# Young Lives Preliminary Country Report: Andhra Pradesh, India

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**September 2003**

Young Lives
An International Study of Childhood Poverty

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# Abbreviations

| | |
|---|---|
| **APDPIP** | Andhra Pradesh District Poverty Initiative Project |
| **APRPRP** | Andhra Pradesh Rural Poverty Reduction Programme |
| **ASSC** | absolute structural social capital |
| **BCG** | Bacillus Calmette-Guerin |
| **CESS** | Centre for Economic And Social Studies |
| **CMR** | Child mortality rate |
| **CPM** | Coloured Progressive Matrices |
| **CSC** | Cognitive Social Capital |
| **DFID** | Department for International Development |
| **DHS** | district health survey |
| **DPEP** | District Primary Education Programme |
| **GOAP** | Government of Andhra Pradesh |
| **GOI** | Government of India |
| **HAZ** | Height for age z score |
| **HDI** | human development index |
| **ICAR** | Indian Council of Agricultural Research |
| **ICDS** | Integrated Child Development Services |
| **IIPS** | International Institute for Population Sciences |
| **IMR** | infant mortality rate |
| **INHP** | Integrated Nutrition and Health Programme |
| **MICS** | Multiple Indicator Clusters Survey |
| **MMR** | Maternal mortality rate |
| **NCEAR** | National Council of Applied Economic Research |
| **NFHS** | National Family Health Survey |
| **NGO** | non-government organisation |
| **PDS** | Public Distribution System |
| **RSSC** | Relative Structural Social Capital |
| **SDQ** | Strengths and Difficulties Questionnaire |
| **SRQ** | Self-Reporting Questionnaire |
| **TOT** | Training of Trainers |
| **UNDP** | United Nations Development Programme |
| **UNICEF** | United Nations Children's Fund |
| **WAZ** | Weight for age z score |
| **WHO** | World Health Organisation |
| **WHZ** | Weight for height z score |

# Preface

The Young Lives project is a longitudinal study on child poverty being carried out in Ethiopia, India, Peru and Vietnam (website: **http://www.younglives.org.uk/**). The research is co-ordinated by an academic consortium involving the University of Reading, the London School of Hygiene and Tropical Medicine, South Bank University, the University of Sussex, the South African Medical Research Council and Save the Children UK, which is also the dissemination and advocacy partner. The UK Government Department for International Development (DFID) is funding the first phase of the project. In each of the countries, this included the first survey of 2000 index children aged around one year and a survey of 1000 children aged around eight years, covering different geographical areas. The Young Lives project is unique in measuring child wellbeing in a holistic and consistent way across several developing countries, including economic, social, physical, psychological and demographic aspects. The first round data collection finished in December 2002 and an important priority has been the early production of a preliminary report from each country, each report following a similar structure.

This preliminary report covers only a small selection of the explanatory and outcome variables. Data are mainly presented for the entire sample of an age group, in most cases separated into wealth groups or by urban/rural location. The full richness of the data is not reflected in this preliminary report, but we hope that it contains enough information to prompt academics, practitioners, policy-makers and other stakeholders to provide ideas, comments and questions to the Young Lives team.

These will feed into further analysis plans, which will include work on the three main 'story lines' of the project: the effects on child wellbeing of (i) access to and use of services, (ii) social relations, and (iii) livelihoods. As in any longitudinal research, the most interesting and important results will come after several rounds of data collection – we hope to survey our index children approximately every three years until they are 15 years old. However, an examination of this first round – like a single snap-shot, cross-sectional study – can produce notable results even at this early stage.

For further information about the India component of the Young Lives project, please contact S. Galab (sgalab@cess.ac.in), Piush Antony (piush_antony@yahoo.com) or access to the local website (www.younglives.org.india). In addition, for further information on the international dimension of the project, please contact the International Co-ordinator, Justine Coulson (j.coulson@scfuk.org.uk).

# Acknowledgements

The authors would like to place on record, their thanks to the many people who have helped make the study possible.

We would like to thank the UK Department for International Development (DFID) for supporting Young Lives. DFID supports policies, programmes and projects to promote international development. DFID provided funds for the first phase of Young Lives 2001-2004 as part of that objective but the views and opinions expressed are those of the author(s) alone.

We would like to thank Rachel Marcus (Save the Children UK) and Ian Wilson (Reading University) for their project development work with the Young Lives India team. We would like to thank Prof S. Mahendra Dev (Director of the Centre for Economic and Social Studies, CESS) for the support and commitment he has displayed to the Young Lives project.

In the design phase, we benefited from the deliberations of the Stakeholders Consultative Workshop on child poverty work, jointly organised by Save the Children UK (India) and CESS, Hyderabad. We have also benefited from the input of the members of the Advisory Committee who suggested the inclusion of state-specific child poverty dimensions in the design of our study. We are grateful to ActionAid which conducted the commissioned study 'Voices of the children in different difficult situations' using participatory child poverty assessment methods.

In helping us to finalise our sampling strategy we would like to thank Ian Wilson, together with our non-governmental organisation (NGO) partners who offered their helpful suggestions on sample design.

We would like to thank Anne McCoy (London School of Hygiene and Tropical Medicine) who helped members of the Young Lives team during questionnaire preparation and the fieldwork training phase. We are also indebted to Mr Prasant, from the Delhi office of Save the Children UK (India) for orientating the team on child protection policies and ethical guidelines for conducting surveys with children. Thanks are due to Dr TD Jose for providing training on anthropometry, to Dr K Mayuri, (Agriculture University, Hyderabad) our consultant developmental psychologist for her invaluable training on interview techniques, mental health measures and child development tests. Dr Shiva Prasad of Hyderabad Central University (HCU) has contributed since the inception of Young Lives project.

The fieldwork was organised with the assistance of CESS supervisors T Mahender Reddy, K Prasada Rao, V Malla Reddy, B Narsaiah, M Bhaskar Reddy, David Brynard, B Srinivasand and T Prabhavathi. We would also like to thank our local regional consultants Dr KVS Raju and Dr KV Ramana Reddy for their input during the fieldwork. We are indebted to our fieldworkers and dedicated investigators for their hard work and dedication, to the school teachers and community health workers who assisted the field teams in completing the surveys. We are grateful to them all.

Our special thanks are due to Lydia Sarella, Soni Srivastava and Varalaxmi Moganti for their assistance in reviewing the literature. Ann Cotton at the University of Reading provided organisational and budgetary support for the project, and we would like to express our thanks to P Raja Narender Reddy for his expert secretarial service.

Data management work was completed with the technical support of Cathy Garlick (University of Reading). Preliminary analysis has been carried out using SPSS for Windows statistical software and we are grateful to SPSS UK Ltd for allowing the Young Lives project to use their software free of charge.

The report was written by the Young Lives India team with overall guidance from the UK-based academic consortium. We are extremely grateful to our Young Lives partners in Vietnam for the excellent template they provided for the preparation of this report. We are very grateful for the feedback provided by Ian Wilson and Justine Coulson (Young Lives International Co-ordinator, Save the Children UK).

Finally, no words are sufficient to acknowledge our thanks for the co-operation extended to the Young Lives team by the thousands of respondents and children who willingly gave their valuable time and guaranteed the successful completion of the project.

# Executive summary

Young Lives: An International Study of Childhood Poverty aims at improving our understanding of the causes and consequences of childhood poverty in developing countries, and at informing policy to reduce it. In each of the four Young Lives developing countries, a longitudinal survey will follow 2,000 one-year-old children every three years until they are 15 years old.

In India, the project has been implemented in Andhra Pradesh by two organisations, Centre for Economic and Social Studies (CESS), Hyderabad and Save the Children UK (India).

During the first phase of the study, 2,000 index children aged 6–17.9 months (one-year-olds) and 1,000 children aged 7.5–8.5 years (eight-year-olds) and their households were selected from 20 sentinel sites located across the three regions of Andhra Pradesh. Survey methods included household questionnaires completed by caregivers, child anthropometric measurements, an eight-year-old respondent questionnaire and a community questionnaire. Fieldwork was undertaken in Andhra Pradesh between September and December 2002.

This preliminary country report will present key descriptive results from the first round of data collection and will be followed by further explanatory analyses.

The following are some of the principal highlights of the descriptive data analysis..

## 1. Index children (6 –17.9 months)

Fifty-four per cent of the index children were male; 75 per cent lived in rural communities; 99 per cent were cared for by their biological mother and lived with both their parents.

## 2. Caregivers of index children

Fifty-nine per cent of primary caregivers had never attended school; two per cent had completed below primary level education and 11 per cent had completed primary level schooling. Interestingly, 17 per cent had completed high school and above. Using the Self-Reporting Questionnaire 28 per cent of caregivers had screened positive for mental ill health.

## 3. The index child's household

The majority of households (91 per cent) were headed by a male with only nine per cent headed by females. Fifty-nine per cent of household heads did not complete primary level education. With respect to basic amenities, 82 per cent of households used electricity although only 52 per cent of the poorest families had access to electricity. Seventeen per cent of households did not have protected sources of drinking water; 68 per cent did not have access to a toilet facility; 76 per cent of the poorest households had an earth floor

## 4. Nutrition of the index child

High levels of malnutrition were recorded among the index children. Twenty-eight per cent were stunted, 20 per cent were wasted and 45 per cent were underweight. More children in rural areas were stunted and underweight than in urban areas. The prevalence of stunting and underweight are more

pronounced among children from the poorest households, a similar though less pronounced pattern is seen for wasting.

## 5. Physical health of the index child

Five per cent of children suffered from a chronic health problem; nearly a quarter (24 per cent) had experienced an acute bout of illness in the 24 hours prior to interview; and 18 per cent had experienced a severe injury or accident. These morbidity outcomes were more prevalent among rural children and those from the poorest households.

## 6. Antenatal care during pregnancy with the index children

High levels of antenatal care were recorded; 88 per cent of mothers received ante-natal care and there was near universal coverage of tetanus vaccination during pregnancy (98 per cent). Just under half of all births occurred in the home; index children from rural areas (56 per cent) and from the poorest households (65 per cent) were more likely to have been born in the home. Thirty-nine percent of deliveries were not attended by anyone with medical training.

## 7. Immunisation of index children

A high level of infant immunisation was reported with 84 per cent of index children aged over one year having received immunisation against BCG, polio and measles. Immunisation coverage was lowest amongst children from the poorest wealth group

## 8. Care of the index child

Six per cent of one-year-old children had been cared for by non-household members. Seven per cent of children had been left unsupervised by an adult, in the care of children under the age of five years

## 9. Livelihoods

Ninety per cent of rural households and 92 per cent of the poorest families were engaged in agriculture. The most common urban household economic activity was finance and business (32 per cent). Rural households had a higher level of economic diversification than those from the poorest wealth group; 60 per cent of the rural households and 58 per cent of the poorest households reported a serious debt. Caregivers living in urban areas and those from the least poor wealth group are less confident of their ability to repay their debts on time.

## 10. Social capital

Caregivers have low levels of structural social capital with low levels of involvement in community groups with urban caregivers and those from the least poor wealth group more likely to have no structural social capital. Eighty per cent of caregivers were the recipients of social support, while 94 per cent reported high levels of cognitive social capital, a measure of their strong feelings of trust and sense of belonging within their community. Caregivers have a low level of citizenship, only 31 per cent worked together to address or solve a common problem, although rural caregivers are more likely to display citizenship (33 per cent) than their urban counterparts (24 per cent).

## 11. Nutrition of the eight-year-olds (7.5–8.5 year-olds)

High levels of malnutrition were recorded among eight-year-old children, 31 per cent were stunted, 15 per cent were wasted and 39 per cent were underweight. A higher prevalence of stunting and underweight was observed among rural children and those from the poorest families. No difference was observed in the prevalence of wasting with respect to location. Children from the poorest wealth group were more likely to be wasted than their less poor counterparts.

## 12. Physical health of eight-year-olds

Six per cent of eight-year-old children had developed a chronic health problem and seven per cent had experienced a life threatening illness, for which 16 per cent did not receive any medical treatment. Eighteen per cent of children had experienced an acute illness in the two weeks prior to interview. Little variation was observed by location and wealth group.

## 13. Child mental health

Using the Strengths and Difficulties Questionnaire (SDQ) behavioural screening tool, 19 per cent of eight-year-old children were classified as 'abnormal cases' for mental disorders. Prevalence is higher among rural children (21 per cent) and among the poorest children (23 per cent).

## 14. Child work, schooling and life skills

A small proportion of eight-year-old children reported that they had worked for money and goods. Ninety-eight per cent of children had at some time attended school and 95 per cent were currently attending school. Less than half the children from rural areas (46 per cent) and only 38 per cent of children from the poorest families had age-appropriate literacy skills. Children displayed more competent numeracy than literacy skills. There was a small variation in numeracy by location and wealth group with urban children and those from the least poor households more likely to complete the task correctly.

