	OC R1 Age 8	YC R3 Age 8	YC R1 6–18 mths	YC R2 Age 5	YC R3 Age 8	OC R1 Age 8
Male	32.1	29.5	33.3	37.7	31.1	33.5
Female	19.9	24.6	27.1	33.5	27.1	32.6
Urban	23.7	21.6	21.0	23.4	16.5	21.2
Rural	26.6	29.2	33.5	39.9	33.8	36.8
Poor	—	29.6	—	44.6	33.3	—
Non-poor	—	26.9	—	32.7	28.7	—
Scheduled Castes	25.4	28.4	34.6	39.2	34.2	35.6
Scheduled Tribes	20.8	22.5	45.5	41.6	41.7	33.0
Backward Classes	29.1	30.4	28.8	38.0	29.1	35.4
Other Castes	22.0	21.4	19.4	23.8	17.8	25.3
Maternal education: no education	25.3	29.4	37.5	43.2	37.7	35.8
Maternal education: up to 5 years	34.5	29.7	26.5	32.0	24.5	39.4
Maternal education: 5 to 10 years	21.0	23.6	22.7	29.2	20.7	22.2
Maternal education: more than 10 years	19.1	15.8	14.2	11.8	8.3	9.5
Total	25.9	27.2	30.4	35.7	29.3	33.0

\* Thinness refers to BMI-for-age z-score less than 2 SD below the mean of the reference population.

When we look at the variations within the Younger Cohort, we see that in Round 3, children in rural areas were experiencing a higher prevalence of thinness (29 per cent) as well as stunting (34 per cent) than children from urban areas (for whom the corresponding figures were 22 per cent and 16.5 per cent). Comparing the two cohorts at the age of 8 suggests very slight improvements in the prevalence of stunting for children in our sample (though the differences are small, so conclusions are extremely tentative). There are a variety of reasons for the high prevalence of under-nutrition, including food security, insufficient nutrient intake and disease burden.

In line with other indicators, the experience of both stunting and thinness is patterned by caste or ethnic background. These social characteristics are likely to be associated with other factors (poverty, food security, disease burden etc.) which cause differences in nutrition. For both measures of nutritional status, children from ‘Other Caste’ backgrounds fare much better than others.

Comparing the Older Cohort in 2002 with the Younger Cohort in 2009 – when they were both aged 8 – suggests that thinness has increased very slightly (but consistently) between the two cohorts. Stunting rates went down for the Other Caste group and for the Backward Classes, but hardly moved for Scheduled Castes and actually increased for children from Scheduled Tribe backgrounds.

What is perhaps most notable from this evidence, is that such a high number of Young Lives children experience stunting or thinness.<sup>5</sup> Given the importance of good nutrition for other aspects of child well-being and development, this is a considerable policy concern. That stunting and thinness rates have not fallen in the Young Lives sample in line with wider

<sup>5</sup> And according to NFHS-3 data for 2005–06, 43 per cent of children under the age of 5 in Andhra Pradesh were stunted.

economic development should raise questions about how to convert this growth into further improvements in conditions for children (to ensure children are able to learn effectively, and therefore attain skills and sustain economic development). Secondly unlike many of the indicators which appear to be moving in progressive directions (for example school enrolment or access to safe drinking water), here gaps are widening – those experiencing improvements tend to be the more affluent Other Caste groups who had initially lower rates of stunting and thinness. Thirdly there is an odd finding around Scheduled Tribe groups, which needs further investigation, namely that although these children appear to have lower thinness rates than other children, by 2009 they were showing higher stunting rates. It is possible, given that these children live in particular rural communities, that this may be explained by recent changes in food availability, food quality or disease burden (and perhaps also improved sanitation).

#### **4.8 Education and school enrolment**

This section considers some of the evidence around enrolment rates and how these have changed as the Young Lives children have got older. Although more investment is still needed, to improve enrolment and retention rates, especially for pre-school children and adolescents, relatively high enrolment in middle childhood represents a success for programmes such as SSA. However school enrolment is not sufficient by itself to enable children and young people to learn. Enrolment does not mean that children are always in school (see also analysis on children's time use below), or that when they are in school, they are in a good position to learn, and high enrolment rates do not guarantee that all children receive a good quality of education.

Most of this section is given over to a consideration of enrolment rates (and how these have changed for Young Lives children), together with the average age of starting school and the percentage of children repeating grades, which has varied over the period of the study. The level of children dropping out of primary school in Andhra Pradesh increased from 5.4 per cent in 2005-06 to 6.9 per cent in 2007-08 (NUEPA 2008), but enrolment rates alone do not provide a full picture of the education system and needs to be analysed together with children's achievement and retention rates. One aspect of the education system in Andhra Pradesh, referred to above and relevant to the recently passed Right to Education legislation, is the rapid growth of the private sector in school provision. This appears to be driven by strong parental demand for services which are often thought to be of better quality and likely to lead to better job prospects, especially given that private schools typically teach in English, while government schools tend to teach in Telugu or the local language (with some schools teaching also in Urdu, which some parents like as the children are then able to learn to read the Qu'ran). This expansion of the private sector is dealt with in more detail below.

##### *Younger Cohort enrolment*

In Round 2 (2006), 96 per cent of Younger Cohort children were enrolled either in primary school (45 per cent) or some form of preschool (51 per cent), at the age of 5. The average age at which children started formal schooling was 5.5 years. By Round 3, when the same children were aged around 8, enrolment in primary schools had increased to 98 per cent.

Enrolment is high in both urban and rural areas, and although there was no difference in the average age children started school, around double the proportion of children in rural areas had repeated a grade in the first three years of primary school compared with children in urban areas. It is very likely there are differences around the quality of education experienced

and, in the context of a rapidly expanding private sector in Andhra Pradesh, it is important to note that a wide variation exists among private schools, with some charging low fees (and being largely unregulated in rural areas) and other more reputable schools (located in urban areas) charging high fees. A second factor is how much time children are able to spend in school. In order to explore these factors in more depth, the Young Lives team has recently carried out a survey of schools attended by Young Lives children, and gathered information from interviews with teachers, school directors, and classroom observation to explore issues around school quality and resources.

**Table 4.11. Children enrolled in school, children who have repeated a year and average age of starting school (Younger Cohort, %)**

	Enrolled in preschool (R2)	Enrolled in school (R2)	Enrolled in school (R3)	Repeated a grade	Average age started primary school
Boys	51.7	44.1	99.3	14.6	5.5
Girls	50.3	45.0	98.7	10.3	5.5
Urban	71.0	27.2	99.6	6.3	5.5
Rural	44.3	50.4	98.8	14.8	5.5
Poor	43.9	50.9	98.8	8.5	5.5
Non-poor	54.0	42.5	99.1	13.3	5.5
Scheduled Castes	41.5	53.0	98.6	13.4	5.6
Scheduled Tribes	34.7	57.7	98.7	12.3	5.6
Backward Classes	54.8	41.7	98.9	12.5	5.5
Other Castes	60.5	35.5	99.7	12.1	5.5
Maternal education: no education	43.7	49.7	98.3	16.1	5.6
Maternal education: up to 5 years	51.2	45.6	99.4	13.4	5.3
Maternal education: 5 to 10 years	61.4	36.7	100.0	6.3	5.5
Maternal education: more than 10 years	71.7	28.3	100.0	4.2	5.4
Total	51.0	44.5	99.0	12.6	5.5

By Round 3 of the survey in 2009, almost all the children were enrolled in primary school, and at least in enrolment, the gaps associated with caste or tribal backgrounds seem to have been almost eliminated. However, as we see below, even at this young age, children's school trajectories start to diverge.

Children from non-poor households were much more likely to be enrolled in preschool in 2006. This is important given that preschool may prepare children more effectively for learning and grade progression in school, although those children already in school might have attended an ICDS centre as well. An interesting point we noted in the Round 2 survey report was the high proportion of children already enrolled in primary school (resulting in a low average age of enrolment for the cohort), even though children should join school at the age of 6. The motivation for this could have been the provision of a daily meal through the MDMS.

As we can also see, although enrolment is almost universal, slightly more of the non-poor group of children had repeated a grade by Round 3, which may seem contrary to expectations. However it is worth noting that this period coincides with the rapid expansion

of the private school system, and many children (particularly from better-off families) were moving to different schools. Analysis of educational transitions from the in-depth qualitative case studies of Younger Cohort children shows that children who moved into private schools were more likely to repeat a grade than their counterparts in government primary schools. This is partly explained simply by the fact of school transfer, and particularly the transfer to English-medium schools. Furthermore, the school management often insists that children repeat the upper and/or lower kindergarten in order to be ready for Grade 1. Any similar shift (from government to private school, or Telugu- to English-medium school) even at a later stage would be likely to have the same result.

Although there is little difference in school enrolment rates between boys and girls, more boys were moved from government to private schools, which caregivers believe will provide better education. Early enrolment in school, and changing school and thereby repeating a grade appear to be common among the Younger Cohort children – for example Vishnu, Revanth and Likhitha from Poompuhar, Anitha from Patna, and Sahithi from Katur, had all repeated one or two grades when they moved from government preschool to private primary school. Saroja and Nagaraju from Patna were kept back for a year by the teacher for poor performance. Given this is such a time of change, with the fast growth of the private sector in Andhra Pradesh, the factors driving the change of school is an area worth probing further

The data also demonstrate the association between maternal education level and a number of indicators of children's education (which could be explained either by the direct effect of the mother's education or by other factors associated with maternal education such as more-educated mothers being more affluent). The children whose mothers were educated to a higher level were more likely to have attended preschool, to have started school slightly earlier, and not to have repeated a grade. Children of mothers with no formal education were more likely to have been enrolled into primary schools without attending preschool.

The strong predictive power of mother's education throws into even sharper relief concerns about gender equity in education raised in relation to the growth of private schooling. The relative deprivation of girls regarding quality education could be of significance for the intergenerational transmission of learning and poverty.

### *Older Cohort enrolment and drop-out*

In case of Older Cohort children (aged 7 to 8 in Round 1, 11 to 12 in Round 2, and 14 to 15 in Round 3), enrolment has been declining from 98 per cent in Round 1, to 90 per cent in Round 2, and further to 77 per cent by Round 3. Eleven per cent of the children repeated a grade while 12.5 per cent dropped out of school between the ages of 12 and 15.

**Table 4.12. Children enrolled in school, children who have repeated a year and average age of starting school (Older Cohort, %)**

	R1 (2002)	R2 (2006)	R3 (2009)	Dropped out between R2 and R3	Repeated a grade	Average age started primary school
Male	98.3	90.8	80.8	10.0	11.7	5.4
Female	97.4	88.8	73.9	14.8	9.9	5.5
Urban	98.3	95.1	84.7	10.4	7.7	5.4
Rural	97.7	87.9	74.8	13.1	11.8	5.4
Poor	–	84.1	75.4	8.7	12.3	5.3
Non-poor	–	91.3	78.0	13.3	10.3	5.4
Scheduled Castes	98.5	86.2	74.7	11.4	16.5	5.5
Scheduled Tribes	96.2	88.3	76.0	12.3	14.6	5.6
Backward Classes	97.8	88.8	75.6	13.2	8.9	5.3
Other Castes	98.1	96.0	85.0	11.0	7.5	5.4
Maternal education: no education	97.4	85.2	68.3	16.9	12.5	5.5
Maternal education: up to 5 years	98.3	94.9	88.6	6.3	6.3	5.3
Maternal education: 5 to 10 years	98.2	97.6	92.2	5.4	12.6	5.5
Maternal education: more than 10 years	100.0	97.6	95.2	2.4	0.0	5.1
Total	97.8	89.8	77.3	12.4	10.8	5.4

Although almost all children had attended school at some time, and three-quarters of them were still enrolled by the age of 15, substantial gaps have begun to appear, with more rural children no longer in school. Similarly, a larger proportion of rural children had repeated a grade. Both these things may be a reflection of the poorer quality of rural schools, the relative deprivation of home environments, or possibly the greater pressures for rural children of balancing school with their family and work commitments (see also section on time use below).

Gaps are also starting to appear along other lines, with only about 75 per cent of BC, SC and ST children still enrolled. This inequality is also evident in the drop-out rate between Rounds 2 and 3 which was almost double for children from the Scheduled Castes and Scheduled Tribes. The qualitative research has also found that more children from the Backward Classes dropped out of school although fewer children from the tribal community in Patna had left school, because of the education facilities (and hostels) provided by the Integrated Tribal Development Agency (ITDA). As they are not working while at the hostel, they have more time to study and also free time to be involved in extra-curricular activities. During discussions with these children on the impacts of the economic crisis, one important finding was that tribal children from Patna who stayed in the school boarding hostels also reported less impact of the food price rises than children living with their families as their needs were taken care of, and there were no changes either in the quantity or quality of food provided in the hostels.

As well as beginning school slightly later than boys, more girls have left education by Round 3 (15 per cent), compared to boys (10 per cent). In interviews and group exercises, the girls reported that distance to school, inadequate transport and lack of basic amenities like toilets at school are key reasons why older girls drop out of school. These are well-established and

reported factors, and sit within a wider context of gender-based differences and inequalities between women and men in adulthood (leading to different expectations as to how long boys and girls will stay in school). However what also emerges is the difficulties adolescent girls face in making use of the services provided to promote education among them. For example, free bus passes are provided by the government for all girls attending high school more than two kilometres from their home. However Vasudha (from Poompuhar), who dropped out of school after Grade 7 in the local upper primary school reported that: "The drivers do not stop the buses. The conductors do not allow us on, and when they do, we are treated badly and our bags get thrown off the bus, because we travel for free without paying."

Himaz (2009) used quantitative data from Round 2 to show that gender discrimination in education often follows a nuanced pattern. She shows that there is a bias favouring boys in terms of school enrolment as children get older (between the ages of 10 and 19). There is also a bias favouring boys in household education expenditure (where this exists) when children are between 10 and 14 years of age, driven mainly by extra tuition fees. Quite notably, once the households have decided to educate a child beyond the upper primary level (i.e., beyond Grade 8), there is no gender-based expenditure bias and an equal proportion of boys and girls are sent to private schools that provide better-quality education.

Children with more educated mothers are more likely to still be enrolled, and to not have to repeat a grade, than children who have less educated mothers. By the age of 15 around one in three children whose mother received very little education had themselves left education, compared to one in twenty children whose mothers had more than secondary education.

The qualitative research explores why children leave school early, and the interviews highlight a combination of factors, often occurring together, that explain this phenomenon. Firstly, parents consider elementary or high-school-level education to be adequate. This notion is perhaps influenced by the government norm of free and compulsory education up to the age of 14 (with children being allowed to work in non-hazardous occupations after that age), the fact that local schools are not always available after Grade 7 or 10. Secondly, distance to high schools, limited transport facilities and the perceived risks associated with travelling to school, particularly for girls, seem to contribute to household decisions to withdraw a child from school. Thirdly, adverse events and shocks at the household level, especially the death of the caregiver, also push children (especially boys) to withdraw from school. Finally, failing the Grade 10 examination is also a reason why children drop out of school. There may be several reasons why children fail the exams: possibly poor quality of schooling, or unsuccessfully trying to balance school and work, or indeed some other negative influence in the home or school environment. The fact that there exists a no-retention policy in government schools up to Grade 8 and students sit the first Board Exam at Grade 10 (which a large number of students 'fail'), reflects the poor quality of elementary schools. Furthermore, young people choose work over schooling because they do not like to be poor performers and parents seem to believe that work is the next best option, unless the child excels at school.

Ravi, Latha and Bhavana from Katur, Subbaiah and Ranadeep from Poompuhar (both rural communities) and Akshay Khan from Polur (urban), had to leave school at different stages because of family circumstances. Ranadeep's interview shows how he needed to balance work with going to school.

#### **Box 4.7. Reasons for leaving school**

Ranadeep's family had ran into heavy debts because of crop failure, the failure of two bore wells, and property division among the brothers.

"They said I needed to do both [go to school and work]. They told me I had to study and to help with the farming. Yes, they told me that I needed both to do work and to study. I asked them how it would be possible. They said I needed to do both. I told them that I could only do one thing at a time. Then too, they didn't listen to me and asked me to come and work in the fields. I know they are struggling in the house. How can I refuse?"

Ranadeep thinks that he did not pass the Grade 10 exam because he had to balance school and work. He said: "Ah, ten students failed. Yes, only those who worked in the fields."

Mohan from Poompuhar (from a better-off household) also had to manage both school and work and failed the Grade 10 public examination.

Rahamatullah from Polur and Ranga Reddy from Poompuhar both stopped school after the death of a parent. Ranga Reddy managed to sit the Grade 10 exam as a private candidate and passed, even though he had not been able to attend school as he was needed to look after the family farm following his father's sudden death.

### *The growth of private education*

The growth in private sector provision of education in Andhra Pradesh has been rapid. More private schools could potentially increase school capacity, though since enrolment rates are already high is it evident that children who would otherwise have gone to government schools are now in the private system. Most challenging for policymakers, in the context of the Right to Education Act, is the risk that a growing private sector may encourage greater inequalities between households able to afford private education and those not able to, or inequalities in the choices that households may need to make between siblings or between boys and girls. Furthermore, many of the private schools are unrecognised, and therefore not monitored to ensure that the children are receiving a good education. Regulation of the private sector will be an added burden for state education services.

Table 4.13 compares the two cohorts of Young Lives children when they were aged 8 to examine both the rapid change that is taking place, and the way this affects different groups of Young Lives children. As we have already observed, enrolment is near-universal at this age, and was so even in 2002. More striking is the fact that in the seven years from 2002 to 2009, the proportion of private schools in primary education has nearly doubled from about 23 per cent to over 44 per cent. In urban areas, the private sector is now a major provider of primary education, but even in rural areas its growth in this period has been considerable.

The rapidly rising share of the private sector in education may represent either a desire for English-medium education by parents or a belief that private schools are better than government schools. Pratham (2010) documents test score gaps between children in private and government schools, with the former performing considerably better, a divergence that is also present in Young Lives test score data from both cohorts. While to some extent this could represent the fact that children in private schools are from wealthier households and also receive more home investments, it is plausible that part of the effect is indeed institutional. This possibility raises important questions for policy and research, since on average private school teachers in rural India are paid only about a fifth of the salary of government school teachers

(Muralidharan and Kremer 2007); the sources of this differential between the performance of children in private and government schools is a central area of research focus for Young Lives.

**Table 4.13. 8-year-olds enrolled in school and attending private schools, 2002 and 2009 (%)**

	Older Cohort R1 (aged 8 in 2002)		Younger Cohort R3 (aged 8 in 2009)	
	Enrolled	Attending private school	Enrolled	Attending private school
Boys	98.2	25.1	99.2	50.4
Girls	97.0	21.4	99.1	37.1
Urban	97.9	62.3	99.8	80.3
Rural	97.5	10.6	98.9	31.3
Scheduled Castes	98.6	11.6	98.9	29.3
Scheduled Tribes	95.3	12.7	98.4	21.7
Backward Classes	97.6	20.4	99.2	44.2
Other Castes	97.7	45.7	99.8	70.4
Maternal education: no education	97.0	11.3	98.6	28.1
Maternal education: up to 5 years	98.3	18.8	99.4	38.3
Maternal education: 5 to 10 years	98.2	56.3	100.0	69.2
Maternal education: more than 10 years	100.0	73.8	100.0	91.7
Total	97.6	23.2	99.2	44.1

The distribution of children from different socio-economic and ethnic backgrounds across private and public schooling also reveals an interesting pattern. While children from all caste groups are now more likely to be enrolled in a private school at 8 years of age than the Older Cohort at the same age, indicating the expansion there has been, there are still important differences in the numbers of children from different backgrounds accessing private schools. While private schooling increased even among SC and ST children from just over 10 per cent to over 20 per cent, more than 70 per cent of Other Caste children are now in private schools.

As can also be seen from Table 4.13, although private school enrolment has grown rapidly in both urban and rural areas, the proportion of girls enrolled in private schools is significantly lower than the proportion of boys, raising concerns of gender equity. These concerns have been discussed in depth by Streuli et al. (2011) who use a synthesis of quantitative and qualitative data from Young Lives to study the trajectories of children in early childhood education. These concerns are especially important given already significant divergences between different groups, for example boys and girls or children of different castes, as documented for example by Lopez Boo (2010) using Young Lives quantitative data from Rounds 1 and 2.

The survey data show that in both the Younger and the Older Cohort, more boys than girls repeated a grade at least once. Both the survey and the qualitative data demonstrate that more boys than girls were sent to the private schools, with a particularly high differential in rural areas. These gender-based differences have also been noted during the qualitative research, where the caregivers justified the preferential treatment of boys as investing in something that stayed with the family (since girls get married and move to a new family). Shanmukha Priya from Poompuhar was first enrolled in a local government school. She was then sent to a private school for just five days but moved back to the government school

because of the high fees. Her younger brother now attends the same private school. Her mother said: "Shanmukha Priya will in any case get married and go." Revanth and his younger brother (also from Poompuhar) attend a private school, while both his older sisters attend the local government school.

#### 4.9 Children's work and time-use

Here we turn to indicators of how much work children are doing. Most children do some work and for most children work is an important means by which they learn new skills which equip them for adult life and build their feelings of self-reliance and self-esteem. However, work for pay under the age of 14, and work in hazardous situations is illegal under international treaties governed by the International Labour Organization.

In this section, we review work being done by the Older Cohort (at the age of 15 in 2009) and then consider time use by the Younger Cohort (aged 8 in 2009). In our definition of work we include not just paid work, but also unpaid activities (such as work on family farms) and household chores. These figures give an indication of patterns in time use and work and how children balance their responsibilities at home with their schooling. However the results are sensitive to the measures used and the vast majority of children will do some form of work (such as chores around the house, caring for siblings or helping their parents).