## 15. Perceptions of wellbeing of eight-year-olds

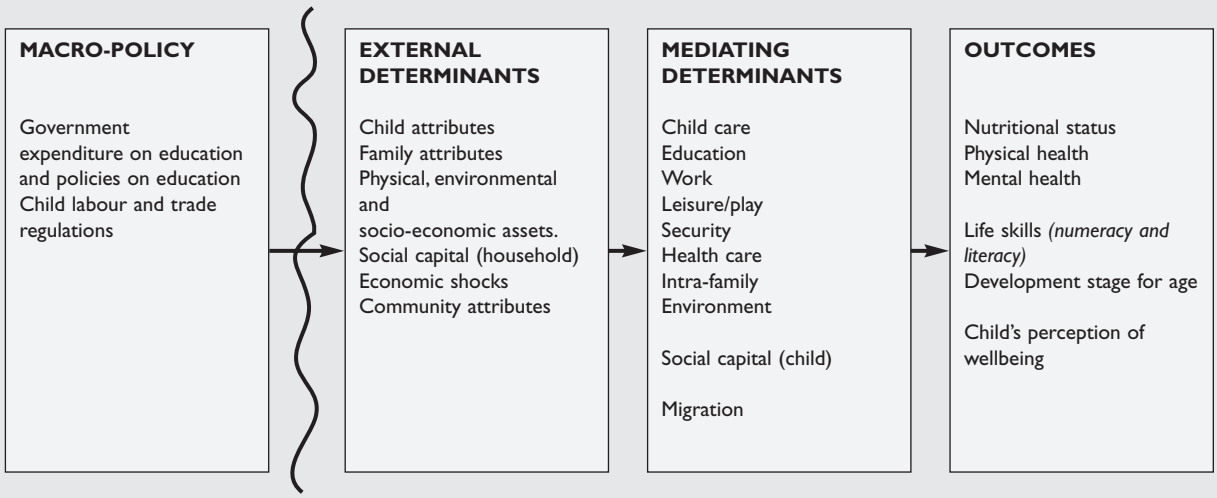
Only two per cent of children reported that the water they drink was 'bad' and 95 per cent believed their water was 'good'; 90 per cent felt that the air they breathed was 'good'; 34 per cent felt that the amount of rubbish in their locality was 'bad'; and 90 per cent felt their area was safe. Information from the household level revealed that 16 per cent of children lived in homes without access to a protected source of drinking water. Therefore, a disparity exists between children's perceptions of environmental hazards and the reality.

# 1. Introduction

Young Lives is an international innovative longitudinal study that aims to improve our understanding of the causes and consequences of childhood poverty in the developing world. At the heart of the research is a panel survey that will track over a 15 year period, a cohort of 8,000 children and their families in four countries (Ethiopia, India, Peru and Vietnam). As a policy-oriented project, research findings will be used to help formulate future policies aimed at alleviating childhood poverty.

The Young Lives project defines poor children as those who grow up with restricted access to different types of resources vital for their wellbeing and to enable them to achieve their full potential. This includes economic, social, physical and environmental resources. The Young Lives conceptual framework (summarised in Figure 1) encompasses a range of child wellbeing outcome measures, which include traditional objective measures such as nutritional status and physical health, but also considers indicators like mental health, developmental stage for age and life skills (numeracy and literacy). In addition, Young Lives adopts a subjective child-centred outcome measure – the children's perception of their own quality of life.

**FIGURE 1: THE YOUNG LIVES CONCEPTUAL FRAMEWORK**




India initiated economic reforms in the early 1990s and owing to the federal nature of the governance in India, the programme in its actual content and implementation was also determined by the individual states. The state of Andhra Pradesh has been at the forefront of economic reforms in India and has adopted a proactive approach to reduce the negative impact of reforms upon those living in poverty, including children. It is in this context that Andhra Pradesh became involved as a partner in the Young Lives study, with the aim of exploring the wellbeing of children living in poverty. This introductory section reviews evidence relating to child poverty with regard to: health and nutritional status, education, child labour and intellectual development.

The objectives of this preliminary report are: (1) to present a brief literature review of general poverty – both income and non-income and child poverty in India and Andhra Pradesh; (2) to review national

policies which have an impact on child poverty, and identify key national audiences for this study; (3) to describe the study methods and present preliminary, descriptive results; (4) to identify provisional conclusions and policy implications.

## 1.1 What is known about poverty in India and in Andhra Pradesh from existing data?

The most striking features of Indian development have always been and continue to be its population size and regional disparities in economic and social development. The deprivation intensity in the world is heavily concentrated in South Asia and sub-Saharan Africa; a few comparative observations specific to this context substantiate this statement. Being the second most populous country in the world, India alone accounts for more than half of the population of the 52 deprived countries, (based on the criterion of life expectancy below 60 years) and the most populous state in India has more people than Brazil and Pakistan (Dreze and Sen, 1995). While India is doing significantly better than many of the sub-Saharan countries in terms of most of the development indicators, there are large areas within India where living conditions are not very different from those prevailing in these countries. Analyses of this nature reveal that there is no part of the world that has lower adult female literacy rates or higher infant mortality rates (IMRs), or sex ratio than some of the districts or states in India (ibid).

The income poverty as measured in terms of head count ratio indicates that poverty in India declined from 45 per cent in 1983 to 26 per cent in 1999–2000.[1] In absolute terms the number of poor declined from about 323 million in 1983 to 260 million in 1999–2000. The decline has not been uniform either across states or across rural or urban areas. While the proportion of poor in rural areas has declined from 46 per cent in 1983 to 27 per cent in 1999–2000, a decline in urban areas has been from 41 per cent to 24 per cent during this period[2] (Planning Commission, 2002). Comparing this with the South Asian context, the decline in the region has been from 45 per cent to 40 per cent during the same period, thereby according significance to India's decline in income poverty.[3]

Of late, there have been various attempts to capture dimensions of non-income poverty. Of significance are human development index (HDI) indicators popularised by the United Nations Development Programme (UNDP). Several adaptations of such indices have been undertaken in India reflecting the sensitivity towards non-economic indicators of poverty. According to the Planning Commission's National Human Development Report (2001) HDIs improved from 0.3 to 0.5 during the period 1981–2001. Although there is consensus about accelerated growth and reduced poverty, the actual impact of growth on poverty reduction remains controversial due to measurement problems (Bhalla, 2000; Srinivasan, 2000; Visaria, 2000)

1 The Planning Commission of India releases the official poverty estimates. The poverty line is based on a minimum calorie norm of 2400 Kcal per capita per diem in rural and 2100 Kcal in urban areas. The use of a calorie norm is taken as a first order approximation to what may be considered as an acceptable minimum need. The calorie norms are anchored to a consumption basket using all India consumer expenditure survey of 1973-74 separately for rural and urban areas. The resulting poverty lines are then adjusted for the state-specific prices to arrive at state level rural/urban poverty line.

2 These poverty lines are then applied on the National Sample Survey Organisation's household consumer expenditure distributions to estimate the proportion and number of poor at the state level. However, the poverty estimates of 1999-2000 are embroiled in controversy over their comparability to those of earlier years (Deaton and Dreze, 2002).

3 Along with rural-urban disparity, the social dimension of poverty is also well established. The poor not only lack economic resources but also have worse social indicators. In this sense, their poverty is strongly linked to their social identity, which is determined mainly by caste. A 1994 survey by the National Council of Applied Economic Research shows that in rural India roughly half the members of scheduled caste and scheduled tribes lived below the poverty line, and that while these groups represent about a third of the population, they make up 43 per cent of poor people.

India was in a comparable situation to, if not slightly ahead of, South Asia during the 1990s. The life expectancy at birth in India rose from 54 years in the 1980s to 63 years in the 1990s, a pattern which is reflected in South Asia.[4] The IMR in India declined from 115 deaths per thousand live births in the 1980s to 83 deaths per thousand live births in the 1990s, compared to a decline from 119 to 74 deaths per thousand in South Asia.[5] With respect to literacy, India is better placed (52 per cent) compared to other South Asian Countries (Nepal 28 per cent; Bhutan 42 per cent; Bangladesh 38 per cent; Pakistan 38 per cent), although it lags behind Sri Lanka which has a literacy rate of 90 per cent (cited in Aggarwal, 2001). However, the rural-urban disparity, and variation across social groups and gender, continues to show less of a diminishing trend in some sectors despite overall improvements in literacy (GOI, 2001).

Though India's performance in non-income poverty and child poverty indicators fares well in comparison with South Asia, it can be said that the progress made on income poverty levels during the four decades of Independence has not been matched with comparable improvements in other areas of deprivation such as health, nutrition and education. There is no evidence of any linear relationship between income and non-income poverty across the states in India.

Andhra Pradesh has achieved a significant reduction in income poverty in rural areas. It fell from 48 per cent in 1973–74 to 11 per cent in 1999–2000. For the period 1999–2000, the rural poverty level in Andhra Pradesh was less than half the all-India figure of 27 per cent (Dev and Ravi, 2003). Though this is contested,[6] the official and the alternative estimates concur that there is a downward trend in poverty levels in \Andhra Pradesh, in line with the decline witnessed at the all-India level, even while other development indicators do not show encouraging progress.

However, a few critical concerns should be highlighted in the context of poverty in Andhra Pradesh. Firstly, the rate of decline of poverty in rural areas is slower than in urban areas, which is contrary to the all-India trends. Secondly, poverty in urban areas is relatively high compared to the rural areas, and finally, the mean consumption levels in rural areas are lower compared to other south Indian states. Among the Indian states, Andhra Pradesh had the fourth lowest rural poverty and fifth lowest urban poverty rates during in 1999–2000 (Dev and Ravi, 2003).

From 1981 to 2001, the position of Andhra Pradesh in human development (based on HDI) has fallen from ninth to tenth while other southern states have done better. Kerala has retained its first position and Tamil Nadu has improved its position from seventh to third (Planning Commission, 2002). Andhra Pradesh lags behind the other south Indian states in health and education indicators thereby showing a poor performance in overall human development.[7]

### 1.1.1. Child nutrition and health

Though India has made considerable improvements in indicators relating to child nutrition and health over the decades, its present status *vis-a-vis* these indicators still holds disheartening figures. This is true

4 At the same time, a recent analysis of chronic poverty in India shows that 15.3 per cent of the total rural population and 14.9 per cent of India's urban population experience severe poverty having income less than or equal to three-fourths of the poverty line. This translates to over 130 million people who can be considered as chronically poor (Mehta and Shah, 2002).

5 For South Asian countries, data on poverty and non-income indicators of poverty, see MHHD, 2002.

6 For child poverty indicators, see World Bank, 2002.

7 Critiques attribute the decline in the poverty to the controversial estimates of 1999-2000. The alternative poverty estimates for the state which were provided by Deaton and Dreze (2002) indicate that about 26 per cent of the rural and 12 per cent of the urban population are poor.

even for the state of Andhra Pradesh. Thirty-eight per cent of children (0-3 years) in Andhra Pradesh are underweight compared to the national average of 47 per cent. The percentage of stunted children in same age group in Andhra Pradesh is 39 per cent compared to 46 per cent across India (IIPS, 1995, 2000a, 2000b). The combined indicator of inadequacy of weight-for-height for the state is nine per cent, considerably lower than the all-India average of 16 per cent. There are wide rural/urban and gender disparities with respect to child nutritional indicators within Andhra Pradesh as well as for all-India. The proportion of underweight children in rural Andhra Pradesh is 41 per cent compared to 29 per cent in urban areas, with the corresponding rates for stunting being 42 per cent and 30 per cent respectively. Moderate to severe malnutrition is higher among rural children than urban children, and this holds among Hindus and Muslims, among scheduled castes and scheduled tribes in India. Among the morbidity factors, anaemia is more common among girls than boys, and boys are more likely to show wasting than girls.

Children of higher birth order have greater risk of stunting than children of lower birth order (Mishra, Lahiri and Luther, 1999). Family size is found to influence child's nutritional status. Children with three or more siblings are more likely to suffer chronic malnutrition because competition increases for food with increased family size (Mishra and Retherford, 2000).

The latest estimates of immunisation indicate that a large number of children in the state as well as in India are dropping out before completing the complete cycle of immunisation. Again the rural/urban and male/female disparities are glaring (IIPS, 2000a, 2000b). Children belonging to households with a low standard of living are less likely to get immunisation (Kumar, 2002). Only 32 per cent of children who belong to scheduled castes/tribes are fully immunised compared to 49 per cent of others (UNICEF, 2001).

Maternal health and nutritional status directly impact on the nutrition status of children. A high percentage of girls with anaemia (55 per cent) enter wedlock and give birth to their first baby before the age of 18 years in Andhra Pradesh (APRPRP, 2002). Antenatal care too is not satisfactory with only about 70 per cent of mothers receiving iron as folic acid tablets and 72 per cent receiving two doses of Tetanus Toxoid (UNICEF, 2001). Besides this, access to a health facility is far from satisfactory even though the population covered by primary health care in Andhra Pradesh is higher than the all-India average (APRPRP, 2002).

The latest estimates indicate that almost half of the deliveries in the state are still home deliveries, unattended by any health professional. The corresponding all-India average is as high as 66 per cent (IIPS, 2000a). A study in Andhra Pradesh indicates that feeding of colostrum and early commencement of breastfeeding is low. The percentages of newborn babies who are breastfed during the first hour and 24 hours after birth are ten per cent and 33 per cent respectively (APRPRP, 2002).

### 1.1.2. Child education

Andhra Pradesh is ranked at position 22 out of 28 states with respect to adult literacy even though it ranks eleventh in terms of per capita state domestic product in descending order (GOI, 2001). Andhra Pradesh had lower figures than the national average with respect to overall literacy rate and with regard to rural/urban and male/female literacy rates. Nevertheless, due to several concerted governmental and non-governmental efforts, the state has been able to address the issues related to child education in a

significant manner. This is reflected in the increase in the enrolment ratio for primary schooling from 64 in 1959–60 to 107 in 2000. While this is quite commendable, the high drop-out rate, especially at the upper primary levels, is alarming as the state attempts to make desirable progress in the field of child education. There has been a reduction in dropout rates at national level for classes 1–4 from 78 per cent in 1960–61 to 55 per cent in 1999–2000 (Planning Commission, 2002). In Andhra Pradesh the drop-out rate is found as 39.16 per cent for classes 1–5 and 58 per cent for classes 6–7 for the year 1999–2000 (Planning Commission, 2002). These are high figures in comparison to other southern states, comparable to some of the northern states.

In rural Andhra Pradesh, children's education is still a privilege and access is limited by exclusions of an economic, social and geographical nature. Even when accessed, many studies have pointed out that quality of schooling severely influences the retention rates (UNICEF, 2001). Quality of schooling also affects more drastically those children who are first generation literates and those from households facing social and economic marginalisation (Reddy and Rao, 2003; NCERT, 1997). Many recent studies have highlighted the inadequacy of poor service delivery (poor infrastructure, lack of qualified and competent teachers, poor attendance of teachers, etc) to create adequate demand for primary education (Reddy and Rao, 2003). Further, it can be observed that the most disadvantaged in making headway in education are those socially disadvantaged in the rural areas (UNICEF, 2001), and girls (Nayar, 2002). Considering the demand side factors, it is argued that generation of productive employment and implementation of minimum wages go a long way in reducing the household's dependency on children and thereby affecting the retention rates. Given the caste-class nexus in India, the economic position of a household still plays a crucial role in accessing education as a life skill (Antony and Gayathri, 2002).

### 1.1.3. Child labour

India holds the dubious distinction of having the highest number of child labourers in the world, and Andhra Pradesh houses the highest number of them within the country (GOI, 1991). According to conventional definitions, child labour levels are estimated at between 10 to 15 million in India. Attempts to broaden the definition by including the out-of-school children drives the figures to as high as 90 to 100 million child labourers in the country. Projections for the year 2000, accounted around 20.2 million (Lal, 1997). According to UNICEF (1994; cited in Saini, 1998) there is virtually no sector in the Indian economy that is not touched by child labour, with agriculture claiming a major share. Gender differences indicate a greater number of female children in child labour (51 per cent against 38 per cent of males).

Despite the debates pertaining to child labour two trends can be discerned from the available evidences. Child labour drastically increases in the age group 10–14 and there exists a clear-cut social dimension to the incidence of child labour across the sectors and states. Among the children of the age group 5–9, the workforce participation rate in rural Andhra Pradesh was 2.7 and 0.7 in urban areas in 1999–2000. The corresponding figures for average of all-India were 0.7 and 0.3. The child workforce participation in the state sharply rises to 25.1 in rural areas for children in the age group 10–14 years and to 7.1 in urban areas. The all-India average labour force participation figures for the same age groups are 9.3 and 4.3 in rural and urban areas respectively. The percentage of child labour was higher for Scheduled Castes and Scheduled Tribes at 33 per cent compared to Other Castes where it was only 24 per cent (UNICEF, 2001).

The child work participation in Andhra Pradesh seems to be closely linked to women's work participation, which is again the highest in India. Regional analyses undertaken within the state indicate that drought prone areas tend to have higher incidences of child labour (Dev and Ravi, 2003) and among the significant correlates of child labour are poverty, inadequate schools and high expenses involved in schooling, (Vidyasagar et al, 2000).

### 1.1.4. Child intellectual and personality development

There are very few studies conducted in this area. Using the Raven's Coloured Progressive Matrices (CPM) to measure child intellectual development it was shown that most rural children's intellectual development between six and 12 years of age is 'below average' or 'average', with only four per cent being classified as 'intellectually superior' (ICAR, 1999).

A series of factors correlate with rural children's intellectual ability: age; class of study; father's education; mother's education; mother's occupation; being a member of a nuclear family; socio-economic factors; child's physical health and nutritional status (Mayuri and Bilquis, 1999). Children from higher castes, and those belonging to families with larger land holdings, or nuclear/small sized families scored better on intellectual ability tests (Madhavilatha and Mayuri, 2000). Other studies indicate that children with moderate to severe malnutrition perform poorly on intellectual abilities tests (Usha, 1990).

A large study involving 900 children from the three regions of Andhra Pradesh revealed that rural boys and girls exhibit adaptive skills, boldness, curiosity, independence and other mental health traits. Correlates of personality development traits were age, class of study, parental education and occupation, and in the Telangana region, the caste factor emerged as significant (Uma Devi and Mayuri, 1999). The findings presented in this preliminary overview should be understood in terms of the linkages they have with other factors such as educational outcomes, nutritional status, quality of teaching, poor status of basic amenities and child care, which are influenced by social and economic factors.

## 1.2. Policies and programmes: impact on child poverty

Against the backdrop of the performance of India and Andhra Pradesh – commendable by themselves, but unexceptional on a comparative perspective – this section attempts a synopsis of the major policies and programmes that influence child poverty/welfare at the national and state level.

What is significant in a policy analysis related to children's wellbeing in India is to make the distinction that the central government's role is largely restricted to framing of national policies and certain centrally sponsored schemes. Primarily, education and health are in the domain of the state governments and the centre has little role to play. This in a way explains the enormous regional variations in educational outcomes and health achievements.

Therefore, as the Young Lives study is being carried out in the state of Andhra Pradesh, it is important to focus on the policies and programmes undertaken by the government of Andhra Pradesh including the implementation of centrally sponsored programmes. Hence, an analysis of state polices and programmes in the context of the overarching framework of central government polices will be presented.

### 1.2.1. Child health and nutrition

In addition to the centrally sponsored Integrated Child Development Scheme (ICDS), the state has initiated the Integrated Nutrition and Health Programme (INHP) with the support of CARE. It was initiated as a programme to complement the ICDS programme in terms of its outreach and quality of delivery. INHP focuses on identified pockets of high malnutrition, IMR, CMR (child mortality rate) and MMR (maternal mortality rate). These programmes though well conceived, in implementation have been affected by problems associated with efficiency and gaps in the delivery system. Efforts to improve community participation by invoking the local governing bodies had restricted impact, largely a result of the socio-political dynamics of the village. At the same time, it was also pointed out that a reliable well functioning child centre contributed to increased enrolment at primary level schooling (ICDS Survey, 1999 cited in NCEAR, 2000).

### 1.2.2. Immunisation and antenatal care

Immunisation and antenatal care are two important components of ICDS. These include immunisation of children against six major diseases and growth monitoring, health check-ups, ante- and post-natal care, provision of iron folic acid tablets to pregnant women, treatment of minor illness and referral services (Gupta et al, 2002). The inability of the programme in the state in delivering these services to the identified beneficiaries is attributed specifically to the lack of monitoring systems.

It needs to be specifically mentioned that the Campaign of Polio Free India has been fairly successful in the state, executing a large implementation plan with clearly identified personnel and monitoring.

### 1.2.3. Primary education

**DPEP – District Primary Education Programme**

This is a major intervention in the state to realise the goal of universal primary education, by having special focus in districts with poor educational outcomes. In the second phase the programme is being implemented in 14 districts and major components include improving access by opening new schools, improving school infrastructure, appointment of regular teachers and starting bridge schools for child labourers. Residential bridge schools provide courses for child labourers aged 9 to 14 years, upon completion of these courses children are either admitted to social welfare hostels or sent to a school near their home. Retention is addressed by appointing Vidya (Education) Volunteers from the village itself. Although it has resulted in increased enrolment, other outcomes such as increased learning, retention, and community participation remain ambitious. Other issues also still exist, such as low levels of motivation of teachers and their extra curricular workload, along with lack of accountability demanded by the community.

**Noon meal scheme**

The already existing midday meal programme of 1996 has been redesigned as the National Programme for Nutritional Support to Primary Education. The scheme covers all the rural blocks, urban slums and disadvantaged sections and is currently implemented in all the districts of Andhra Pradesh along with rest of the country. It is suggested that to meet the nutritional outcomes, the caloric value has to be ensured through regular supply and the meal has to be supplementary and not a substitution of the

child's home meal. To function as an incentive for school participation, a cooked meal is preferred instead of dry rations as the chance of delivery system leakage is higher in the latter (Kannan, 2002). The Tenth Five Year Plan has recently indicated that the scheme should administer a cooked meal, but in states like Andhra Pradesh, where poor infrastructure and several other problems are associated with rural schools, self-targeting of the scheme can only reduce leakage, and the desired outcomes can be achieved by decentralised execution of these schemes.

### 1.2.4. Child labour interventions

The dubious distinction of having 1.7 million child labourers in the state has had many implications. Several programmatic interventions are in place, both governmental and non-governmental, to rehabilitate and mainstream child labourers. Various concerted advocacy efforts are also undertaken to highlight child participation in the work force as a major deprivation and indicator of child poverty. This has resulted in Andhra Pradesh being the first state to define child labour as 'all children out of school' in its Education for All Strategy Paper. It is also the first state to declare that formal school education is relevant to all children including children of the poor, which is a major step in abandoning the earlier programme of non-formal education centres for child labourers. Quite a few interventions – educational, vocational, household oriented and trade union based – are being carried out in the state with fairly good rates of success. What is disheartening is the fact that all these programmes are still at a micro level and structural causes that push children out into the labour force are largely unchallenged in reality. The large chunk of child labourers – in the rural areas engaging predominantly in agriculture, mostly girls and from Scheduled Caste and Scheduled Tribe communities – poses a great challenge to implementing decentralised programmes that address education as a basic right in every village.

### 1.2.5. Household interventions

The major household intervention that impacts upon child poverty is the Public Distribution System (PDS), which provides subsidised cereals to poor households. In the 1980s Andhra Pradesh followed this as a major welfare/anti-poverty policy by providing rice at two rupees a kilo. Though it was rolled back to a subsidised rate, distribution of rice through PDS still plays a significant role in preventing the food security levels of poorer households from relapsing into abject poverty. However, studies point out that leakage levels are high, coverage is limited and most often the poorest are not covered due to their poor access to public services. Of late, many studies argue that food insecurity of households pushes children into the workforce. Universal coverage of PDS could address child poverty not only in terms of retaining children in schools but also in ensuring minimum nutritional needs of children by preventing families from resorting to inferior cereals.

### 1.2.6. Anti-poverty programmes and women's empowerment programmes

Several anti-poverty programmes are being implemented in the state mainly with the help of international agencies such as the World Bank and DFID. It is commendable that most of these programmes do recognise the importance of identifying the child as a direct beneficiary in some cases, but as an immediate indirect beneficiary in all cases. The DPIP (District Poverty Initiatives Project) programme has an in-built component of a residential school for deprived children, especially girl

children. Strengthened programmes like Development of Women and Children in Rural Areas and other special programmes for women's empowerment, such as self-help groups, do increase women's access to public services and therefore help to ensure better care for children in terms of health and education. However, performance of these programmes tends to be determined by the specificities rather than by the design, which reduces the multiplier effect expected of them.

Therefore in summary, although child poverty is yet to be recognised or defined within a multi-dimensional framework at a policy level, it can be discerned from the existing policies that Andhra Pradesh possesses comprehensive policies and programmes to address various aspects of deprivation faced by poor children. Many of the programmes are being successfully implemented and are achieving their desired outcomes. However, to effect quantifiable and perceptible changes in childhood poverty among those worst affected groups, the programmes require fine tuning. Therefore, even with the highly successful programmes, there are some areas of poor child poverty indicators. Large drought prone tracts, and traditionally backward regions affected by large-scale migration, pose a greater threat in identifying and implementing the targeted programmes.

The impact of the several reforms initiated in the state cannot be unambiguously articulated at present, as any reform process necessarily involves considerable time lag in effecting particular outcomes. Andhra Pradesh has undertaken several measures to reduce the short-term shocks of the reforms especially on the poor and marginalised sections. At the same time, certain initiatives seem to have irrevocable impact on poor families and such impacts cannot be addressed through externally funded, time driven, sectoral, poverty alleviation programmes. Reducing social sector expenditure in the wake of ongoing privatisation is going to be a double burden on the poor in accessing basic services, especially health care.

The immediate impact of reduced social sector expenditure is going to be borne by children. Children will have reduced access to health care due to increased health costs; and poorer nutritional status due to reduced household incomes and a series of household coping strategies including reduced number of meals, a shift to inferior food stuffs, labour force participation and migration. Increased market competition is leading to the gradual disappearance of traditional occupations, and shifts in cropping patterns in favour of cash crops are altering the labour requirements, especially for female labour. Resulting increased vulnerabilities of marginalised communities would seriously impact the already minimal nutritional and other developmental outcomes of their children.

## 1.3. Key actors

In a multi-party democracy like India, there is scope for influencing the agenda of the government through systematic feedback to public policy. An active media and a vibrant civil society are characteristic of democracies and provide ample opportunities for addressing public policy. It is in this milieu that the Young Lives project pitches its efforts to inform and influence the public policy pertaining to child wellbeing.

India has federal governance structures and therefore the legislature is an important organ that deals with policy framework and ensures policy implementation. Since education, health and family welfare are in the domain of the state governments, with negligible input from the central government, state government policies play a critical role in determining the targets and priorities of public financing.

Political priorities and electoral concerns dominate policies at the state level and, therefore, the legislature becomes one of the foremost audiences for the Young Lives study. Members of the state and central legislatures need to be informed and lobbied in order to set well-informed political priorities and to make pertinent interventions in policy framing and in effecting policy changes.

During the past decade, in Andhra Pradesh, the senior bureaucracy has been recognised by various quarters for their dedication and commitment toward welfare and development. With several important poverty reduction projects and national programmes being administratively headed by senior bureaucrats, it is important for this group to be addressed by Young Lives. When updated about the field realities, they would be in a position to make mid-course modifications to projects that address child wellbeing directly or indirectly. Projects like Velugu funded by the World Bank, Sarva Siksha Abhiyan (SSA) "Education for All" funded by the Government of India, ICDS and tribal welfare projects are important in this context. As key personnel in drafting policy and implementation plans, senior bureaucrats can have a catalytic function in effecting changes in policies relating to child welfare.