We have assessed children's work in terms of incidence and intensity. Among the Older Cohort, the percentage working (paid and unpaid) had risen from 6 per cent in Round 1 (2002, age 8) to 22 per cent in Round 2 (2006, age 12) and further to 28 per cent in 2009 at ages 14 to 15, which is as might be expected. Given that so many children are working, we use qualitative data alongside the survey evidence to explore how children balance work and school. Our survey data in 2006 showed that 26 per cent of the Older Cohort children in rural areas reported that they were already working for pay, at least part time (Galab et al. 2008). Of the 24 Older Cohort children included in the qualitative research, most were from rural communities: by 2008 (at age 13 to 14) five had dropped out of school, increasing to nine of them no longer in school by 2009. Most of the other sub-sample children reported combining work on family farms with school attendance.

The determinants of child work were analysed intensively by Krutikova (2009) using survey data from Round 2. She documented that child work often increased in response to income shocks, was very sensitive to household gender and age composition, and that in urban areas it also varied according to the bargaining power of women. While comparably detailed analysis has not yet been carried out using the Round 3 data, in the following sections, we present the initial correlates and patterns observed in 2009. Morrow and Vennam (2009) utilise the richness of the qualitative information to study, specifically, the use of child labour in cottonseed production and the experiences of Young Lives children. They document the trade-off between work and school in at least some cases, as well as the decision-making processes within the sample households that lead children to work in cotton fields.

Table 4.14. Children who report working for pay (Older Cohort, R1–R3 and Younger Cohort, R3) (%)

	R1 OC Age 8	R2 OC Age 12	R3 OC Age 15	R3 YC Age 8
Boys	5.4	25.1	28.7	3.2
Girls	7.1	18.5	27.0	2.7
Urban	6.8	6.1	12.1	3.0
Rural	6.1	27.0	33.1	3.0
Poor	—	30.1	34.6	2.4
Non-poor	—	19.2	26.7	3.1
Scheduled Castes	5.4	22.8	40.0	3.9
Scheduled Tribes	17.9	35.7	41.7	3.8
Backward Classes	5.7	23.2	26.0	2.1
Other Castes	2.4	10.5	12.3	3.6
Maternal education: no education	6.8	29.9	38.6	3.3
Maternal education: up to 5 years	4.0	11.9	15.34	1.2
Maternal education: 5 to 10 years	7.2	10.0	9.58	2.5
Maternal education: more than 10 years	4.8	0.0	0.0	5.8
Total	6.2	21.7	27.8	3.0

In rural areas, we found that a third of the Older Cohort children were working for pay, compared to only 12 per cent in urban areas (and this pattern was similar in the previous round). The incidence of children working for pay at the age of 8 has fallen from 6 per cent in 2002 (Round 1, Older Cohort) to 3 per cent in 2009 (Younger Cohort, Round 3) although the figures are too small to assign real significance to them. It should also be noted that there was severe drought in 2001 and 2002, which may have led to more children working at that time.

The incidence of children working for pay was highest by Round 3 among the Scheduled Tribes and Scheduled Castes. This is likely to be reflected in the urban or rural location of each of these communities and the pattern is consistent between 2006 and 2009 (2002 and 2009 for the STs).

We also found slightly more boys (29 per cent) were working than girls (27 per cent), with the amount of work reported by boys increasing more sharply than that reported by girls between the ages of 8 and 12 years old (Round 1 and Round 2), and girls then catching up a little and reporting a faster increase in work between the ages of 12 and 15 (Round 2 and Round 3), so narrowing the gap. Comparing cohorts suggests that the reduction in paid work between 2002 and 2009 was slightly greater for girls than boys, which may reflect the success of current policy focus on girls, but the numbers are small and so interpretation should be cautious.

The children belonging to poor households reported higher incidence of working (35 per cent) than children belonging to non-poor households (27 per cent). Since we do not have consumption data for 2002, we cannot estimate which households were poor in 2002 on a consistent measure. However more poor children were working by 2006 than non-poor children and both rates continued to grow between 2006 and 2009 (though the catch-up of the less poor group is noticeable)

Considering how patterns of work vary by the level of maternal education demonstrates that though for 8-year-olds in 2002 there were limited differences by maternal education levels, this increased sharply for those with uneducated mothers and differentials continued to grow. For children with uneducated mothers, the proportion working increased from less than one in

10 (7 per cent) to about two in five (39 per cent). For children whose mothers had more than secondary education, this appeared to fall from 5 per cent in 2002 to no children reporting work in subsequent rounds. However maternal education is also associated with other factors (including rurality and consumption level) which are likely to be important determinants of work levels.

Data were also collected on how children spend their time on a typical day. How children spend their time is a useful indicator of the activities and processes which are shaping (and potentially differentiating) their development.

Broadly speaking, both cohorts report spending a considerable proportion of time in school and a smaller proportion on leisure activities. Both groups of children report being involved, to a greater or lesser extent, in domestic chores or unpaid work within the household. Some of the Older Cohort have also left school and are working for pay.

Other Caste children were, on average, spending the longest time in school or studying (in both the Older and Younger Cohorts), and tended to report less leisure time than ST and BC children. ST children report spending the smallest amount of time in school or studying in the Younger Cohort, but in the Older Cohort, this group of children actually seemed to spend fractionally more time studying than SCs or BCs. It is worth recalling the enrolment figures that show that the ST children tended to start school later and also to leave education sooner.

**Table 4.15. Percentage of children spending time on various tasks on a typical day (Younger Cohort)**

	Caring for family members	Domestic tasks	Tasks on family farm/ business	Paid work outside household	At school	Studying outside school time	Play/leisure
Boys	15.2	20.3	0.9	0.5	98.9	90	100
Girls	20.7	36.7	0.3	0.3	98.9	92.7	99.9
Urban	15.5	20.6	0	0.2	99.4	93.5	100
Rural	18.6	30.6	0.8	0.5	98.7	90.5	99.9
Non poor	18.9	28.2	0.6	0.5	99.2	93.8	100
Poor	15.9	30.5	0.9	0	98.2	82	99.7
Scheduled Castes	24.1	35	0.6	0.3	98.9	91.4	99.7
Scheduled Tribes	21.8	28.2	0.8	0.4	98.4	75.4	100
Backward Classes	14.2	28.7	0.8	0.6	98.8	93.2	100
Other Castes	18.1	20.3	0.2	0	99.5	96.5	100
Maternal education: no education	21.2	32.4	1.1	0.6	98.2	87.2	100
Maternal education: up to 5 years	13.1	28.5	0.0	0.3	99.4	95.1	100
Maternal education: 5 to 10 years	15	21.9	0.2	0.2	99.8	95.8	99.8
Maternal education: more than 10 years	14.9	14.0	0.0	0.0	100	97.5	100
Total	17.8	28.0	0.6	0.4	98.9	91.4	99.9

Table 4.16. Hours per day spent on core activities (Younger Cohort)

	Caring for family members	Domestic tasks	Tasks on family farm / business	Paid work outside household	At school	Studying outside school time	Play /leisure
Boys	1.2	1.2	2.1	1.0	7.8	2.0	4.9
Girls	1.2	1.2	3.0	3.7	7.7	2.1	4.7
Urban	1.0	1.2	0.0	1.0	7.9	2.1	4.7
Rural	1.2	1.2	2.3	2.1	7.7	2.0	4.8
Non poor	1.2	1.2	2.8	2.0	7.8	2.0	4.6
Poor	1.2	1.2	1.0	–	7.4	1.9	5.5
Scheduled Castes	1.2	1.1	1.5	1.0	7.7	2.0	4.7
Scheduled Tribes	1.1	1.2	1.0	1.0	7.6	1.7	5.2
Backward Classes	1.3	1.2	3.1	2.3	7.7	2.1	4.8
Other Castes	1.1	1.2	1.0	–	7.9	2.1	4.7
Maternal education: no education	1.3	1.2	2.5	2.3	7.7	1.9	4.9
Maternal education: up to 5 years	1.1	1.2	0.0	1.0	7.6	2.2	4.8
Maternal education: 5 to 10 years	1.1	1.1	1.0	1.0	7.8	2.1	4.7
Maternal education: more than 10 years	1.0	1.0	0.0	0.0	8.1	2.1	4.7
Total	1.2	1.2	2.3	2.0	7.8	2.0	4.8

Note: These figures are averages for those children who report having spent time on task.

Almost all the Younger Cohort children are in school and they spend almost 8 hours there each day. Even at this young age, they report spending between one and two hours studying outside school, and play or leisure time also accounts for much of their time. Girls and boys both help out around the home – about 20 per cent of girls say they care for other family members (about an hour each day) and more than a third say they help with domestic chores (just over an hour a day). Fewer boys help care for other family members (only 15 per cent), but a fifth of them help with chores. Very few of the children are helping on the land or in the family business at this age, and a only a handful work for pay outside the household.

**Table 4.17. Percentage of children spending time on various tasks on a typical day (Older Cohort)**

	<b>Caring for family members</b>	<b>Domestic tasks</b>	<b>Tasks on family farm/ business</b>	<b>Paid work outside household</b>	<b>At school</b>	<b>Studying outside school time</b>	<b>Leisure</b>
Boys	9.2	54.9	14.2	12.3	81.6	79.3	99.6
Girls	30.0	87.1	11.1	15.1	74.2	73.2	98.6
Urban	16.5	64.9	4.0	8.5	84.7	85.5	99.6
Rural	20.9	73.5	15.5	15.5	75.5	73.1	98.9
Non poor	19.9	74.5	13.2	13.1	78.6	76.6	98.9
Poor	19.2	51.5	8.5	18.5	76.2	76.2	100.0
Scheduled Castes	23.4	76.6	13.2	19.8	75.6	72.1	98.5
Scheduled Tribes	30.6	64.3	10.2	14.3	76.5	75.5	98.0
Backward Classes	18.6	71.3	15.5	14.0	76.6	74.9	99.2
Other Castes	13.9	70.1	6.5	7.0	83.6	84.1	100.0
Maternal education: no education	22.7	74.0	17.8	19.7	69.2	66.8	98.6
Maternal education: up to 5 years	12.5	73.9	9.1	7.4	89.2	86.9	100.0
Maternal education: 5 to 10 years	18.6	64.1	1.8	3.0	91.6	92.8	99.4
Maternal education: more than 10 years	9.5	50.0	0.0	0.0	95.2	95.2	100.0
Total	19.6	71.2	12.7	13.7	77.8	76.2	99.1

Table 4.18. Hours per day spent on core activities (Older Cohort)

	Caring for family members	Domestic tasks	Tasks on family farm/ business	Paid work outside household	At school	Studying outside school time	Leisure
Boys	1.1	1.5	3.8	8.5	8.3	2.7	4.3
Girls	1.5	2.3	4.1	6.8	8.1	2.6	3.9
Urban	1.2	1.6	2.9	9.0	8.4	2.7	4.2
Rural	1.5	2.1	4.0	7.3	8.1	2.6	4.1
Non poor	1.3	2.0	3.9	7.5	8.3	2.6	4.0
Poor	1.6	1.8	3.4	8.0	7.9	2.8	4.7
Scheduled Castes	1.2	2.1	4.0	6.9	8.2	2.6	3.9
Scheduled Tribes	1.7	2.1	4.7	7.5	7.8	2.7	4.4
Backward Classes	1.4	2.1	3.6	7.6	8.2	2.6	4.2
Other Castes	1.3	1.8	4.8	9.4	8.4	2.8	3.9
Maternal education: no education	1.5	2.1	4.1	7.7	8.1	2.4	4.2
Maternal education: up to 5 years	1.3	2.0	2.9	6.8	8.0	2.8	3.9
Maternal education: 5 to 10 years	1.3	1.7	3.3	7.2	8.5	3.0	3.9
Maternal education: more than 10 years	1.0	1.8	0.0	0.0	8.9	2.9	3.9
Total	1.4	2.0	3.9	7.6	8.2	2.6	4.1

Note: These figures are averages for those children who report having spent time on task.