The role of civil society groups has become increasingly visible in the policy discourse in Andhra Pradesh, particularly in the post-reform period. Civil society groups have led policy discussions on electricity, agriculture, primary education, child labour and forestry. In Andhra Pradesh, international NGOs like CARE, ActionAid, Plan India, Save the Children UK, Centre for World Solidarity (CWS), World Vision and Catholic Relief Services (CRS) address child-focused policy issues either directly or indirectly through their partner local NGOs. Many NGOs undertake field based micro action projects to address child welfare directly and have been successful in influencing policy changes. A network of these national and international NGOs could act as a scaffold for Young Lives to reach policy-makers. Besides this, they can also provide peer review and feedback on policy briefs developed by Young Lives. Moreover, NGOs and international NGOs work in a large constituency of their own, implementing programmes that have immediate impact on child poverty. Therefore in this context, they may be the first level users of survey findings and policy tracking.

In India, the media functions as a watchdog with regard to public policies and welfare. Persistent attention given by the media invokes immediate responses from policy-makers and can often result in amendments to legislation and polices. Since child wellbeing is a sensitive issue, Young Lives identifies the media as a vehicle for dissemination to society at large and policy-makers in particular.

Recently, in order to counter implementation problems at the lower levels, people's participation is incorporated in the project plan and implementation is carried out through local governance structures. These structures based at the district, mandal and village panchayats (upper, middle and lower tiers respectively of self-governing institutes in the state) do play a major role in determining outcomes. Therefore, the institutes responsible for training representatives of these bodies constitute a significant audience for Young Lives. Interaction with them would also enable demand driven inputs to public policy.

India has a large academic community involved in public policy, through direct involvement in state policy-making bodies as well as indirectly through systematic follow-up of policies. Academia is another forum for Young Lives to refine advocacy outputs.

With respect to Andhra Pradesh, especially in the post-reform period, international donor agencies, together with bilateral and multi-lateral aid agencies, have become key players in the social sector, particularly health, nutrition and education. Their annual country strategy papers have a significant influence upon the development agenda of the state. Hence, they constitute a key audience for Young Lives advocacy and dissemination efforts.

The Young Lives advisory panel in Andhra Pradesh consists of representatives from these identified key actors.

# 2. Methods

## 2.1. Young Lives methodology

Young Lives is a panel study that will follow 2,000 index children in each of the four partner countries; Ethiopia, India, Peru and Vietnam. The study will track children from the age of 6–17.9 months (one year old) until they are 15 years old. The children and their households will be revisited every three to four years for data collection, with an intermediate tracking visit planned between sweeps of the survey. The primary caregiver, and at subsequent stages the caregiver and the index child, will be interviewed using quantitative age-appropriate questionnaires. Children's height and weight will be recorded and community level data collected at each survey round.

Index children were selected from 20 sentinel sites located within six districts (two districts from each of the three regions) and the capital of the state of Andhra Pradesh, Hyderabad. These districts were classified into poor and non-poor according to their relative level of development. A sentinel site is a concept developed from health surveillance and is used for purposeful sampling, with a sentinel site defined in such a manner that it is judged to represent specific characteristics of an area or population.

In addition to the data collected about the index child and their communities, one thousand 7.5–8.5 year old (eight-year-old) children and their caregivers were interviewed during this first round of the study. Information gathered about these children will allow an immediate comparative description of older children living in the same communities as the index child, and will enable parallels to be drawn when the index children reach the same age. It is hoped that future funding will enable this cohort of older children to be revisited in subsequent sweeps of the survey.

A series of thematic studies is planned. Using largely qualitative methods, these studies will explore in greater depth specific issues which have emerged from the first round of the survey. In India, the first of these projects is in progress and will explore the effect of migration upon child wellbeing.

The rationale against the use of a birth cohort was two-fold: in a developing country such as India, a high proportion of births occur in the home and it would be difficult to accurately identify and trace all births during a specified time period; a birth cohort would also be vulnerable to the high IMR during the first six months of life (IMR=65.2 in Andhra Pradesh, 1997–99; eCensusIndia, 2002). Therefore this approach was neither financially nor logistically feasible.

The Young Lives study in India was conducted in Andhra Pradesh with two partners – CESS and Save the Children UK. Both partner organisations are based in Hyderabad. During this first phase of the study, a process of consultation and communication was established with the UK-based academic consortium and this facilitated the process of research development, survey design and fieldwork planning and training. A research advisory panel was established which included representatives from the NGO sector, the government rural development department, social activists, corporate sector and independent experts in dissemination and advocacy. The panel was consulted throughout the research process.

## 2.2 Questionnaires

Young Lives is a study of breadth as opposed to depth. In order to ensure the questionnaire content was relevant and the structure and scope were feasible to implement, a literature review and consultative process were carried out. Justification documents detailing the rationale for the inclusion of specific survey topics can be found, together with training manuals and core questionnaires at www.younglives.org. The following series of questionnaires was developed and used during the first round of the Young Lives study.

### 2.2.1. Household questionnaires

Information for each one-year-old and eight-year-old child was collected at the level of their household, with questionnaires answered primarily by their caregiver, although other household members were welcome to respond if they had more detailed knowledge about specific topics, eg, household livelihood information.

The two household questionnaires (used in all four countries) shared core elements in addition to age-appropriate and country-specific topics:

**TABLE 1: TOPICS IN THE ONE-YEAR-OLD AND EIGHT-YEAR-OLD HOUSEHOLD QUESTIONNAIRES**

| CORE TOPICS COMMON TO BOTH HOUSEHOLD QUESTIONNAIRES |
|---|
| Locating information – for tracking |
| Household composition |
| Caregiver characteristics |
| Child health – chronic, acute and life threatening illnesses |
| Livelihoods |
| Economic changes – occurrence of shocks and associated coping strategies |
| Socio-economic status |
| Social capital |
| Anthropometry |
| **TOPICS EXCLUSIVE TO THE ONE-YEAR-OLD HOUSEHOLD QUESTIONNAIRE** |
| Pregnancy, delivery, breastfeeding and vaccination status |
| Child care |
| Mental health of caregiver – Self-Reporting Questionnaire (SRQ20) |
| **TOPICS EXCLUSIVE TO THE EIGHT-YEAR-OLD HOUSEHOLD QUESTIONNAIRE** |
| Child's schooling |
| Child labour |
| Child mental health – Strength and Difficulties Questionnaire (SDQ) |

For the purpose of tracking children for subsequent rounds of the study, information was collected about a close family member and a friend who would always know the whereabouts of the family.

A number of country-specific questions were added to the household questionnaires, covering the following topics:

**TABLE 2: COUNTRY-SPECIFIC TOPICS IN THE ONE-YEAR-OLD AND EIGHT-YEAR-OLD HOUSEHOLD QUESTIONNAIRES**

| ONE-YEAR-OLD HOUSEHOLD | EIGHT-YEAR-OLD HOUSEHOLD |
|---|---|
| School grade currently enrolled in or attained by all household members | School grade currently enrolled in or attained by all household members |
| Total area of each plot of land owned, rented or borrowed on the day of the survey | Total area of each plot of land owned, rented or borrowed on the day of the survey |
| Ownership of working electric fan | Ownership of working electric fan |
| Ownership of working almariah (storewell) | Ownership of working almariah (storewell) |
| Ownership of working clock | Ownership of working clock |
| Ownership of bullock cart | Ownership of bullock cart |
| Ownership of thresher | Ownership of thresher |
| Iron folic supplementation during antenatal care | |
| Polio vaccination | |

In Andhra Pradesh, another separate module was developed and appended to the one-year-old and eight-year-old household questionnaires. The country-specific module investigated two areas of current interest with regard to child wellbeing in Andhra Pradesh: migration and child labour.

The first module focuses on the migration of household members during the previous year: the reasons for and nature of migration; seasonality of migration and associated wage income; and the living and working conditions of migrants. The second module investigates child labour: it details the economic activities of children inside and outside of the household;, the seasonality of child employment and its associated wage income. Results from this module will not be presented in the preliminary report but will be explored in subsequent analyses.

### 2.2.2 Child questionnaire

An age-appropriate questionnaire was devised for and administered to 1008, eight-year-old children. The children were asked about their ambitions, perceptions of wellbeing, health, their experience of school, work and social relations, in addition to a series of literacy and numeracy tests adapted from the Living Standards Measurement Study. Children also completed the Raven's CPM, a developmental test used to assess intellectual development (Raven et al, 1998). The core questions relating to perceptions of wellbeing and quality of life explored issues that emerged from the 'Voices of the Poor' study (www.worldbank.org/poverty/voices/overview.htm). These questions asked children whether they had enough food, whether they felt respected and safe, and whether they lived in a good environment with respect to water, air and rubbish pollution. A modified version of this questionnaire was administered to 100 respondents who were asked to explain their answers to five key questions.

### 2.2.3. Community questionnaire

The community questionnaire was devised with three principal objectives:

1. to minimise the length of the household questionnaire by collecting information on conditions that pertain to all households in the community
2. to provide contextual information to inform individual level data analysis
3. to provide meso-level data to link macro and micro events.

The questionnaire consists of six sections which relate to the community's natural environment, social situation, infrastructure and access to services, economy, provision of health and education services, in addition to basic commodity and service costs. This questionnaire was administered in 98 communities by fieldwork supervisors. Respondents were drawn from key figures within the community, for example village leaders, community health workers, teachers, etc.

A comprehensive list of all the variables included in the one-year-old household, eight-year-year old household and eight-year-old child questionnaires are included in Appendix 1 of this preliminary report.

### 2.2.4. Policy monitoring

Young Lives will consider meso- and macro-level policy in order to meaningfully interpret evidence from the community level questionnaires. Key policy areas have been identified as relevant to principal Young Lives outcome measures: health care, education, poverty reduction, social safety net, social security and public expenditure. Using a policy matrix framework, information on these policy areas will be collected every six months. This information will be also be used to analyse changes observed during the longitudinal aspect of Young Lives.

### 2.2.5. Questionnaire translation

All questionnaires used in the Young Lives study underwent an exhaustive cycle of translation into Telugu and back-translation into English. A preliminary translation of the questionnaires was conducted by members of the research team in Hyderabad. Key team members are bi-lingual in spoken and written English, with English commonly used in a professional and business context in India. A member of the research team brought the preliminary translations to London and a process of revision began with members of the UK-based academic consortium. Particular attention was paid to question meanings and whether certain concepts could be appropriately translated into Telegu and back-translated into English. The revised translations were then circulated among the research team in India and further refinements made. These versions were field-tested in August 2002 and final modifications agreed prior to fieldworker training. The (SDQ) which assesses child mental health in the eight-year-old household questionnaire is a copyrighted instrument. Before the SDQ could be used in the field, the translation and back-translation were independently assessed and approved by the author, Dr Robert Goodman of the Institute of Psychiatry, University of London, UK.

For interviews with specific ethnic minority groups, local interpreters were recruited in ten communities located within four districts. They translated the questionnaires into five local languages and tribal dialects, for a total of 203 questionnaires including both one and eight-year-old interviews (203 out of 3019 = seven per cent of all study interviews).

## 2.3. Sampling

### 2.3.1. Selection of districts, sentinel sites and communities

Andhra Pradesh state is divided into 23 administrative districts, which are each subdivided into a number of mandals, dependent 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 inter-regional variations with the following priorities:

- a uniform distribution of sample districts across the three regions to ensure full representation
- the selection of one poor and one non-poor district from each region, with district poverty classification based on development ranking
- when selecting poor districts and mandals, consideration was given to issues which might impact upon child 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.

### 2.3.2. Selection of districts

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 the following indicators:

**TABLE 3: DEVELOPMENT INDICATORS USED TO RANK ANDHRA PRADESH DISTRICTS**

| ECONOMIC INDICATORS | HUMAN DEVELOPMENT INDICATORS | INFRASTRUCTURE DEVELOPMENT INDICATORS |
|---|---|---|
| Percentage of gross irrigated land | Proportion of population Scheduled Caste, Scheduled Tribe | Total road length per 100 $km^2$ |
| Per capita income | Female literacy | Number of banks per 10,000 population |
| Percentage of population urban | Infant mortality rates | Number of hospital beds per 10,000 population |
| | Percentage of children aged 5–14 years not attending school | |

A relative development index was constructed using a ranking method, sectoral ranks were aggregated using the following weights: economic – 30, human development – 40 and infrastructure – 30. A representative group of poor and non-poor districts was selected.

In Coastal Andhra, three poor districts were selected: Srikakulam, Prakasam and Vizayanagaram, with 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 chosen 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 wellbeing. 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; DES, 2002) 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 Telengana 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 Telengana. 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).

### 2.3.3. Selection of sentinel sites/mandals

The second stage of sampling involved 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 the 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 (excluding Hyderabad) 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 due to the scarcity of data at the mandal level, although mandal ranking was carried out in the same way as district ranking.

## TABLE 4: DEVELOPMENT INDICATORS USED TO RANK RURAL MANDALS IN ANDHRA PRADESH

| ECONOMIC INDICATORS | HUMAN DEVELOPMENT INDICATORS | INFRASTRUCTURE DEVELOPMENT INDICATORS |
|---|---|---|
| Percentage of gross irrigated land | Proportion of population of Scheduled Caste, Scheduled Tribe | Total road length per 100 $km^2$ |
| Number of milk animals per 1,000 population | Female literacy | Number of banks per 1,000 population |
| Percentage of workers in non-agricultural employment | Percentage of children aged 5–14 years not attending school | Number of hospital beds per 10,000 population |

## TABLE 5: SENTINEL SITE LOCATION (EXCLUDING HYDERABAD) IN ANDHRA PRADESH

| DISTRICT | RURAL SITES | | URBAN SITES | TOTAL |
|---|---|---|---|---|
| | Rural | Predominantly Scheduled Caste/Tribe population | | |
| **NON-POOR** | | | | **6** |
| West Godavari | 0 | 1 | 1 | **2** |
| Cuddapah | 2 | 0 | 0 | **2** |
| Karimnagar | 1 | 0 | 1 | **2** |
| **POOR** | | | | **13** |
| Srikakulam | 3 | 1 | 1 | **5** |
| Anantapur | 3 | 0 | 1 | **4** |
| Mahaboobnagar | 3 | 1 | 0 | **4** |
| **TOTAL** | **12** | **3** | **4** | **19** |

### 2.3.4. Selection of villages

The next stage of sampling involved the selection of villages within sentinel sites. Villages and their associated hamlets were defined as communities in rural areas. Mandals/sentinel sites cover 20–40 villages. Therefore it was important to ensure that the sample was distributed uniformly across the sentinel site. A list of villages with their associated census codes and population numbers was available from the last national census conducted in 1991. Census codes relate to geographical location and from these it was possible to determine the spread of villages. 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 give rise to 100 one-year-old and 50 eight-year-old children. In order to estimate the threshold population sufficient to generate this sample size, the prevalence of one-year-old children in the general population was estimated to be two 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 using the same method of census codes. In Hyderabad city, three slum areas were selected. Slums 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.

Before data collection began in selected communities, a door-to-door listing schedule was completed in order to identify eligible children.

## 2.4 Fieldwork

### 2.4.1. Pre-fieldwork preparation

The Young Lives survey instruments were field-tested in Hyderabad by three field supervisors and three members of the research team. A total of 38 field tests were completed for the one-year-olds' households, 28 for the eight-year-olds' households and eight for the community questionnaires. Field-testing highlighted any ambiguities in the meaning of questions, and led to further revisions of the questionnaire translations/back-translations and refinement of the country-specific module and fieldwork training manuals. Field-testing also facilitated the planning of fieldwork logistics, fieldwork schedules and effective methods of eligible household identification.

Fieldwork was planned for 20 sentinel sites spread across the three regions of Andhra Pradesh. To maximise efficiency and minimise costs, one fieldwork team was assigned per region, in addition to a team dedicated to urban Hyderabad. The four fieldwork teams were each comprised one field supervisor and four field investigators, who were supervised and assisted by a regional co-ordinator. A member of the Young Lives research team liaised with the regional co-ordinator and had overall responsibility for the work of each regional team.

All the field supervisors had been employed on previous research projects with CESS and were familiar with fieldwork logistics, team management, interviewing skills and quality control issues. Field investigators were either post-graduate students undertaking MPhil and PhD studies or CESS employees with previous fieldwork experience. Both supervisors and field investigators were proficient in written and spoken English. One field investigator was female.

### 2.4.2. Training

A preliminary training of trainers (TOT) workshop was held for members of the research team and supervisors. The project was introduced by the Principal Investigator and the National Co-ordinator and participants were introduced to the conceptual and theoretical background of the Young Lives study. A participatory training approach was adopted throughout the TOT. Key experts from external organisations contributed to the training process. A representative from Save the Children UK (Delhi) introduced current Child Protection Policies, the ethics of working with children and guidelines for handling child-sensitive issues in the field. A developmental psychologist from the Agricultural University (Hyderabad) provided a series of training sessions which covered: interviewing skills (with

particular reference to children, handling sensitive issues with mothers); the use and application of maternal and child mental health instruments (SRQ-20 and SDQ); tests of child literacy and numeracy; and the test of child development (Raven's CPM). Specialist training in anthropometry was provided by the National Co-ordinator who had substantial experience in running the National Family Health Survey (NFHS) in India and conducting anthropometric measurements. Supervisors had key responsibilities in the execution of the study and their training included: logistical planning, effective strategies to gain access to communities, community questionnaire administration and quality control issues.

The training format involved the supervisors and trainers being oriented to each questionnaire, discussing each question in turn with close reference to the training manual, role play and completion of practice schedules. After the schedules had been considered in detail, researchers and supervisors field-tested the questionnaires. In the light of field-testing, schedules and manuals were finalised before the start of regional investigator training.

After the completion of the TOT, researchers and supervisors travelled to the regions for training of the field-investigative teams. These programmes began simultaneously and a constant system of feedback was established with CESS headquarters and any key issues which arose were circulated between the regions. A member of the UK-based academic consortium participated in two of the regional training programmes. The training programme followed a similar format to the TOT and covered the same key issues. One fieldworker from each team was assigned as a dedicated investigator with responsibility for anthropometric measurements, the eight-year-old child questionnaire, the Raven's CPM and the maternal and child mental health measures.

After orientation and familiarisation with the questionnaires was complete, supervisors and field investigators were taken to nearby rural villages, where they practised listing and identification of eligible households and conducted practice interviews. A final training session reflected on this experience, resolved any outstanding queries and fed back to the other regional teams.

### 2.4.3. Field data collection

Fieldwork was conducted throughout Andhra Pradesh between September and December 2002. Progress was uninterrupted except for the important local festivals Dasara and Depavali.

Before entering a sample community, the supervisor and field investigators met with the Mandal Revenue Officer and provided a formal letter of introduction. This meeting afforded an opportunity to gather community information and gain an introduction to key mandal representatives and officers. Upon arrival in the village, the team met with the village head and explained the purpose of the survey. Having successfully gained access to the community, the fieldworkers conducted the household listing. Field teams were assisted in their identification of and entry to eligible households by local community health workers. Where an eligible household was identified, fieldworkers explained the study, enrolled households and administered the consent form. Fieldworkers returned the next day to conduct the interview. A total of 14 households in nine sentinel sites refused to take part in the study. Alternative households were identified and enrolled in the study.

Completed questionnaires were dispatched to the CESS headquarters in Hyderabad for data checking and entry.

### 2.4.4. Supervision and quality control

The technical management and supervision of the Young Lives survey was conducted by CESS, with support from the UK-based academic consortium.

On a day-to-day basis, supervisors were responsible for maintaining data quality. On the day of the interview, supervisors checked schedules, for inconsistencies, missing data and irregularities. If any of the above problems were identified, fieldworkers were asked to return to the household and complete the schedule before the team left the community. Supervisors monitored the administration of each Raven's CPM test.

During data collection, the expert developmental psychologist conducted an observation field trip to all three regions of Andhra Pradesh. She conducted interviews with caregivers and eight-year-old children, and a series of Raven's CPM tests, which enabled fieldworkers to observe her field technique. In addition, she observed and assessed the quality of fieldwork with particular reference to the psycho-social measures, child interviews and Raven's CPM. Her visits facilitated valuable discussion and reflection around interviewing techniques, with particular reference to establishing rapport with caregivers together with introducing and eliciting sensitive information, a particularly important issue when the majority of fieldworkers were male.

### 2.4.5. Data entry

CESS signed contracts with two external agencies: Response Internet Services and Gayatri Software Services to conduct data entry and cleaning. Data entry programmes were written in Microsoft Access 2000 by the Young Lives Data Manager at the University of Reading, UK. These programmes together with technical guidelines for their application were sent to country partners and tested before survey data was entered. Any problems were identified and resolved. Prior to the start of double data entry, personnel from the two external agencies were familiarised with the questionnaires and trained in the use of the databases.

## 2.5. Data analysis

Data was entered and stored in Microsoft Access databases and transferred to SPSS Version 11.0 for analysis. Before analysis, data was checked for inconsistencies by using the Double Data Entry program. Anthropometric indicators were computed using the EpiNut module of EpiInfo 2000, which uses the World Health Organisation (WHO) International Growth Reference as a growth standard.

For the purposes of preliminary data analysis, this report presents descriptive information on the whole sample and provides breakdown by location (urban, rural) and wealth category. The wealth index draws on work undertaken by the World Bank and Macro International which was used to develop the wealth index cited in the UNICEF Multiple Indicator Cluster Surveys (MICS). It has been designed to include sufficient variables that vary substantially across the sample according to wealth. Type of cooking fuel performs well as an indicator of wealth in district health surveys (DHS) surveys and can be used to discriminate between households in areas without electricity that therefore do not have televisions and refrigerators.

The index is constructed from:

- the number of rooms per household member as a continuous variable
- a set of dummy consumer durable variables. Each equals one if a household member owns a radio, refrigerator, bicycle, television, motorbike, motor vehicle, mobile phone, land phone, or some additional consumer durable indicators specific to the country context such as a working fan and a working clock
- a set of three dummy variables equal to one if the house has electricity, brick or plastered wall, or a sturdy roof (such as corrugated iron, tiles or concrete)
- a dummy variable equal to one if the dwelling floor is made of a finished material (such as cement, tile or a laminated material)
- a dummy variable equal to one if the household's source of drinking water is protected and piped into the dwelling or the yard
- a dummy variable equal to one if the household has a flush toilet or pit latrine (not shared with others in the community)
- a dummy variable equal to one if the household uses electricity, gas or kerosene for cooking.

The wealth index is a simple average of the following three components:

- housing quality – the simple average of rooms per person, floor type, roof and wall type
- consumer durables – the scaled sum of the consumer durable dummies
- services – the simple average of drinking water, electricity, toilet facilities and cooking fuel, all of which are 0/1 variables.

The wealth index is thus a score ranging between 0 and 1. For the purposes of comparison with other Young Lives countries the wealth index is grouped into four categories: <0.25 the 'poorest', 0.25-<0.5 'very poor', 0.5-<0.75 'less poor', >=0.75 'better-off'. However from an initial analysis using these four groups it was found that only three per cent of the one-year-old and eight-year-old samples were 'better off' in Andhra Pradesh. Therefore, an alternative grouping was devised in Andhra Pradesh: <0.2 the 'poorest', 0.2-<0.4 'very poor' and >=0.4 'least poor' and this will be referred to throughout this preliminary report.

Young Lives did not measure household income or consumption. Income poverty data, which is measured at the household level, are not a child-specific poverty measure (Harper, Harpham, and White 2001). Recent research suggests that the asset-consumption relationship is closely aligned (Filmer and Pritchett, 1998; Montgomery et al, 1997). In addition, the task of measuring poverty from income or expenditure data increases the cost of fieldwork relative to using the wealth index. Certain household asset variables may reflect household wealth better in some countries than in others, or may reflect differing degrees of wealth in different countries. Therefore country-specific asset indices were calculated using country-specific asset options. Poverty is commonly recognised as multi-dimensional. Adequacy of livelihoods, including income, assets, food availability etc. is only one of five major dimensions to be considered in this study.

## 2.6. Ethics

Formal ethical approval for the Young Lives study was obtained from independent ethics committees at the London School of Hygiene, London South Bank University and the University of Reading, UK.

Ethical guidance was sought from expert members of the advisory panel in Andhra Pradesh during this first phase of the study. Protocols are now in place for the formation of a formal ethics committee for the next phase.

Strict ethical guidelines were enforced throughout the fieldwork process. The consent form was administered when the household was enrolled to the study and fieldworkers did not return until the next day to conduct the interview. This gave potential participants time to reflect upon whether they wished to be involved. Participation was dependent upon written informed consent from all participants. For illiterate participants, verbal consent was obtained and fieldworkers signed the consent forms with respondents' permission.

# 3. Results – one-year-old survey

In the one-year-old household survey, 2,011 interviews were completed with caregivers in Andhra Pradesh.

## 3.1. Sample wealth distribution

A four-level wealth index grouping was chosen for Young Lives cross-national comparison, and one-year-old households had the following distribution:

**TABLE 6: WEALTH DISTRIBUTION USING CROSS-COUNTRY COMPARISON CUT-OFFS**

| | TOTAL | POOREST WI<0.25 | VERY POOR 0.25=< WI<0.5 | LESS POOR 0.5=<WI<0.75 | BETTER OFF WI>=0.75 |
|---|---|---|---|---|---|
| COUNT (N) | 2011 | 803 | 754 | 403 | 51 |
| % | 100 | 40 | 38 | 20 | 3 |

There is a distinctly uneven distribution of the sample across wealth groups, with the sample skewed toward the lower wealth groups. Alternative and more appropriate wealth index cut-offs were chosen for analysis of the Andhra Pradesh data.

**TABLE 7: WEALTH DISTRIBUTION USING ANDHRA PRADESH SPECIFIC CUT-OFFS**

| | TOTAL | POOREST WI<0.2 | VERY POOR 0.2=<WI<0.4 | LEAST POOR WI>=04 |
|---|---|---|---|---|
| COUNT (N) | 2011 | 622 | 710 | 679 |
| % | 100 | 31 | 35 | 34 |

## 3.2. General characteristics of the index child, their caregiver and their household

### BOX 1: GENERAL CHARACTERISTICS OF THE CAREGIVER (N=2011)

- 99 per cent of caregivers are the index child's biological mother
- only three caregivers are males
- 11 per cent of caregivers are aged 15–19 years, 78 per cent 20–29 years and 11 per cent over 30 years of age
- 12 per cent of rural caregivers are aged 15–19 years compared to seven per cent of urban caregivers
- a slightly higher proportion of caregivers (12 per cent) from the poorest group are aged 15–19 years compared to caregivers (eight per cent) from the least poor group.
- 46 per cent Backward Caste, 21 per cent Other Caster, 18 per cent Scheduled Caste and 15 per cent Scheduled Tribe
- 87 per cent Hindu, eight per cent Muslim, four per cent Christian and one per cent Buddhist
- 96 per cent of caregivers live in the same household as their partner
- 57 caregivers have a partner who lives outside of the household and 15 caregivers have no partner
- 61 per cent live in a household of two to five people, 35 per cent live in a household of size six to ten people and four per cent of caregivers live in households composed of 11 or more people
- 34 per cent of caregivers are literate
- 59 per cent of caregivers never had any schooling, two per cent received only below primary level education, 11 per cent completed primary, 12 per cent completed middle and 17 per cent completed high school and above
- 70 per cent of rural caregivers received no education compared to 27 per cent of urban caregivers; 81 per cent of caregivers from the poorest wealth group received no education compared to 28 per cent of those from the least poor group.