By the age of 15 there are much greater differences in the way young people spend their time, with only 78 per cent still attending school and variations in the types and amount of work they do by urban/rural location, socio-economic status, and caste. Their tasks are also highly gendered, with 87 per cent of girls doing domestic chores (on average for 2.3 hours per day) and 30 per cent caring for other family members. Boys also help with domestic tasks (55 per cent of boy) but spend half the time on this than girls.

The young people in poor households report spending more time on paid work than those in non-poor households (it is worth noting that the very fact of having a young person in the household is likely to increase the household consumption level and so may affect the chances of being poor on that measure). While poorer young people seem to spend more time on paid work than young people in non-poor households, the Older Cohort adolescents in non-poor households report larger proportions of their time spent on domestic tasks or unpaid work. Almost a quarter of the Older Cohort children are working in the family business or on the land (14 per cent of boys and 11 per cent of girls) or doing paid work outside the household (12.5 per cent of boys and 15 per cent of girls). The number of Scheduled Tribe children working outside the household rises to 20 per cent (and they are also less likely to be in school).

As with the analysis above, the mother's education level is associated with differences in the patterning of children's time use. In both cohorts, children with mothers with lower education levels tended to spend more time on domestic tasks, caring and leisure, and less time on school. The difference in time spent in school is substantial: young people in the Older Cohort with uneducated mothers reported around 1 hour less than young people whose mother had

more than ten years of education. They also spend less time outside school studying (2.4 hours compared to 3 hours for children with more educated parents).

### *Balancing school and work: children's perceptions and experiences*

Qualitative interviews and the group exercises carried out in 2008 with children then aged around 13 to 14, mirror the survey data and demonstrate that most of the children were engaged in household activities, although differently for boys and girls as shown in the tables above. While the girls are engaged in household tasks inside the home (washing-up, cleaning, laundry, cooking and fetching water) boys are more likely to be engaged in tasks outside (fetching water, getting provisions, and so on). Children considered these as routine household activities and not as 'work' (which also may also affect how these questions are answered in surveys and so illustrates that these may underestimate work).

The children ranked their daily activities through a group exercise. The ranking showed that they liked school the most, followed by domestic tasks, and farm work was disliked by most of the children. Children from households who had some land were also required to work on the family farm during the peak agricultural season, which affected the time spent in school. Children were required to juggle school, home and farm work for two to three months a year (from the end of August to November). Unable to strike a balance between the different forms of work, some children missed school and then found it difficult to continue attending. Not only does this show the seasonal pressures on children, but that children may be formally enrolled in school and yet missing much tuition. Existing government and NGO services are geared towards the needs of children who have dropped out of school, but children who miss school for a specific period because of seasonal agricultural work do not receive much attention from policymakers (Vennam and Komanduri 2009).

#### **Box 4.8. Working in the fields**

Twelve-year-old Ramya is one of five children (four girls and a boy) from a better-off family which owns land, but which also has a debt connected with the marriage of two of her sisters. She is expected to work on the land, demonstrating that work is not always directly caused by poverty, but also the need to provide labour within the household to work on family land, and the pressures that family debt may place on households. Describing her experiences of combining school and work, Ramya says: "I try to read, but I feel tired. I miss school, so I don't know what is happening at school." Her father is too busy to help her with homework.

Her mother understands her problems with work: Ramya says: "If I say I don't like to go to the fields every day she [her mother] understands and does not force me. If I want to go to school, she lets me". But: "She doesn't let me go during the cotton harvest."

Ramya also finds the work hard and tiring; "It is very hard ... there is pain in my legs. We walk a long way... we have to do the same work every day, even if it is hot. At that time I cover my head with a towel. Sometimes I get a fever, but mostly it is only my hands and legs that ache. I feel tired after a long day, and do not feel like doing anything when I get home, not even studying." However, Ramya agrees that she has to work until the family clears the debt incurred in connection with the marriage of her two elder sisters.

## **4.10 Subjective well-being**

Apart from material indicators, an individual's subjective assessment of their well-being is very important in understanding childhood poverty. Young Lives is one of the few studies to collect measures of subjective well-being of children. Here we present analysis from a simple

measure of well-being, the 'ladder of life', in which the children are asked to place themselves on a 9-rung ladder depending on where they see themselves in relation to the best possible life for themselves. On average, the responses show that both Older and Younger Cohort children feel they stand on around step 5 of the ladder at present.

As in other dimensions, the Other Caste children reported the highest levels of subjective well-being. Similarly, children from non-poor households felt better off than those from poor households, and children with more-educated mothers reported higher levels of well-being. Maternal education and household income are positively correlated with subjective well-being.

**Table 4.19. Children's perceptions of their relative place in life (Younger Cohort)**

	Average rung on which children place themselves on 9-rung 'ladder of life'	Children who place themselves on bottom 3 rungs (%)	Children who place themselves on top 3 rungs (%)
Boys	5.1	25.2	25.3
Girls	5.1	24.8	26.1
Urban	5.8	13.3	34.1
Rural	4.9	29.1	22.7
Non-poor	5.2	24.2	25.9
Poor	4.7	29.9	20.7
Scheduled Castes	4.9	30.9	23.5
Scheduled Tribes	5.0	26.6	25.8
Backward Classes	5.1	23.9	25.4
Other Castes	5.3	21.1	28.4
Maternal education: no education	4.8	28.6	21.9
Maternal education: up to 5 years	4.8	30.2	22.7
Maternal education: 5 to 10 years	5.6	17.3	31
Maternal education: more than 10 years	6.4	9.2	45
Total	5.1	24.9	25.7

Children from urban areas also placed themselves higher on the ladder than rural children. The Younger Cohort are more likely to report a good life than the Older Cohort. The child well-being has been analysed against socio-economic status and ethnicity of their households. The analysis shows that material poverty and subjective well-being of the children are linked (poorer children reporting a lower ladder position than non-poor children).

# 5. The impact of government programmes on children

We have seen in the previous section how, despite ongoing inequalities and despite the shocks that many households experience, some indicators of child and household well-being have improved (such as poverty or school enrolment levels). This section moves on from this to assess the public policy environment in which these changes have occurred. Although there are many safety net programmes in Andhra Pradesh, we confined our analysis to a few relevant programmes which enjoy an extensive coverage. The public programmes discussed in this chapter are broadly categorised in to three groups:

- Programmes of a universal nature (MGNREGS and TPDS)
- Programmes targeting marginalised sections of the society
- Programmes targeting children directly (MDMS and Girl Child Protection Scheme).

In this section we present only descriptive statistics regarding the take-up of some of these programmes in our sample households. For most policies, we do not have information dating back to the first round of the survey in 2002, primarily because some of the most influential programmes currently implemented, such as the MGNREGS and the MDMS, were started more recently.

## ***5.1 Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)***

The MGNREGS (formerly known as NREGS but renamed in 2009) is one of most the important instruments for alleviating poverty and improving food security in India. It is the biggest social security programme for the informal sector, providing 100 days of employment in a financial year at the statutory minimum wage to every adult in a rural household willing to undertake unskilled manual work. It is a legal commitment by government to provide employment for those who seek work, and so acts as a floor to the wage labour market.

In Andhra Pradesh the programme was rolled out in three phases – first of all to 13 districts in 2005, then to a further six districts in 2007 and three more districts in 2008, to cover all 22 districts in the state. Two out of six rural districts covered by Young Lives fell within the second and third phases, and in these two districts a large proportion of the Scheduled Tribe households are covered. Thus, MGNREGS is now in operation in all the rural districts in the state and households from 15 of the 20 Young Lives sentinel sites (those in rural areas) had benefited from this scheme by Round 3 (mirroring this scaling up, in 2006 45 per cent of Young Lives households reported having a job card which had increased to 78 per cent by 2009).<sup>6</sup>

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<sup>6</sup> A job card is issued to people who register to work under the scheme. They then apply in writing, stating when they would like to work and for how long (subject to a minimum period of 14 days).

**Table 5.1. Households reporting access to MGNREGS and number of days worked (Younger Cohort) (%)**

	Households with job card	Households where someone worked under MGNREGS	Average number of days worked under MGNREGS	Households reporting 100 or more days under MGNREGS
Poor	87.3	79.5	45.9	10.8
Non-poor	76.6	66.3	36.6	10.3
Scheduled Castes	85.3	77.5	40.4	12.1
Scheduled Tribes	87.2	82.6	44.6	10.1
Backward Classes	77.9	65.7	38.8	11.3
Other Castes	55.3	46.9	23.6	3.4
Maternal education: no education	84.5	76.3	43.2	12.0
Maternal education: up to 5 years	74.9	64.9	34.3	8.9
Maternal education: 5 to 10 years	62.6	49.2	27.9	7.3
Maternal education: more than 10 years	36.0	20.0	6.2	0.0
Total	78.1	68.4	38.1	10.3

**Table 5.2. Households reporting access to MGNREGS and number of days worked (Older Cohort)**

	Households with job card	Households where someone worked under MGNREGS	Average number of days worked under MGNREGS	Households reporting 100 or more days under MGNREGS
Poor	88.9	82.8	47.2	14.1
Non-poor	77.0	67.2	39.9	13.5
Scheduled Castes	93.5	85.7	48.5	16.1
Scheduled Tribes	75.8	72.5	43.9	14.3
Backward Classes	80.0	68.8	42.0	14.1
Other Castes	47.3	36.6	18.4	5.4
Maternal education: no education	84.44	76.4	46.2	14.5
Maternal education: up to 5 years	75.0	63.2	33.5	12.1
Maternal education: 5 to 10 years	52.1	39.7	21.6	9.6
Maternal education: more than 10 years	27.3	9.9	1.4	0.0
Total	78.4	69.05	40.6	13.5

There is considerable research and policy interest in MGNREGS, and its implementation varies across the country. Uppal (2009) used Round 2 data from Young Lives to assess the impact of the MGNREGS as a safety net for children. He reports positively about the self-targeting mechanism under the MGNREGS and notes that poorer and ‘lower’ caste households are more significantly likely to register, and that registration in the MGNREGS by a member of the household significantly reduces the likelihood of children in the household being required to work. He concludes that the MGNREGS seems to offer a viable safety net for households with variable employment opportunities. More extensive analysis using Round 3 data has already been commissioned by Young Lives.