## BOX 2: GENERAL CHARACTERISTICS OF THE HOUSEHOLD (N=2011)

- 91 per cent of households are headed by males
- 41 per cent of households are composed of more males than females, 39 per cent have more females than males and 20 per cent have an equal number of members of each sex
- 59 per cent of household heads did not complete primary school
- 69 per cent of household heads in rural areas did not complete primary school compared to 30 per cent in urban areas
- 79 per cent of household heads from the poorest group did not complete primary compared to 33 per cent from the least poor group.

## BOX 3: GENERAL CHARACTERISTICS OF THE ONE-YEAR-OLD CHILDREN (N=2011)

- 54 per cent male and 46 per cent female with no significant difference in sex distribution between wealth groups or locations
- 25 per cent of one-year-old children live in urban and 75 per cent in rural areas
- 31 per cent of one-year-old children live in households from the poorest wealth group, 35 per cent from the very poor and 34 per cent from the least poor group (using the Andhra Pradesh three level wealth cut-offs)
- 99 per cent of index children are cared for by their biological mother, 99 per cent live with both their parents, 98 per cent see their mother daily, (with six cases where the mother is dead) and 97 per cent see their father daily (with no reported cases of dead fathers)
- 38 per cent of index children are an only child.

## 3.3. Nutritional status

Nutritional status is one of the key child outcome indicators measured in Young Lives.

**TABLE 8: NUTRITIONAL STATUS OF ONE-YEAR-OLDS BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| Stunting (N=1983) *(Z score Height for Age < -2)* | 545 | 28 | 18 | 31 | 37 | 29 | 18 |
| Wasting (N=1985) *(Z score Weight for Height < -2)* | 402 | 20 | 18 | 21 | 22 | 23 | 16 |
| Underweight (N=1982) *(Z score Weight for Age < -2)* | 886 | 45 | 33 | 49 | 54 | 47 | 33 |

Nutritional status is a key Young Lives 'outcome variable', together with physical health. With respect to the whole sample, 28 per cent of one-year-old children were stunted, 20 per cent were wasted and 45per cent were underweight. According to the WHO (1995) classification system for assessing the severity of malnutrition, there is a medium prevalence of stunting and a very high prevalence of both wasted and underweight children.

**TABLE 9: COMPARATIVE NUTRITIONAL STATUS DATA FOR ANDHRA PRADESH, (NFHS, 1998–99)**

| | STUNTING HAZ % | WASTING WHZ % | UNDERWEIGHT WAZ % |
|---|---|---|---|
| **Children aged 6–11 months** | 29.7 | 3.3 | 27.1 |
| **Children aged 12–23 months** | 46.0 | 12.0 | 45.1 |

The Young Lives anthropometric data has some degree of face validity when compared to measurements from the NFHS (1998–99) for Andhra Pradesh, with respect to the prevalence of stunting and underweight. However, the prevalence of wasting measured in Young Lives is much higher than that seen in the NFHS data. Further comparison to NFHS data requires disaggregation of the Young Lives data by age group and consideration of factors such as sampling and seasonal effects.

Clear differences were observed with regard to the prevalence of malnutrition by household location and wealth index, particularly with respect to stunting and underweight. One-year-old children in rural areas were more likely to be stunted (31 per cent) or underweight (49 per cent) than those living

in urban areas (18 per cent and 33 per cent respectively), whilst wasting appears to be a severe problem in both rural and urban areas. An inverse relationship exists between malnutrition and wealth, with the prevalence of stunted and underweight children increasing as wealth index decreases. A similar but less pronounced association is seen between the prevalence of wasting and household wealth, with children from the least poor group still exhibiting a very high prevalence of wasting.

The very high prevalence of wasting should be considered in the light of the higher prevalence characteristic of the Indian sub-continent (WHO, 1995), although consideration should be given to the occurrence of any significant environmental events which may have had an adverse effect upon child nutrition in Andhra Pradesh.

Further analysis will identify the principal determinants of malnutrition amongst one-year-olds in the Young Lives sample.

## 3.4. Physical health

**TABLE 10: PHYSICAL HEALTH OF ONE-YEAR-OLDS BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Health compared to others (N=2011)** | | | | | | | |
| *Same* | 983 | 49 | 48 | 49 | 51 | 49 | 47 |
| *Better* | 751 | 37 | 42 | 36 | 32 | 37 | 42 |
| *Worse* | 277 | 14 | 10 | 15 | 17 | 14 | 11 |
| **Perceive of long-term health problem (N= 1976)** | 93 | 5 | 3 | 5 | 6 | 4 | 4 |
| **Occurrence of life threatening illness (N=2005)** | 450 | 22 | 13 | 26 | 28 | 22 | 17 |
| **Sought treatment for life threatening illness** | 398 | 88 | 89 | 88 | 86 | 94 | 86 |
| **Occurrence of severe injury/accident (N=2011)** | 352 | 18 | 13 | 19 | 21 | 19 | 12 |
| **Illness in last 24 hours (N=2011)** | 488 | 24 | 22 | 25 | 28 | 25 | 21 |

Nearly 50 per cent of caregivers perceived their child's health to be the same as that of its peers, while 37 per cent were optimistic and felt that their child's health was better than the norm. Some variation is seen by location with rural caregivers more likely to report relatively poor child health and urban caregivers more likely to give positive comparisons. This pattern is repeated across wealth groups with the poorest households more likely to perceive their child's health as worse and the less poor to have a positive perception.

Five per cent of one-year-old children were reported to have developed a chronic condition, with little variation seen across location or wealth groups. In contrast, 22 per cent of children were reported to have had a life threatening illness, for which treatment was sought in 88 per cent of cases. The prevalence of life threatening conditions during this critical first year of life was higher in children from rural areas (26 per cent) and those from the poorest households (28 per cent). Little variation was seen in the prevalence of health-seeking behaviour in response to these critical illnesses between location or wealth groups.

Accidents and injuries are a significant and often under-recognised cause of morbidity in developing countries. Eighteen percent of children were reported to have had a severe injury or accident (burn, broken bone or serious fall), with children from rural areas (19 per cent) and from the poorest wealth group (21 per cent) more likely to be affected. This may reflect increased levels of risk within the home environment, less safe childcare practices or poor supervision. Nearly a quarter of children (24 per cent) had experienced an acute illness in the 24 hours prior to interview, with a slightly higher prevalence seen among children from rural and from the poorest households.

## 3.5. Antenatal care and birth

### TABLE 11: ANTENATAL CARE AND BIRTH CHARACTERISTICS RELATING TO ONE-YEAR-OLDS BY LOCATION AND WEALTH INDEX

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Any antenatal care (N=1954)** | 1746 | 88 | 87 | 88 | 87 | 88 | 90 |
| **Received tetanus injection (N=1748)** | 1707 | 98 | 99 | 97 | 96 | 98 | 99 |
| **Received iron folic tablets or syrup during pregnancy (N=1741)** | 1650 | 95 | 97 | 94 | 93 | 95 | 97 |
| **Delivered at** | | | | | | | |
| *Home* | 912 | 46 | 15 | 56 | 65 | 54 | 20 |
| *Hospital* | 970 | 49 | 83 | 37 | 30 | 41 | 74 |
| *Health centre* | 9 | 1 | - | 1 | - | 1 | - |
| **(N=1999)** | | | | | | | |
| **Medically trained person attended delivery (N=2011)** | 1225 | 61 | 90 | 51 | 42 | 55 | 84 |
| **Low birth weight baby (N=870)** | 382 | 44 | 33 | 52 | 57 | 45 | 38 |

Young Lives assesses the uptake of antenatal care, delivery characteristics and birth weight, since evidence suggests these factors have a significant impact upon child development. Nearly 90 per cent of mothers received antenatal care, with equity across location and wealth groups. Further analysis will identify the characteristics of mothers who did not receive antenatal care and establish whether these women belong to highly marginalised groups within society. Of those women who received antenatal care, there is nearly universal immunisation against tetanus and 95 per cent of mothers received iron folic tablets or syrup.

The Young Lives data have face validity when compared to NFHS (1998–99) and Multiple Indicator Survey (MICS) data collected in 2000. Referring to the MICS (UNICEF, 2001), 90 per cent of women surveyed in Andhra Pradesh received an antenatal check-up; 88 per cent of those in rural areas compared to 94 per cent in urban. NFHS data for Andhra Pradesh (1998–99) report that 93 per cent of urban mothers had seen a doctor for antenatal care compared to 77 per cent of rural mothers. A higher proportion of rural Young Lives mothers compared to the NFHS reported having received antenatal care, which may be due to rural mothers reporting antenatal care provision from health care providers other than doctors. A higher proportion of Young Lives mothers took iron folic tablets during pregnancy (95 per cent overall, 97 per cent urban, 94 per cent rural) compared to mothers surveyed in the MICS (62 per cent overall, 66 per cent urban, 61 per cent rural).

Nearly half of all births took place in a hospital (49 per cent), 46 per cent at home and over 60 per cent of deliveries were attended by someone with medical training. However the place of delivery and provision of medical assistance were strongly related to household location and wealth status. Over double the proportion of mothers from urban areas (83 per cent) delivered their babies in hospital compared to those in rural areas (37 per cent) and nearly half the mothers in rural areas (49 per cent) delivered their babies without medically trained assistance. Women from the least poor group were more likely to deliver in hospital (74 per cent) compared to (30 per cent) women from the poorest group, and they were more likely to have medically trained assistance (84 per cent) compared to their poorest counterparts (42 per cent). These findings are comparable to those from the MICS where 42 per cent of deliveries occurred in the home and 46 per cent were attended by non-medically trained assistants.

The collection of birth weight data from caregivers was problematic in this sample. Validated birth weight reports were available for only 870 children (43 per cent) in our sample, for whom the prevalence of low birth weight was 44 per cent. If the characteristics of those who provided a valid birth weight are compared to those who could not supply this information, it is apparent that caregivers from urban areas and those from the least poor households were more likely to report birth weight. This is due to the higher prevalence of home deliveries among mothers in rural areas and those from the poorest families. Birth weight measurements are less likely to be recorded for babies born in the home and without the assistance of medically trained personnel. When the subjective reports of baby's size at birth are considered, nearly a quarter of mothers perceived their baby to have been small or very small at birth (four per cent very small). Children from rural areas were more likely to be perceived as small or very small (27 per cent) at birth compared to those from urban areas (18 per cent), with mothers from the poorest households reporting a higher prevalence of small or very small babies (30 per cent) compared their least poor counterparts (21 per cent) .

## 3.6. Child vaccinations

### TABLE 12: VACCINATION STATUS OF CHILDREN OVER ONE-YEAR-OLD BY LOCATION AND WEALTH INDEX

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| (N=1073) | | | | | | | |
| **BCG only** | 2 | - | 1 | - | - | - | - |
| **Polio only** | 36 | 3 | 2 | 4 | 6 | 3 | 1 |
| **BCG, measles and polio** | 905 | 84 | 90 | 83 | 78 | 83 | 91 |
| **No BCG, measles or polio** | 25 | 2 | 1 | 3 | 2 | 3 | 2 |

The triple coverage of the BCG, polio and measles was high (84 per cent) in children aged over one-year-old. There was widespread uptake in both rural (83 per cent) and urban areas (90 per cent) and across wealth groups, although vaccination rates were lowest among children from the poorest wealth groups (78 per cent). Nearly all children had been exposed to at least one vaccination (only two per cent had received no vaccinations). This compares to NFHS (1998–99) data where six per cent of children aged 12–23 months had received no vaccinations.

These high levels of child immunisation may reflect the successful implementation of the Polio Free India programme. This programme was introduced in Andhra Pradesh in 2000 and aims to eradicate polio by 2005.

## 3.7. Caregiver mental health

### TABLE 13: CAREGIVER'S MENTAL HEALTH BY LOCATION AND WEALTH INDEX

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **'Case' of mental health problems (N=2011)** | 571 | 28 | 19 | 32 | 36 | 35 | 16 |

A measure of caregiver's mental health was obtained using the WHO (1994) recommended SRQ-20. The scale is not diagnostic but can be used as a screening tool for mental health problems. It consists of a series of 20 statements with associated yes/no answers. These statements investigate the occurrence of behaviours characteristic of depression and anxiety. The SRQ-20 has been used in over 20 developing countries including India and has been successfully implemented in both rural and urban communities.

Using a standardised 'cut-off' score, 28 per cent of caregivers were shown to experience some mental health problems. The prevalence of mental health problems varied considerably according to household location and wealth group. Rural caregivers (32 per cent) were more likely to experience problems than those living in urban areas (19 per cent), while double the proportion of caregivers from the poorest group experienced problems compared to those in the least poor group.

This is the first occasion on which caregiver mental ill health has been measured in a community-based survey in Andhra Pradesh. Research suggests that there is an association between maternal mental health and a child's physical and mental health, in addition to having an impact upon a child's developmental stage for age. It is an important determinant of child wellbeing since a mother's psychological wellbeing may affect the amount and quality of care she can give her child.

The Young Lives study will provide a unique opportunity to investigate the relationship between maternal mental health and child wellbeing over time and attempt to identify potential determinants of maternal mental health in Andhra Pradesh, in order to facilitate the development of suitable intervention strategies.

## 3.8. Child care

**TABLE 14: CHILDCARE BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Cared for by individuals not living in the household (N= 2007)** | 129 | 6 | 5 | 7 | 8 | 6 | 5 |
| **Been left alone or with children under the age of 5 years during the last 6 months (N=1994)** | 136 | 7 | 4 | 8 | 9 | 7 | 5 |

A small proportion of children (six per cent) have been cared for by individuals not resident in the household, with a similar proportion having been left in the care of a group of children or an individual child under the age of five years in the previous six months. A higher proportion of rural children and children from the poorest wealth group were left unsupervised in the care of small children.