This report is not the place for a full analysis of Young Lives data on MGNREGS, which would require both qualitative and quantitative evidence to consider both access and how households used the scheme and the barriers they faced. In the confines of this report, we consider survey evidence on households which reported having job cards and using the scheme.

Table 5.1 analyses which households reported having job cards, together with how many days households are typically working under the scheme. Around 86 per cent of the Younger Cohort SC and ST households and 93 per cent in the Older Cohort report possessing job cards. In both cohorts, households where mothers are more educated are less likely to have job cards, implying that less affluent households are more likely to be enrolled in the scheme

Not all households which have a job card access work under the scheme, either because they face a barrier to taking up work (such as a lack of suitable work, lack of labour in the household, or other barrier to scheme participation) or because they choose not to work to the full capacity (perhaps using MGNREGS as insurance in case of a lack of other work). Overall 68 per cent of the sample households reported that someone in the household had accessed MGNREGS. Such reporting is higher in the case of poor, SC, ST and BC households (more likely both to hold job cards and to be working under MGNREGS). Additionally, large numbers households counted here as 'non-poor' are also accessing the MGNREGS (noting that Young Lives is a pro-poor sample, and so these households are not rich in any way). There is a slight difference between the days worked by Younger Cohort households in the 12-month period as compared to the Older Cohort households.

This analysis indicates the rapid spread of job cards in Andhra Pradesh between 2006 and 2009. That there is relatively high coverage within the sample but that poorer and more marginalised groups are most likely to take up work under the scheme could be seen as some success for its self-targeting mechanism, where, in principle, scheme membership is available to rural households irrespective of background and households then opt in. Our local knowledge also indicates the self-targeting objective has been relatively successful for landless labourers and marginal farmers. Relatively few households took up the maximum number of days possible which could just be a reflection of the households having better outside options for other periods in the year although service delivery problems cannot be ruled out.

## **5.2. Targeted Public Distribution System (TPDS)**

The TPDS is an important welfare scheme to ensure food security across India. It is intended to supply essential commodities like rice, sugar, edible oil and kerosene at subsidised prices through a network of fair-price shops which are widespread across all villages and also in the urban areas. The distribution network is the largest of its kind in the world. As the scheme is intended to ensure food security, this is potentially important to household and child well-being, and so we provide some descriptive evidence on who is accessing the TPDS (especially given recent concerns over sharp inflation in food and fuel prices). Alongside increasing food security, the key consideration for policy analysis is how the system helps buffer families from price increases and other income shocks.

**Table 5.3. Households accessing TPDS and receiving subsidised items (both cohorts) (%)**

	<b>Accessing PDS</b>	<b>Rice</b>	<b>Dal</b>	<b>Sugar</b>	<b>Kerosene</b>	<b>Cooking oil</b>
Urban	75.7	99.0	87.6	92.0	89.0	87.3
Rural	95.5	99.5	85.3	82.5	98.0	89.2
Poor	97.6	100.0	88.4	85.9	96.6	90.2
Non-poor	89.9	99.2	85.2	84.4	96.1	88.5
Scheduled Castes	95.2	100.0	82.3	79.6	98.9	84.5
Scheduled Tribes	91.9	99.3	86.2	80.0	96.1	89.5
Backward Classes	92.6	99.5	86.8	86.4	96.4	90.2
Other Castes	79.7	98.3	86.8	87.9	91.8	89.0
Maternal education: no education	96.6	99.5	84.7	82.5	97.6	89.0
Maternal education: up to 5 years	92.5	99.4	88.6	86.7	96.1	89.6
Maternal education: 5 to 10 years	84.2	99.1	86.7	88.2	93.3	88.0
Maternal education: more than 10 years	47.5	98.7	84.6	87.2	83.3	85.9
Younger Cohort	90.7	99.4	86.4	85.0	96.1	88.6
Older Cohort	89.9	99.2	84.7	83.6	95.9	89.0
Total	90.4	99.4	85.8	84.5	96.1	88.8

Note: Columns 2 to 6 are percentages of those households accessing the scheme, not of whole Young Lives sample.

**Table 5.4. User experiences of TPDS (%)**

	<b>Reasons for dissatisfaction</b>				
	<b>Satisfied with service</b>	<b>Inconvenient hours</b>	<b>Poor quality</b>	<b>Insufficient quantity</b>	<b>Irregular supply</b>
Urban	87.1	17.5	28.6	28.6	25.4
Rural	82.3	6.5	30.8	22.5	40.2
Poor	87.0	11.3	22.6	39.6	26.4
Non-poor	82.7	7.7	31.4	21.3	39.6
Scheduled Castes	81.1	11.7	27.7	20.2	40.4
Scheduled Tribes	82.0	14.9	27.7	29.8	27.7
Backward Classes	84.2	4.1	30.3	25.1	40.5
Other Castes	84.2	10.8	36.9	18.5	33.8
Maternal education: no education	82.4	7.9	23.3	22.9	45.8
Maternal education: up to 5 years	83.2	6.5	42.9	18.2	32.5
Maternal education: 5 to 10 years	86.1	11.4	32.9	32.9	22.9
Maternal education: more than 10 years	82.1	7.7	69.2	15.4	7.7
Younger Cohort	84.0	9.3	27.6	26.8	36.2
Older Cohort	82.0	6.3	35.4	17.4	41.0
Total	83.3	8.2	30.4	23.4	37.9

Note: Columns 2 to 5 are percentages of those households reporting problems with the TPDS.

Ninety per cent of households report accessing the TPDS, noteworthy because of the current parliamentary bill to make TPDS a legal entitlement. The percentage of rural households accessing the TPDS is much higher (95.5 per cent) than urban households (76 per cent). Households where mothers were more educated (which tend to be more affluent) were less likely to be accessing the TPDS. Table 5.3 considers the types of commodities different groups report receiving; Table 5.4 presents evidence on user satisfaction and concerns with the fair-price shops. The first table demonstrates that households commonly reported receiving rice through the scheme, but were less likely to report receiving dal and other commodities (although in each case this around 9 in 10 households were accessing the scheme). Although access to the scheme is typically high in the sample, there are some differences between groups; notably it appears that there are some differences between urban and rural areas (also reflected in ethnic/caste differences), with households in rural areas being less likely to receive sugar and more likely to receive kerosene than those in urban areas.

It is to be noted here that the impressively high outreach of TPDS is not reflective of its reach in most of the country. As Khera (2011) documents, Andhra Pradesh, along with Tamil Nadu and Himachal Pradesh, has among the highest take-up of TPDS. Other states such as Uttar Pradesh, Chattisgarh and Odisha have much lower take-up, although this has improved in recent years. Elsewhere attention has been drawn to problems within the TPDS where some BPL households are excluded and other households above the poverty line managed to gain access (Saxena n.d.). As reported elsewhere, problems of mismanagement and misappropriation of resources have undermined the ability of both the TPDS and the MDMS to achieve their goals (Kattumuri 2011).

Table 5.4 considers how satisfied Young Lives households report being with the TPDS. Encouragingly over one in five households (83 per cent) reported satisfaction with the service, with this proportion broadly similar across social groups. However about 30 per cent of the dissatisfied users reported that they received poor-quality food items; nearly one-quarter of them reported that the quantity of food items supplied through TPDS was insufficient (23 per cent) and 38 per cent suggested that TPDS services were irregular. There are variations across the social groupings, but understanding what these may suggest requires further examination as they may reflect either differences in experiences or expectations. Households in urban areas are about twice as likely than those in rural areas to report inconvenient opening hours (17.5 per cent and 6.5 per cent respectively). Those households where mothers are educated to above secondary level are particularly likely to report that TPDS has poorer-quality food (this group is also less likely to use the TPDS). Worryingly, poorer households are more likely to report accessing an insufficient quantity of food through the TPDS, but are less likely than non-poor households to report an irregular supply through the scheme (though rural households, some of the disadvantaged groupings and households with uneducated mothers do report an irregular supply).

To develop the survey evidence, focus group discussions were held on these topics with some Older Cohort children in 2008 (as part of the second round of qualitative research and in order to examine concerns over rapid food inflation). The young people, by and large, appreciated both the TPDS and the MDMS (see also below) and their contribution to mitigating the impact of the food price crisis. Girls in general talked more positively about the impact of the TPDS. For example, Sania from Polur maintained that the TPDS helped poor people “to lead life without starvation, and children are able to eat full meals regularly.” Another girl described the impact of the programme in terms of “giving poor people a new life.” However, the boys in Polur were very

critical of the TPDS and thought that it was of no use as the quality of grains being distributed was too poor and a regular supply was not ensured (as reflected in Table 5.4).

The focus group discussions also covered other weaknesses in the scheme, most of them being linked to the implementation process. Exclusion, leakages (food being sold outside the scheme for a higher price), poor quality, limited quantity not being sufficient for large families, errors in weighing resulting in less food, and irregular supply were the weaknesses suggested in the focus groups. These observations from the children are in accordance with observations reported in a number of other sources (Planning Commission 2005; Swaminathan 2000; Saxena n.d.). These studies also point out shortcomings like non-viability of fair-price shops, not fulfilling the price-stabilisation objective, etc. (Saxena n.d.: 45). The children were hopeful that if the shortcomings of the TPDS were addressed, it could be an important means of tackling the food price crisis – important given concerns about the risks of future food and fuel inflation. Here, the government could play an important role and the fair-price shop dealers also need to be made more accountable.

### **5.3. Welfare programmes for marginalised groups**

National and state governments have introduced some social protection programmes for marginalised groups (caste and gender groups, and out-of-school children) for overall development.<sup>7</sup> In addition to caste- and gender-based programmes, Below the Poverty Line (BPL) cards and Rajiv Arogyasri are the two other major government welfare schemes that enable poor people to access benefits and programmes, including the TPDS. The objective of Rajiv Arogyasri is to improve the access of BPL families to medical care for the treatment of diseases that involve hospitalisation and surgery through an identified network of healthcare providers. The number of diseases covered under this scheme has been increased in a phased manner. The scheme was initially launched in three districts 2007 (all of which are covered by Young Lives) in 2007 and has now been extended to all the districts in Andhra Pradesh. Thus, a Rajiv Arogyasri card is a prerequisite to modern medical treatment in cases of necessity, which poor people might not otherwise be in a position to afford. In order to operate the scheme, a public–private partnership has been promoted between an insurance company/TPA, the private sector hospitals and the state agencies. These two welfare schemes have a bearing on children’s well-being and Young Lives can help assess their contribution to it.

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<sup>7</sup> This category of programmes includes: residential schools run by the Social Welfare Department, the Education Guarantee Scheme under SSA, and the Programme for the Prevention of Trafficking for high-risk groups or communities.

**Table 5.5. Households with BPL cards and Rajiv Arogyasri (health insurance) cards (both cohorts) (%)**

	<b>Have BPL card</b>	<b>Have Rajiv Arogyasri card</b>	<b>Have used Rajiv Arogyasri</b>
Urban	78.2	67.8	3.5
Rural	95.7	88.8	3.1
Poor	97.4	90.4	2.6
Non-poor	90.6	83.0	3.3
Scheduled Castes	95.7	88.2	2.7
Scheduled Tribes	92.2	85.2	3.3
Backward Classes	93.1	85.6	2.9
Other Castes	81.4	72.0	4.2
Maternal education: no education	97.1	88.9	3.2
Maternal education: up to 5 years	93.3	86.9	2.3
Maternal education: 5 to 10 years	83.9	76.9	4.1
Maternal education: more than 10 years	56.2	44.4	2.5
Younger Cohort	91.4	82.6	3.3
Older Cohort	90.8	84.8	2.9
Total	91.2	83.4	3.2

Ninety per cent of the households (both cohorts) possess the BPL cards – more so among the rural households (96 per cent compared with 78 per cent of urban households). Similarly, 83 per cent of the households (88 per cent of the rural and 68 per cent of the urban) have Rajiv Arogyasri cards, which are given to the BPL households. This scheme has received high political support, and so media coverage which may in part explain its high take-up of this scheme. In both the cases, high levels of maternal education are negatively associated with the possession of these cards, with children in households with less educated mothers being more likely to be covered by the schemes (Table 5.5). Thus majority of the rural households have some sort of health insurance through their Rajiv Arogyasri card. Though this coverage is impressive, there may be more basic healthcare needs which also require further policy attention (as demonstrated by the high level of stunting and thinness highlighted earlier in this report).

#### **5.4 Midday Meal Scheme**

The Midday Meal Scheme (MDMS) is one of the most important government interventions in education in the last decade. Although announced in 1995, the scheme was not implemented in most states till 2001, when the Supreme Court ordered it to be implemented in a time-bound manner in every state. The scheme entitles all children in primary and upper primary classes in government schools and government-aided private schools to a cooked meal of a set nutritional value. In 2004, the Supreme Court additionally ordered that in drought-affected areas, children should continue to be served the midday meal even during the summer holidays, as a relief measure.

The scheme has several objectives: to increase enrolment and attendance, to increase short-term concentration through reducing hunger, to improve the nutritional status of children and to break down social barriers by encouraging children from different backgrounds to sit and eat together. Khera (2011) and Afridi (2007) document the beneficial effects of the MDMS in increasing school participation, especially for girls.

Singh (2008) uses Young Lives data from 2002 and 2006 and finds a significant impact of the MDMS as a safety net. He finds that having suffered from a drought causes a significant deterioration in children's nutritional status but that this effect is entirely compensated for by the MDMS in the Younger Cohort. This finding, along with the evidence discussed above, provides justification for the scheme in general and specifically to the continuation of the programme even during the summer holidays in drought-afflicted areas.

**Table 5.6. Children accessing the MDMS (%)**

	Enrolled in government school	Access midday meal	Served hot, cooked meal	Always like the food
Boys	48.4	91.6	99.1	71.4
Girls	61.3	91.5	99.2	77.3
Urban	17.3	75.0	100.0	63.5
Rural	67.6	93.0	99.1	75.3
Non-poor	49.7	92.1	98.8	74.1
Poor	80.2	90.0	100.0	74.7
Scheduled Castes	69.9	95.0	98.3	79.0
Scheduled Tribes	75.8	88.2	98.8	80.0
Backward Classes	54.6	93.8	99.6	70.8
Other Castes	27.6	79.1	100.0	73.6
Maternal education: no education	70.4	93.8	99.4	73.5
Maternal education: up to 5 years	59.9	87.7	98.3	78.1
Maternal education: 5 to 10 years	30.0	87.1	100.0	75.4
Maternal education: more than 10 years	5.0	66.7	75.0	50.0
Total	54.3	91.5	99.2	74.5

Note: Columns 2, 3 and 4 are a percentage of the children attending government schools (column 1).

Table 5.6 considers access to the MDMS, together with some further questions from the survey relating to the meal. Of the Young Lives children enrolled in government schools, over nine in ten children report accessing the MDMS, which was almost always a hot, cooked meal. About three-quarters of them report always liking the meal. The penetration of the MDMS has been truly impressive and in documenting this, we complement several other studies which have also documented its widespread prevalence across the country (e.g. Pratham 2010).

## 5.5 Girl Child Protection Scheme

The Girl Child Protection Scheme is implemented by the Women and Child Welfare Department of Andhra Pradesh. Its primary aims are to eliminate prejudice and discrimination against girls, particularly through encouraging the enrolment of girls in school and to ensure they continue school to intermediate level (pre-university). It also aims to protect the rights of girls and empower them socially and financially and to eliminate negative cultural attitudes and practices against girls.

The scheme is open to families with one or two girls, who have used family planning services, and whose total annual household income is below Rs.20,000 for rural areas and Rs.24,000 in urban areas. The state government will deposit Rs.5,000 in a bank account for

eligible girls on birth, which can be accessed on completion of Grade 10 for girls continuing their education or when the child is 18. Little research is available on the impact of this scheme, due to data limitations. Again, Young Lives is well placed to help to evaluate its impact over time as the Young Lives children grow and can take advantage of it.

**Table 5.7. Households accessing Girl Child Protection Scheme\* and the benefits they perceive (both cohorts, %)**

	Households accessing scheme	Main perceived benefit		
		Motivation for providing education to girls	Financial support for higher education	Other benefits
Urban	8.3	32.6	60.5	7
Rural	17.6	45.1	43.3	11.6
Non poor	15.4	46.5	42.3	11.2
Poor	15.2	31.4	56.9	11.8
Scheduled Castes	20.5	34.5	50.0	15.5
Scheduled Tribes	15.9	42.1	50.0	7.9
Backward Classes	14.5	53.4	38.5	8.1
Other Castes	12.1	30.0	56.0	14.0
Maternal education: no education	15.2	49.1	37.6	13.3
Maternal education: up to 5 years	19.0	37.0	56.2	6.8
Maternal education: 5 to 10 years	14.0	35.9	53.1	10.9
Maternal education: more than 10 years	6.7	28.6	71.4	0.0
Younger Cohort	14.9	39.7	47.4	12.9
Older Cohort	16.1	50.5	42.3	7.2
Total	15.3	43.4	45.6	10.9

Note: This includes only the households that have a girl aged 5–18 (who is not necessarily the Young Lives sample child). Columns 2 to 5 are percentages of those households accessing the scheme.

Around 15 per cent of households in our sample which had at least one girl child between 5 and 17 years of age (not necessarily the Young Lives sample child) have benefited from financial support for her education through the scheme. This proportion is highest among the SCs and lowest among the OCs, which probably reflects their economic status. The primary perceived benefits of the scheme are to motivate parents to continue their daughter's education and to make it easier to finance their education.

## 6. Conclusions and policy implications

This report presents descriptive analysis of data from Rounds 1 to 3 of the Young Lives survey, supplemented by qualitative data from three rounds of qualitative research. This broad description is intended to demonstrate some of the main trends observed, but there is much more data within the study. Young Lives researchers are continuing to analyse the data in policy-relevant ways and the quantitative data have been publically archived for the use of the research community. This concluding section highlights key findings, and discusses some of the possible implications for policy within Andhra Pradesh and in India.

Throughout the first decade of the millennium, Andhra Pradesh, along with the rest of India, has seen rapid economic growth (averaging around 8 per cent during the 2002–07 period, and rising to just over 10 per cent per year in 2007–09), although the rate of growth was much reduced by the global slowdown after 2008. To an extent this wider growth has fed through to consumption levels in the Young Lives sample, which increased by 16 per cent in real terms between 2006 and 2009 (although only part of this rise was due to increasing overall consumption levels, and part to life-cycle differences as families get older). However, disparities remain wide both across rural and urban households and across ethnic and caste groupings. Analysis of the Young Lives wealth index (comprised of housing conditions, service access and ownership of consumer durables) demonstrates that although the rural–urban wealth gap declined between 2002 and 2009, it remains considerable (with consumption in rural areas being about 59 per cent of the level in urban areas). A comparison across the social groupings reveals that the wealth index is highest for the OCs followed by the BCs, SCs and STs in all three rounds of Young Lives survey data.

***Delivering pro-poor growth.*** Although typically households saw consumption expenditure levels increase, the gaps between more advantaged and less advantaged groups remain large, and in some cases they widened. State-level evidence demonstrates much slower growth in the agricultural sector than in urban-based services or industry. Although Young Lives households in urban and rural areas both saw a real-terms increase of around 16 per cent in their consumption expenditure, the cash increase in urban areas was Rs.160 and in rural households Rs.122 rupees. Much more work therefore is needed to ensure pro-poor growth. Strategies to achieve pro-poor growth may include investments in education or health services (including disease prevention) which help ensure poorer people are able to participate in growth; ensuring people have access to land; reforms that would help boost job quality and the returns to poorer households from sectors in which they are often concentrated (especially agriculture); and social protection measures which help protect households from risk (see Lucas 2005; Shepherd 2011). The challenge is to ensure that India is able to implement its pro-poor schemes successfully, which requires more effective operational capacity to ensure schemes reach the poorest households (especially ST and SC households) and that quality is good.

***Poor nutrition needs to remain a major policy concern.*** Despite increasing economic consumption, India remains home to two in five of the world's malnourished children. India ranks India 66 out of 88 developing countries in the Global Hunger Index which noted that hunger rates were 'alarming' (von Braun et al. 2008). One of the starker findings from initial

analysis of Round 3 of Young Lives data was that, despite a decade of economic growth, the rate of stunting for children at age of 8 fell by only 4 percentage points between 2002 and 2009 (from 33 per cent to 29 per cent), and stunting rates were twice as high in rural households as in urban ones for 8-year-olds in 2009. Alongside stunting, other indicators of nutrition are extremely concerning: the proportion of children officially classed as thin has not changed for the past 20 years, at around 48 per cent (Kattumuri 2011).

In India 30 per cent of infants have a low birth weight and one in every three adult Indians has a BMI below 18.5, indicating chronic energy deficiency. Stunting has been associated with effects on different domains of child development. Its causes are multiple – including access to a certain volume and quality of food in early childhood as well as health improvement measures to prevent disease, which undermines nutrition. Measures to reduce child stunting, therefore include improving access to food and improving health and sanitation infrastructure. Much more is needed to use the engine of economic growth to deliver commensurate improvements for poorer children. The Twelfth Five-Year Plan has highlighted nutrition as a key policy concern, with responsibility lying with the Prime Minister's Office National Nutrition Council. This focus given to poor nutrition is welcome but will require engaging with the complexity of its causes and therefore calls for a multi-sectoral approach to address the issues of the availability of food, access to it and the absorption of nutrients.

**Combating the high burden of ill-health on poor families.** High rates of illness are a common feature of chronic poverty. A high burden of illness among children is likely to undermine their nutrition or other aspects of their physical development and their ability to attend and learn in school. Family illness or death is likely to mean that children fulfil roles otherwise undertaken by parents or siblings, including work and care. Illnesses within the family also cause significant additional costs, perhaps entailing debt, and may undermine participation in livelihood activities (in the period 2006–09, parental illness was reported by 12.8 per cent of households). Disease prevention and improved basic healthcare are therefore important elements of pro-poor policies.