Although only a relatively small proportion of children have been left alone or in the care of other children aged under five years, it would be interesting to identify the demographic and socio-economic characteristics of these children's households; to establish whether these children are at higher risk of accident or injury than their peers who were not left unsupervised by adults; and whether this pattern of childcare has an impact upon child wellbeing.

## 3.9. Housing

### TABLE 15: HOUSING CHARACTERISTICS BY LOCATION AND WEALTH INDEX

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Electricity (N=2009)** | 1650 | 82 | 97 | 77 | 52 | 92 | 99 |
| **Source drinking water (N=2008)** | | | | | | | |
| *Piped into dwelling/yard/plot* | 348 | 17 | 41 | 9 | 5 | 7 | 39 |
| *Tube-well in dwelling* | 152 | 8 | 15 | 5 | 4 | 6 | 13 |
| *Public standpipe/tube-well* | 1143 | 57 | 38 | 63 | 69 | 68 | 34 |
| *Unprotected well/spring/pond/river/stream* | 333 | 17 | 1 | 22 | 21 | 19 | 10 |
| *Other* | 32 | 2 | 5 | - | 1 | - | 4 |
| **Toilet facility (N=1996)** | | | | | | | |
| *Flush toilet/septic tank* | 402 | 20 | 62 | 6 | 2 | 8 | 49 |
| *Pit latrine (household's)* | 150 | 8 | 23 | 2 | - | 4 | 18 |
| *Pit latrine (communal)* | 80 | 4 | 4 | 4 | 3 | 7 | 2 |
| *None* | 1353 | 68 | 10 | 87 | 94 | 80 | 31 |
| *Other* | 11 | 1 | 1 | - | 1 | 1 | - |
| **Floor material (N=2006)** | | | | | | | |
| *Earth* | 744 | 37 | 6 | 48 | 76 | 36 | 3 |
| *Wood* | 20 | 1 | 1 | 1 | 1 | 2 | - |
| *Stone/brick* | 690 | 34 | 43 | 32 | 21 | 46 | 34 |
| *Cement/tile* | 529 | 26 | 47 | 20 | 1 | 16 | 60 |
| *Laminated material* | 12 | 1 | 2 | - | - | - | 2 |
| *Other* | 11 | 1 | 1 | - | - | - | 1 |
| **Roofing material (N=2006)** | | | | | | | |
| *Straw/thatch* | 427 | 21 | 6 | 26 | 52 | 13 | 2 |
| *Earth/mud* | 77 | 4 | - | 5 | 6 | 6 | - |
| *Wood/planks* | 85 | 4 | 2 | 5 | 6 | 7 | 1 |
| *Galvanised iron* | 45 | 2 | 5 | 1 | 1 | 3 | 3 |
| *Concrete/cement* | 605 | 30 | 48 | 24 | 4 | 28 | 57 |
| *Tiles/slates* | 442 | 22 | 26 | 21 | 12 | 26 | 27 |
| *Other* | 325 | 16 | 14 | 17 | 20 | 19 | 11 |
| **Wall material (N=2005)** | | | | | | | |
| *Brick/concrete* | 1157 | 58 | 91 | 47 | 13 | 61 | 96 |
| *Adobe/mud* | 412 | 21 | 5 | 26 | 47 | 16 | 2 |
| *Wood/branches* | 336 | 2 | 1 | 2 | 4 | 1 | - |
| *Galvanised iron* | 9 | - | - | 1 | 1 | 1 | - |
| *Matting* | 69 | 3 | 1 | 4 | 8 | 2 | 1 |
| *Other* | 322 | 16 | 2 | 21 | 28 | 20 | 1 |

Eighty-two per cent of households used electricity, with near total coverage in urban areas (97 per cent). Rural households (77 per cent) and those in the poorer wealth group (52 per cent) were less likely to have an electricity supply. Seventeen per cent of households obtained their drinking water from unprotected and unhygienic sources. Over 90 per cent of households in urban areas had access to hygienic drinking water from either an individual or communal protected source, only one per cent of urban households collected their water from an unprotected well, while 22 per cent of rural households relied on an unprotected source. Access to protected drinking water is related to household wealth index with the poorest families (21 per cent) more likely to have an unprotected source.

Toilet facilities are limited, with 68 per cent of households lacking access to any toilet facility. There is a clear disparity between household locations and between wealth groups with regard to this indicator. Eighty-seven per cent of rural households do not have toilet facilities compared to ten per cent of urban dwellings, while 94 per cent of households from the poorest group lack these facilities compared to 31 per cent from the least poor group. Nearly 40 per cent of households have earth floors. This type of construction is more common among the rural (48 per cent) and the poorest households (76 per cent).

These data indicate that a high proportion of Young Lives children are growing up in households lacking sanitation and sewerage facilities. Following the next round of data collection when children will be four years old, it will be interesting to explore whether the absence of basic amenities impacts upon child survival and morbidity.

## 3.10. Livelihoods, diversification, shocks and coping strategies

### TABLE 16: HOUSEHOLD'S MAIN TYPE OF ECONOMIC ACTIVITIES BY LOCATION AND WEALTH INDEX

| | TOTAL (N=2011) | % | URBAN % (N=505) | RURAL % (N=1506) | POOREST % (N=626) | VERY POOR % (N=710) | LEAST POOR % (N=679) |
|---|---|---|---|---|---|---|---|
| SECTOR* | | | | | | | |
| *Agriculture, hunting, forestry and fishing* | 1366 | 68 | 3 | 90 | 92 | 83 | 30 |
| *Mining and quarrying* | 28 | 1 | - | 2 | 2 | 2 | - |
| *Manufacturing* | 247 | 12 | 20 | 10 | 9 | 11 | 17 |
| *Electricity, gas and water* | 1 | 0 | - | - | - | - | - |
| *Construction* | 228 | 11 | 12 | 11 | 11 | 13 | 10 |
| *Wholesale and retail trade* | 137 | 7 | 16 | 4 | 2 | 5 | 14 |
| *Transport, storage and communications* | 176 | 9 | 14 | 7 | 5 | 8 | 13 |
| *Finance, insurance, real estate and business services* | 219 | 11 | 32 | 4 | 3 | 5 | 24 |
| *Community, social and personal services* | 353 | 18 | 27 | 14 | 11 | 16 | 26 |
| *Household has no activities* | 17 | 1 | 2 | - | 1 | - | 2 |

*Households may be involved in none, one or more than one sector

The principal employment sector is agriculture with 90 per cent of rural and 92 per cent of the poorest households engaged in agricultural activity. In urban areas, finance and business (32 per cent) is the most common sector of household economic activity followed by the community and personal sector (27 per cent), manufacturing (20 per cent) and wholesale and retail (16 per cent) respectively.

Evidence suggests that diversification of economic activity can buffer poor households from the adverse impact of shocks. For this reason, Young Lives measures household economic diversification as a facet of livelihoods.

**TABLE 17: DIVERSIFICATION OF ECONOMIC ACTIVITY BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **(N=2011)** | | | | | | | |
| **Activities in only one sector** | 1343 | 67 | 76 | 64 | 69 | 62 | 70 |
| **Activities in more than one sector** | 651 | 32 | 22 | 36 | 30 | 38 | 29 |

Two-thirds of households are involved in a single economic activity. Rural households (36 per cent) are more likely to have diversified into more than one sector than those in urban areas (22 per cent), while households from the (very poor) middle wealth group (38 per cent) are more likely to have diversified than either their poorest (30 per cent) or least poor (29 per cent) counterparts.

**TABLE 18: HOUSEHOLD DEBT AND ABILITY TO REPAY BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Serious debt (N=2002)** | 1021 | 51 | 25 | 60 | 58 | 65 | 31 |
| **Can repay on time (N=980)** | 790 | 81 | 74 | 82 | 81 | 83 | 76 |

Just over half the households sampled, reported that they had a serious debt, with the burden of debt being higher among rural (60 per cent) than urban (25 per cent) families and among the poorer households (58 per cent; 65 per cent). Respondents are optimistic with regard to their debt repayments, with 81 per cent of those with a serious debt reporting that they will be able to repay on time. Urban households are slightly more pessimistic, with 26 per cent feeling that would be unable to repay on time compared to 18 per cent in rural areas.

## TABLE 19: TYPE OF SHOCKS BY LOCATION AND WEALTH INDEX

| | TOTAL (N=2011) | % | URBAN % (N=505) | RURAL % (N=1506) | POOREST % (N=626) | VERY POOR % (N=710) | LEAST POOR % (N=679) |
|---|---|---|---|---|---|---|---|
| **Number of shocks (N=2011)** | | | | | | | |
| *None* | - | - | - | - | - | - | - |
| *1 to 5* | 1971 | 98 | 100 | 97 | 98 | 97 | 99 |
| **Type of shocks** | | | | | | | |
| *Natural disaster* | 448 | 22 | - | 30 | 28 | 32 | 7 |
| *Decrease in food availability* | 105 | 5 | 2 | 6 | 7 | 6 | 3 |
| *Livestock died or stolen* | 134 | 7 | - | 9 | 8 | 9 | 3 |
| *Crops failed or stolen* | 2011 | 100 | 100 | 100 | 100 | 100 | 100 |
| *Death/reduction in household members* | 59 | 3 | 2 | 3 | 3 | 3 | 2 |
| *Loss of job/source of income/family enterprise* | 102 | 5 | 4 | 5 | 7 | 6 | 3 |
| *Severe illness or injury* | 333 | 17 | 6 | 20 | 20 | 21 | 8 |
| *Victim of crime* | 60 | 3 | - | 4 | 4 | 4 | 1 |
| *Divorce or separation* | 29 | 1 | 1 | 2 | 2 | 2 | - |
| *Birth/new household member* | 149 | 7 | - | 9 | 9 | 10 | 4 |
| *Paying for child's education* | 64 | 3 | - | 4 | 4 | 4 | 2 |
| *Moved, migrated or fled* | 68 | 3 | - | 4 | 5 | 4 | 1 |
| *Other* | 58 | 3 | 1 | 4 | 4 | 4 | 2 |

The economic shocks experienced by a household and the coping strategies they deploy, can have a significant impact upon family prosperity and wealth. All households sampled had experienced at least one shock during the three years prior to interview, with 98 per cent reporting between one and five shocks and two per cent reporting six or more shocks. There was a near universal experience of economic shocks across household location and wealth groups. It would be interesting to consider the number and pattern of shocks in greater detail and disaggregate the data in terms of no shock, one shock, more than one shock.

A total number of 3,620 shocks were reported by 2,011 households. The most frequent shock was the failure or theft of crops and this was reported by all households and accounted for 56 per cent (2011 out of 3620) of all reported shocks, with no variation by location or household wealth group. This data will be revisited and checked since it seems improbable that all households in the survey (including those in urban areas) should have experienced the failure or theft of crops during the previous three years. Results should be viewed in a preliminary light. The second most common shock was the occurrence of natural disasters reported by 22 per cent of households (accounting for 12 per cent of all reported shocks) and experienced principally in rural areas and by the poorer families.

## TABLE 20: TYPE OF RESPONSE BY LOCATION AND WEALTH INDEX

| | TOTAL (N=2011) | % | URBAN % (N=505) | RURAL % (N=1506) | POOREST % (N=626) | VERY POOR % (N=710) | LEAST POOR % (N=679) |
|---|---|---|---|---|---|---|---|
| **Type of response** | | | | | | | |
| *Nothing* | 233 | 27 | 61 | 24 | 23 | 25 | 39 |
| *Sell things* | 54 | 6 | 2 | 7 | 6 | 6 | 10 |
| *Use savings* | 55 | 6 | 9 | 6 | 5 | 6 | 13 |
| *Use credit* | 579 | 66 | 32 | 69 | 66 | 73 | 49 |
| *Eat less* | 84 | 10 | 4 | 10 | 11 | 9 | 7 |
| *Buy less* | 72 | 8 | 4 | 9 | 9 | 7 | 11 |
| *Work more/start work* | 228 | 26 | 7 | 28 | 26 | 29 | 19 |
| *Take children out of school* | 7 | 1 | 2 | 1 | 1 | 1 | 2 |
| *Send children to work* | 19 | 2 | - | 2 | 2 | 1 | 6 |
| *Fled/moved away from problem* | 3 | - | 11 | - | 1 | - | 1 |
| *Migrated to work/find work* | 101 | 12 | 5 | 12 | 16 | 10 | 6 |
| *Received help from relatives or friends* | 178 | 20 | 36 | 19 | 20 | 19 | 26 |
| *Received aid from government/NGO* | 44 | 5 | 2 | 5 | 3 | 6 | 9 |
| *Insurance payment* | 4 | 1 | 2 | - | - | 1 | - |
| *Other* | 15 | 2 | 7 | 1 | 3 | - | 4 |

In response to the shocks detailed in the previous table, a total of 1,676 coping strategies were reported. The most frequent household coping strategy was to use credit (579 out of 1676; 35 per cent) and two-thirds of households responded to crisis in this manner; households from rural areas and from the poorer wealth groups being more likely to adopt this strategy. The second most common response was to 'do nothing', followed by working more or starting to work.