The Government of Andhra Pradesh has recently introduced the Rajiv Arogyasri health insurance programme, aimed at improving access to hospital treatment for poorer households. Though Young Lives evidence shows high take-up of Rajiv Arogyasri cards, there is little use of the services; around 3.2 per cent of Young Lives households with these cards have used them to access services. The Rashtriya Suraksha Bima Yojana (RSBY) health insurance being rolled out in other states across India is aimed at reducing the costs of hospital-based medicine for families with BPL cards. The development of such health insurance schemes is welcome but since primary healthcare is not covered by these hospital-based schemes, families still face high health-related costs to access clinics (and accessible primary care is often of low quality).

Qualitative evidence from Young Lives demonstrates that healthcare costs contribute to debt and prove to be a barrier to effective primary healthcare. Caregivers often refer to a lack of access to functioning primary health services, which means parents often have either to take their child to a district hospital or to opt for costly private medical care. (National Statistics suggest that public health spending was just 1 per cent of GDP by 2008/9.) Young Lives data also highlight the related problem of a lack of progress in delivering improved sanitation. Access to improved sanitation increased by just 5 percentage points between 2002 and 2009, with only one in three Young Lives children (35 per cent) being in households reporting access to improved sanitation. Poor sanitation is a danger to health, and thereby also to child nutrition. Policymakers concerned to improve child health therefore need to give greater emphasis to

improving access to primary and preventative health strategies (including improved sanitation) alongside the more complex secondary healthcare services on which the Rajiv Arogyasri and RSBY schemes focus.

**Improved enrolment but many children have still left school by age 15.** Education is a key strategy both to ensure poorer people and communities can share in economic growth and to sustain growth over the longer term. This area is clearly important for children as well as a key national priority, as shown by the recent Right to Education legislation. Rising enrolment rates at primary level are a great success, but have not yet been matched by the quality improvements necessary to ensure all children can benefit from them. By 2009, almost 99 per cent of Young Lives 8-year-olds reported being enrolled in school (up very slightly on the same figure for 8-year-olds in 2002). In spite of this impressive figure, there are concerns: even by age 8 in 2009, more than one in ten children had repeated a year, with this being especially common for rural and poorer households, and for boys. Although enrolment rates are going up, one in ten of the Older Cohort had left formal schooling by the age of 12 and only three-quarters were still in education by the age of 15. Girls, children in rural areas, and ST, SC and BC groups were all more likely to have left school by 15 than other groups. It is particularly notable in our data that very few households report participating in the Girl Child Protection Scheme, which aims to help support girls to stay in education. Further, although education is important for its own sake, and a predictor of later outcomes, for children's life chances to improve it is also necessary that new livelihood options are open to children leaving schools and colleges, to enable them to use their skills. Similarly, for those young people who have left formal schooling, vocational strategies may help them engage in the benefits of economic change. Policymakers therefore need not only to help keep children in school, but to maximise the potential for them to learn when they are there; and to think about how those who have left school acquire skills and what sorts of opportunities will be available to young people in the labour market.

**Building on increased enrolment to deliver better learning for children.** There is a large weight of international and domestic opinion, and research evidence, on the importance of pre-school interventions such as ICDS (see Murray and Woodhead 2010), both in delivering improved child nutrition and in helping prepare children for transitions to school (although, as has been noted, ICDS nutritional interventions miss very young children as children are often older than 3 when they attend, Gragnolati et al. 2005). As well as highlighting necessary quality improvements within the existing ICDS scheme, the Round 3 findings show, notably, that only half of the Younger Cohort children had experienced any pre-school education, and that poorer children and those in rural areas were the least likely to have done so (for example 44 per cent of children growing up in rural areas had attended preschool, compared with 71 per cent in urban areas). Ensuring ICDS is of good quality and that poorer children are able to participate in it is critical in getting the foundations right for children's later life. Improving the impact of education for children, however, requires improving the quality of schools as well as retaining children in school, and ensuring that other pressures (including poverty) do not undermine children's ability to learn. There are many issues which have been discussed in relation to the quality of education, including teacher training, teacher absenteeism (particularly in rural areas), the quality of teaching materials, and the quality of infrastructure (including the availability of gender segregated toilets, which features within girls accounts of barriers they face in attending schools).

**Helping children who work to learn.** Young Lives evidence shows that many children have to combine school with work. This is often not work for pay, but unpaid activity, for example on family farms or caring for family members, and therefore child labour abolition movements may not impact upon it. The pressures on children who work may reduce their time for formal learning (and also encourage some children to leave formal schooling), but children's work may also be a critical way for households to manage low resources or labour needs. Agricultural work may put pressure on children to spend large amounts of time out of school during harvest. Social protection and livelihood measures which reduce risk and increase household incomes are also important in helping ensure children can stay within the education system. However, alongside this it is also important that school systems are flexible and supportive to children who work (including where they miss periods of schooling).

**A fast growing private sector in education may be increasing differences between boys and girls.** Young Lives evidence demonstrates the growth in the private schooling sector in Andhra Pradesh, with the private second share in 2009-09 standing at 21.5 per cent (NUEPA 2011) Comparing the two cohorts at age 8 shows that the proportion in private schools nearly doubled. In 2002, 23 per cent of Young Lives children were attending private primary schools at the age of 8; by 2009, this was 44 per cent. The increase is driven by many children who would previously have been in government schools now being in private schools. The government has recognised the need to improve schools, including by learning from the private sector, but has so far focused its attention on secondary-level education. The shift towards private schooling has had significant implications for policies such as the Right to Education Act (which in some ways formalises the role of the private sector in education, registering private schools and requiring some places be reserved for children from more deprived backgrounds). The rise of the private sector may well also reflect parental concerns over quality in government schools (including preference for the use of English as a teaching medium, which typical in private schools). The perceived need to send children to private schools is also likely to put further pressure on family budgets, stretching existing resources and forcing parents to choose between children in the allocation of limited resources. It is particularly notable that within the general increase in enrolment in private schools, this has been greatest for boys (by 2009, 50 per cent of Younger Cohort boys were attending private schools, compared with 37 per cent of girls. Whereas just under three-quarters of OC children were attending private schools by 2009, this was one in five (22 per cent) for the more disadvantaged ST households.

UNESCO has argued that, despite the private sector having a role to increase capacity, for reasons of equality it is important to maintain strong public systems (UNESCO 2009). If more-advantaged groups are concentrated in the private system, and less-advantaged ones in the public sector, widening gaps risk exacerbating existing inequalities, by gender and by socio-economic disadvantage. The Right to Education Free and Compulsory Act 2009 is an important opportunity to ensure that quality standards are established and that adequate monitoring mechanisms exist for both private, aided and unaided schools and that good quality assurance is created for all India's schools, essential also to reaching international Education For All goals.

**And finally helping poorer families cope with risk and reducing chronic poverty.** Young Lives evidence demonstrates how common risk is in the lives of Young Lives families. More than a third of rural households reported crop failure between 2006 and 2009, and 15 per cent the death of livestock. Eight in ten households (77 per cent) reported food price increases

between 2006 and 2009, the period coinciding with the global food, fuel and financial crisis. Other analysis shows that shocks are interrelated: households experiencing one shock also face an increased chance of experiencing further shocks or adverse events (Dornan 2010). The high proportion of poorer households' budgets spent on food demonstrates the particular danger of food-price inflation, and is an important part of the context within which recent Right to Food legislation is being formulated to help tackle food insecurity. A large number of Young Lives households report using the TPDS scheme, which may have a particular role in ensuring continued access to basic staples, but about 17 per cent of participating households report dissatisfaction with the scheme, with leading causes of concern being poor quality, insufficient quantity and irregular supply.

The MGNREGS has now been rolled out and provides both a wage floor in rural areas and elements of insurance by guaranteeing a certain number of days of employment. Young Lives data reveal that only 15 per cent of enrolled households worked the full 100 days. Furthermore, MGNREGS is limited to rural areas, and little social protection provision exists for those living in urban slums, where households still face considerable risk (for example Dornan 2010 shows that about a third of Young Lives households facing a family illness or death and one in five households experiencing an economic shock did not have access to the MGNREGS scheme). India spends over 2 per cent of its GDP on its core safety net programmes. Some of these programmes are ground-breaking and well-designed, and there are pockets of good performance, but the overall returns to spending in terms of poverty reduction and improvement in livelihoods have not reached their full potential. Despite increased household income, many children in Young Lives households continue to face deprivation, and in particular face the challenge of increased food prices, and inadequate nutrition, sanitation and health facilities, and social inequalities persist. Childhood poverty will continue unless we are able to address stark inequalities based on gender, class and caste.

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# Appendix 1. Definitions of key outcome variables

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
	HQ=Housing quality index	$WI = \frac{HQ + CD + SV}{3}$	Simple average of scaled number of rooms per person (capping at 1.5), material of walls, material of roof and material of floor	$HQ = \frac{HQ_1 + HQ_2 + HQ_3 + HQ_4}{4}$ <p>         HQ1 = (Number of Rooms/ Household size)/1.5          HQ2 = 1 if Wall's material = Brick, concrete, stone          HQ3 = 1 if Roof's material = Concrete, cement, corrugated/galvanised iron, or tiles/ slates          HQ4 = 1 if Floor's material = Cement, concrete, tiles, stone/brick, granite/ marble/polished stone, or laminated material       </p> $CD = \frac{CD_1 + CD_2 + \dots + CD_{12}}{12}$ <p>         CD1= 1 if household owns a radio          CD2= 1 if household owns a television          CD3= 1 if household owns a bicycle          CD4= 1 if household owns a motorcycle          CD5= 1 if household owns a car          CD6= 1 if household owns a mobile phone          CD7= 1 if household owns a land line phone          CD8= 1 if household owns a fan          CD9= 1 if household owns a refrigerator       </p> $SV = \frac{SV_1 + SV_2 + SV_3 + SV_4}{4}$ <p>         SV1= 1 if household has electricity          SV2 = 1 if source of water is piped into dwelling, yard, or plot, piped into neighbour's or relative's dwelling, bought, in tubewell in dwelling/yard, public standpipe, common tap or public well, protected community tank/well          SV3 = 1 if household has own toilet facility (flush toilet, septic tank, pit latrine in household) or access to a communal pit latrine, or to neighbour/relative's toilet          SV4 = 1 if cooking fuel is gas, electricity, kerosene or paraffin       </p>
Wealth Index (WI)	Composite index that reflects the welfare of household members in terms of the quality of the dwelling, use of durable goods, and access to basic services	CD=Consumer durables index	Scaled sum of 9 consumer durable dummies, all of which are consistent across rounds	

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
		$TotCons = \frac{(FCons + NFCons)}{FullDeflator * HHSize}$	FCons= Food consumption  Sum of estimated value of consumption of food items	$FCons = FCons_1 + FCons_2 - FCons_3$  FCons1=Sum(food bought and consumed in the past two weeks)*2 FCons2 = Sum (food consumed from own harvest or stock in the last 2 weeks)*2 FCons3 = Sum (food consumed from gifts, transfers, food aid in the past 2 weeks)*2
			Sum of estimated value of food and non-food consumption, deflated by the Consumer Price Index (CPI) base 2006) - of the month of the interview - divided by household size. The consumption aggregate is only constructed for R2 and R3	$NFCons = EduCons + MedCons + ClothCons + OthCons_1 + OthCons_2 + OthCons_3$  EduCons= Sum (expenditure on education items in the past year)/12 [excluding school fees for adults] MedCons = Sum (expenditure on medical treatment and medicines in the past year)/12 ClothCons= Sum (expenditure on adults and children's clothing and footwear in the past year) /12 OthCons1 = Sum (expenditure on personal care items, internet, transport, cigarettes & tobacco, kerosene, gas, etc, and security in the last 30 days) OthCons2= Sum (expenditure on rents, dwelling and vehicle maintenance, cleaning materials, business tax/license, water, electricity, and telephone rates, fees and paper work and legal advice) / 12 OthCons3= Sum (expenditure on entertainment, presents for children, jewellery, other transport costs, and other non-food consumption in the past year)/12
			NFCons= Non-Food consumption	CPI=CPI*S*CPI CPI=Sum(SH*PRI)/AV(CPSIS), i=1..10 SHi=share of consumption item i in total community consumption, PRI=community price of item i AVCPIS=Average(CPIS) across communities CPI=2006 Average Andhra Pradesh wide CPI varying by month and urban/rural location as reported by the Indian Labour Bureau

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Absolute poverty	Percentage of households/YL children living with a consumption level below the national poverty line	Proportion of households with a total real monthly per capita consumption below the Andhra Pradesh poverty line (estimated at 2006 prices). The poverty line varies according to region and urban/rural characteristics	Poverty lines are Andhra Pradesh poverty lines separately calculated for urban and rural areas as reported in the Planning Commission Nov 2009 report.	
Relative poverty	Percentage of households/ YL children living with a consumption level below the relative poverty line	Proportion of households with a total real monthly per capita consumption level below 50% of the median consumption for all households	As these real poverty lines are calculated using 2004/05 prices we shift base year prices to 2006 so that the same base year is used for poverty lines and real per capita consumption expenditure	
Subjective poverty	Percentage of households that perceived themselves as poor	Proportion of households reporting to be among the poorest or the poorest compared to other households in their community/suburb	Perceptions of children's well-being, grouped in three categories (low, medium, high)	
Subjective well-being				

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Shocks	Percentage of households experiencing any shocks in the past 3 years (last interview)	Percentage of households that have suffered negative changes in their livelihoods due to crime, regulation, economy, family-related or environmental shocks	Crime-related shocks	<p>Crime-related shocks include destruction or theft of tools or inputs of production, theft of cash, crops, livestock, theft or destruction of housing or consumer goods, and crime resulting in death or disablement of working adult household member</p> <p>Regulation-related shocks include land redistribution, resettlement or forced migration, restrictions on migration, forced contributions or arbitrary taxation, and eviction</p>
Dwelling-related shocks	Percentage of households that experienced shocks related to government regulations in the past 3 years	Percentage of households that experienced crime-related shocks in the past 3 years	Crime-related shocks	<p>Household economy-related shocks include large increases (decreases) in input (output) prices, death of livestock, destruction of place of employment, job-loss, industrial actions, contract disputes about purchased inputs/ sale of outputs, credit source disbanded, confiscation of assets, disputes with family members or neighbours regarding land or assets. Excludes increase in food price asked in R3 only</p> <p>Environment-related shocks include droughts, too much rain or flood, erosion or landslides, frosts or hailstorms, pests or diseases affecting crops or livestock, crops failure, and pests and diseases that led to storage losses</p> <p>Dwelling-related shocks include fire affecting living accommodation and building collapse</p>
Family health-related shocks	Percentage of households that experienced a shock that has affected the dwelling in the past 3 years	Percentage of households that experienced shocks that affected negatively the household economy in the past 3 years	Household economy-related shocks	<p>Family health-related shocks include death or episodes of illness of child's parents or other household member. Other family circumstances-related shocks (divorce, birth of new household member, imprisonment, etc) are not included in this group</p>
	Food-related shock	Percentage of households that have experienced a large increase in the price of food in the past 3 years	Food-related shocks include a large increase in food prices	

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Access to electricity	Percentage of households with access to electricity			
Sanitation facilities	Percentage of households with adequate toilet facilities		Proportion of households with own toilet facility (flush toilet, septic tank, pit latrine in household) or access to a communal pit latrine, or to neighbour/relative's toilet	
Access to safe drinking water			Proportion of households with piped into dwelling, yard, or plot, piped into neighbour or relative's dwelling, bought, tubewell in dwelling/yard, public standpipe, common tap or public well, protected community water tank/well	
Enrolment			Proportion of children who are currently enrolled in formal education.	
Drop-out			Proportion of children who were once enrolled in formal schooling but are currently not enrolled	
Stunting			Proportion of children with a z-score of height for age of more than two standard deviations (<-2SD)	

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Underweight	Percentage of children with low weight for age	Proportion of children with a z-score of weight for age of more than two standard deviations (<-2SD)		
Wasting	Percentage of children with low BMI	Proportion of children with a z-score of BMI of more than two standard deviations (<-2SD)		
Child work	Percentage of children performing paid activities	Proportion of children who reported having done paid work in the past 12 months and those who declared at least one hour of paid activities in time use module		
Time use	Time spent in different activities on a typical day	Average number of hours that children spend on household chores, taking care of family members, performing domestic tasks, at school, studying outside school, performing paid activities and in leisure activities on a typical day.	The denominator is the total number of children performing the activity	

## Appendix 2. Young Lives publications on India (most recent first)

Galab, S. and Ingo Outes-Leon (2011, in press) *Siblings, Schooling, Work and Drought*, Young Lives Working Paper

Dercon, Stefan and Alan Sanchez (2011, in press) *Long-term Implications of Under-nutrition on Psychosocial Competencies: Evidence from Four Developing Countries*, Young Lives Working Paper

Crivello, Gina, Uma Vennam and Anuradha Komanduri (2011, in press) 'Ridiculed for Not Having Anything': Children's Views on Poverty and Inequality in Rural India', in Jo Boyden and Michael Bourdillon (eds) *Childhood Poverty: A Multidisciplinary Approach*, Basingstoke: Palgrave Macmillan

Dercon, Stefan and Abhijeet Singh (2011) *From Nutrition to Aspirations and Self-efficacy: Gender Bias over Time among Children in Four Countries*, Background Paper written for the *World Development Report 2012*

Dornan, Paul (2011) *Growth, Wealth and Inequality: Evidence from Young Lives*, Policy Paper 5, Oxford: Young Lives

Pells, Kirrily (2011) *Poverty, Risk and Families' Responses: Evidence from Young Lives*, Policy Paper 4, Oxford: Young Lives

Pells, Kirrily (2011) *Poverty and Gender Inequalities: Evidence from Young Lives*, Policy Paper 3, Oxford: Young Lives

Helmers, Christian and Manasa Patnam (2011) 'The Formation and Evolution of Childhood Skill Acquisition: Evidence from India', *Journal of Development Economics* 95.2: 252-266

Barnett, Inka (2011) *Is the Dual Burden of Over- and Under-nutrition a Concern for Poor Households in Ethiopia, India, Peru and Vietnam?*, Working Paper 67, Oxford: Young Lives

Streuli, Natalia, Uma Vennam and Martin Woodhead (2011) *Increasing Choice or Inequality? Pathways through Early Education in Andhra Pradesh, India*, Working Papers in Early Childhood Development 58, The Hague: Bernard van Leer Foundation

Pells, Kirrily (2010) *Inequalities, Life Chances and Gender*, Round 3 Preliminary Findings, Oxford: Young Lives

Dornan, Paul (2010) *Understanding the Impacts of Crisis on Children in Developing Countries*, Round 3 Preliminary Findings, Oxford: Young Lives

Vennam, Uma, Gina Crivello and Hymavathi Kongara (2010) *Children's Perspectives on Risk and Vulnerability in Contexts of Poverty and Change: Findings from Andhra Pradesh, India*, Working Paper 64, Oxford: Young Lives

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- Komanduri, Anuradha, Uma Vennam and K. Hymavathi (2009) 'Voices of Children in Poverty: Promoting Their Right to Participation', *Journal of Juridical Studies* (Dept of Law, SPMVV)
- Woodhead, Martin, Patricia Ames, Uma Vennam, Workneh Abebe and Natalia Streuli (2009) *Equity and Quality? Challenges for Early Childhood and Primary Education in Ethiopia, India and Peru*, Working Papers in Early Childhood Development 55, The Hague: Bernard van Leer Foundation
- Vennam, Uma and Anuradha Komanduri (2009) *Young Lives Qualitative Research: Round 1 (India)*, Technical Note 21, Oxford: Young Lives
- Lopez Boo, Florencia (2009) *The Production Function of Cognitive Skills: Nutrition, Parental Inputs and Caste Test Gaps in India*, Working Paper 55, Oxford: Young Lives
- Vennam, Uma and Anuradha Komanduri (2009) *Selected Topics in Child Well-being in India: A Review of Policies, Programmes and Services*, Technical Note 20, Oxford: Young Lives
- Woodhead, Martin (2009) *Pathways through Early Childhood Education in Ethiopia, India and Peru: Rights, Equity and Diversity*, Working Paper 54, Oxford: Young Lives
- Himaz, Rozana (2009) 'Persistent Stunting in Middle Childhood: The Case of Andhra Pradesh Using Longitudinal Data', *IDS Bulletin* 40.4: 30-38
- Nair, Arvind (2009) *Disadvantaged at Birth? The Impact of Caste on Cognitive Development of Young Children in Andhra Pradesh, India*, Young Lives Student Paper (thesis for MSc in Economics for Development, University of Oxford)
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**Young Lives is a long-term international research project investigating the changing nature of childhood poverty in four developing countries – Ethiopia, India (in Andhra Pradesh), Peru and Vietnam – over 15 years, the timeframe set by the UN to assess progress towards the UN Millennium Development Goals.**

Through interviews, group work and case studies with the children, their parents, 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 aspirations for the future, set against the environmental and social realities of their communities.

This report presents initial findings from the third round of data collection by Young Lives in Andhra Pradesh (India), carried out from late 2009 to early 2010. It gives a broad outline of some of the key indicators of childhood poverty and changes that have taken place in the children's lives between the earlier rounds of data collection in 2002 and 2006 and this third round. In particular, we are able to make comparisons between the older children at age 8 in 2002 (in Round 1), and the younger cohort at age 8 in 2009 (Round 3) – to highlight changes that have happened in the children's lives and their communities over that time.

The Young Lives team in Andhra Pradesh works with the Centre for Economic and Social Studies (CESS) in Hyderabad, Sri Padmavati Mahila Visvavidyalam (Women's University) (SPMVV) in Tirupati, and Save the Children-Bal Raksha, Bharat.

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