Data relating to household economic shocks and associated coping strategies will be explored in further depth to identify the pattern of coping strategies employed in response to particular shocks, and whether differences exist between households that have defined coping strategies and those that do not,

## 3.11. Social capital

**TABLE 21: DIMENSIONS OF CAREGIVER SOCIAL CAPITAL BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Absolute structural social capital, ASSC (N=2011)** | | | | | | | |
| *No ASSC* | 1429 | 71 | 85 | 67 | 71 | 65 | 78 |
| *Medium ASSC* | 576 | 29 | 15 | 33 | 29 | 35 | 22 |
| *High ASSC* | 6 | - | - | - | - | - | - |
| **Relative structural social capital, RSSC (N=2011)** | | | | | | | |
| *No RSSC* | 1445 | 72 | 86 | 67 | 71 | 66 | 79 |
| *Medium RSSC* | 482 | 24 | 9 | 29 | 24 | 31 | 17 |
| *High RSSC* | 84 | 4 | 5 | 4 | 5 | 3 | 5 |
| **Social support, SS (N=2005)** | | | | | | | |
| *No SS* | 400 | 20 | 29 | 17 | 18 | 15 | 27 |
| *Medium SS* | 1555 | 78 | 71 | 80 | 81 | 81 | 70 |
| *High SS* | 50 | 2 | - | 3 | 1 | 4 | 3 |
| **Cognitive social capital, CSC (N=2011)** | | | | | | | |
| *No CSC* | 4 | - | - | - | - | - | - |
| *Medium CSC* | 127 | 6 | 10 | 5 | 5 | 6 | 9 |
| *High CSC* | 1880 | 94 | 90 | 95 | 95 | 94 | 91 |
| **Citizenship, CIT (N=2011)** | | | | | | | |
| *No CIT* | 1386 | 69 | 76 | 67 | 70 | 67 | 71 |
| *Some CIT* | 625 | 31 | 24 | 33 | 30 | 33 | 29 |

Structural social capital represents an individual's level of connectedness or networks (what individuals do, behaviour that can be assessed objectively) and is measured in Young Lives by asking about the caregiver's involvement in informal and formal groups within the community. This can be measured in two ways: an absolute measure – absolute structural social capital, ASSC, (number of groups in the community), and a relative measure – relative structural social capital, RSSC (the number of groups in which caregiver is involved compared to the actual number of groups or organisations listed from the community survey). Seventy-one per cent of caregivers were not active members of any community groups at the time of the survey, with a value (ASSC) equal to 0. A higher proportion of urban caregivers had no ASSC (85 per cent) compared to their rural counterparts (67 per cent) and a higher proportion of carers from the least poor group had no ASSC (78 per cent). Only six respondents had high ASSC. This pattern is reflected in RSSC, with urban caregivers (86 per cent) and those from the least poor (79 per cent) households more likely to have no RSSC. These results may reflect the more isolated and busy nature of urban lifestyles, with urban caregivers having less time to become involved in community groups. However this pattern may also reflect the migratory status of some urban households. It would be interesting to consider how long caregivers have lived in their communities, ascertain their level of involvement in community groups and assess their level of involvement or assimilation into their new communities.

Twenty per cent of the sample reported having received no social support in the year prior to interview. Those living in urban areas (29 per cent) and those from the least poor households (27 per cent) were more likely to report no social support.

Cognitive social capital (CSC) reflects how individuals feel about trust, reciprocity and their sense of belonging in their community. The majority of caregivers (94 per cent) had high levels of CSC and levels were high across location and wealth groups, although a slightly lower proportion of those living in urban areas (90 per cent) and in the least poor group (91 per cent) had high CSC.

From the caregivers' reports it is uncommon for individuals to work together in order to address a shared issue or problem. This is reflected in the measure of citizenship; 69 per cent of caregivers score 0 for citizenship. Rural caregivers are more likely to have some degree of citizenship (33 per cent) than their urban counterparts, but there is little variation across wealth groups.

# 4. Results – eight-year-old survey

In the eight-year-old survey, 1,008 household and child interviews were completed in Andhra Pradesh.

## 4.1. Sample wealth distribution

A four-level wealth index grouping was chosen for Young Lives cross-national comparison; eight-year-olds' households had the following distribution:

**TABLE 22: WEALTH DISTRIBUTION USING CROSS-COUNTRY COMPARISON CUT-OFFS**

| | TOTAL | POOREST WI<0.25 | VERY POOR 0.25=< WI<0.5 | LESS POOR 0.5=<WI<0.75 | BETTER OFF WI>=0.75 |
|---|---|---|---|---|---|
| **Count (N)** | 1008 | 421 | 348 | 214 | 25 |
| % | 100 | 42 | 35 | 21 | 2 |

The sample has an uneven distribution across the wealth groups, with the distribution skewed toward the lower wealth groups. Alternative and more appropriate wealth index cut-offs were chosen for analysis of the Andhra Pradesh data.

**TABLE 23: WEALTH DISTRIBUTION USING ANDHRA PRADESH SPECIFIC CUT-OFFS**

| | TOTAL | POOREST WI<0.2 | VERY POOR 0.2=<WI-<0.4 | LEAST POOR WI>=04 |
|---|---|---|---|---|
| **Count (N)** | 1008 | 325 | 335 | 348 |
| % | 100 | 32 | 33 | 35 |

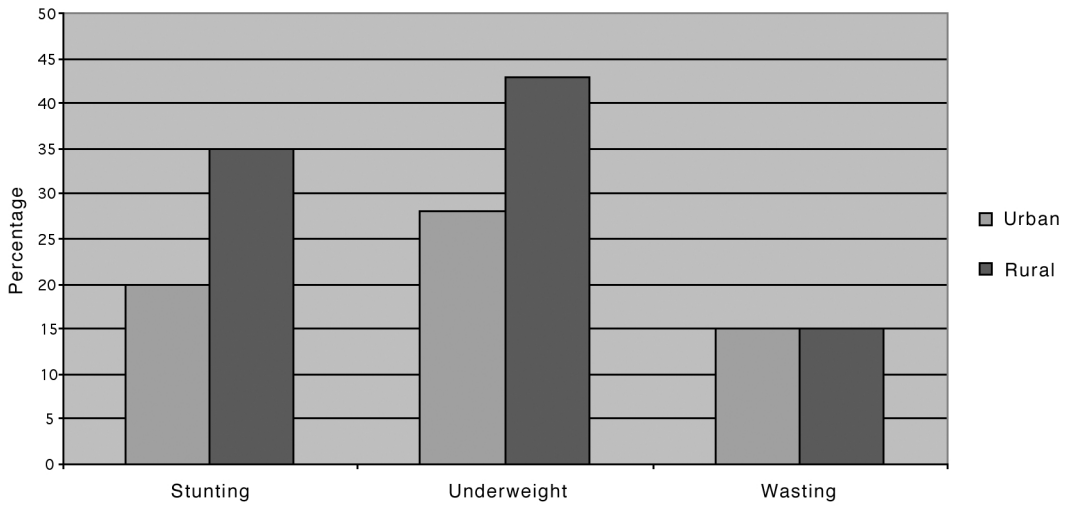
## 4.2. Nutritional status

**TABLE 24: NUTRITIONAL STATUS OF EIGHT-YEAR-OLDS BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Stunting (N=1006)** *(Z score Height for Age < -2)* | 313 | 31 | 20 | 35 | 37 | 33 | 24 |
| **Wasting (N=1007)** *(Z score Weight for Height < -2)* | 151 | 15 | 15 | 15 | 19 | 14 | 13 |
| **Underweight (N=1004)** *(Z score Weight for Age < -2)* | 393 | 39 | 28 | 43 | 44 | 41 | 32 |

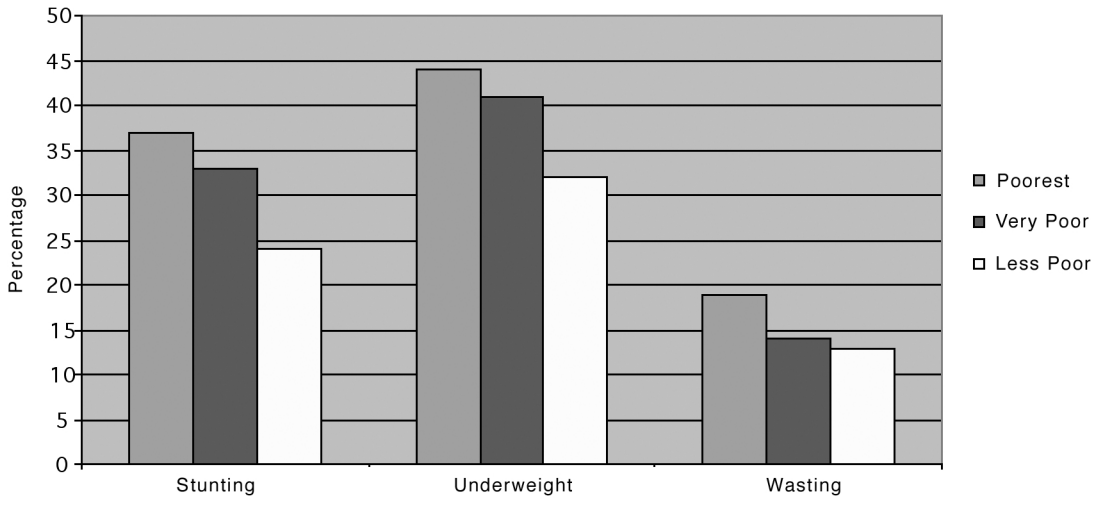
According to WHO (1995) guidelines, the prevalence of underweight eight-year-old children was very high (39 per cent) and stunting was high (31 per cent). A higher proportion of rural children were stunted (35 per cent) or underweight (43 per cent) compared to children from urban areas. The prevalence of wasting was very high (15 per cent), with no variation by household location.

**FIGURE 2: DISTRIBUTION OF POOR NUTRITION STATUS (<-2SD) OF EIGHT-YEAR-OLDS BY LOCATION**




There was a clear relationship between malnutrition and poverty, with more eight-year-old children from the poorest wealth group being malnourished relative to children from the least poor group. Thirty-seven per cent of children from the poorest households were stunted, 44 per cent underweight and 19 per cent wasted, compared to 24 per cent, 32 per cent and 13 per cent of children from the least poor households respectively.

**FIGURE 3: DISTRIBUTION OF POOR NUTRITION STATUS (<-2SD) OF EIGHT-YEAR-OLDS BY WEALTH GROUP**



There is no appropriate NFHS data for this age group against which to compare the face validity of the Young Lives anthropometric data.

Further analysis will identify the principal determinants of malnutrition amongst eight-year-olds in the Young Lives sample. The collection of anthropometric data allows immediate comparison between the prevalence of acute and chronic malnutrition in the one-year-old and eight-year-old cohorts. In addition, the longitudinal aspect of the study will allow the nutritional status of these two cohorts to be compared when the index (one-year-old) children reach eight years of age; and also allow analysis of how the nutritional status of the index child will vary over time and with respect to wealth inequalities, environmental and policy change.

## 4.3. Physical health

Less than ten per cent of caregivers perceived their child's health to be worse than its peers, with nearly 40 per cent displaying an optimistic view and rating their child's health as better. Long-term health problems were reported for six per cent of children with little variation across household location or wealth group. Seven per cent of children were reported to have experienced a life threatening illness, for which the majority (84 per cent) of affected children received medical treatment. Slightly more children (17 per cent) from the least poor group had experienced severe toothache in the previous year compared to children from poorer households. Nearly 20 per cent of children had experienced an acute illness in the two weeks prior to interview, with little variation by location or wealth group.

**TABLE 25: PHYSICAL HEALTH OF EIGHT-YEAR-OLDS BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Health compared to others (N= 1007)** | | | | | | | |
| *Same* | 527 | 52 | 45 | 55 | 58 | 53 | 47 |
| *Better* | 390 | 39 | 48 | 36 | 32 | 38 | 46 |
| *Worse* | 90 | 9 | 6 | 10 | 11 | 9 | 7 |
| **Long-term health problem (N=1008)** | 64 | 6 | 4 | 7 | 7 | 6 | 6 |
| **Occurrence of life threatening illness in last 3 years (N=1003)** | 67 | 7 | 4 | 8 | 7 | 9 | 4 |
| **Sought treatment for life threatening illness** | 56 | 84 | 89 | 83 | 76 | 87 | 87 |
| **Occurrence of severe toothache in last year (N=1002)** | 139 | 14 | 14 | 14 | 13 | 12 | 17 |
| **Illness in last 2 weeks (N=1004)** | 178 | 18 | 17 | 18 | 20 | 17 | 16 |

## 4.4. Child's schooling

Virtually all eight-year-old children in the sample had attended school (98 per cent) with 95 per cent currently in school. The gross enrolment rate for Andhra Pradesh was 86 per cent in classes 1–4 (age six to 11 years) in 1999–2000 (GOAP, 2000).

**TABLE 26: CHILD SCHOOLING AND LEISURE TIME BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Child attended school (N=1008)** | 987 | 98 | 100 | 97 | 98 | 97 | 99 |
| **Child currently in school (N=999)** | 952 | 95 | 100 | 94 | 94 | 95 | 97 |
| **Main things children dislike about school: (N=584)** | | | | | | | |
| *Teachers/ pupils beating me* | 345 | 59 | 51 | 62 | 61 | 63 | 55 |
| *Dirty toilets* | 34 | 6 | 14 | 3 | 3 | 3 | 11 |
| **Main things children like about school: (N=1008)** | | | | | | | |
| *Teachers and friends* | 501 | 50 | 57 | 47 | 48 | 47 | 55 |
| *Learning* | 259 | 26 | 17 | 29 | 30 | 27 | 21 |
| **What children do for fun: (N=968)** | | | | | | | |
| Plays with friends | 582 | 60 | 54 | 62 | 64 | 63 | 54 |
| Watches TV | 114 | 12 | 17 | 10 | 6 | 12 | 17 |
| Reads, writes, draws | 171 | 18 | 15 | 19 | 20 | 17 | 16 |
| Helps parents | 19 | 2 | - | 3 | 4 | 2 | - |

The main thing that children did not like about school was being beaten by their teachers or by other pupils (59 per cent). This was reported more frequently by children from rural areas (62 per cent) and those from the poorest wealth group (61 per cent). Children from urban areas (14 per cent) and the least poor households (11 per cent) were also more likely to say that they did not like the dirty toilets at school. Half the children reported that the main thing they liked about school was 'their teachers and friends', a reason more commonly cited by children from urban areas and from the least poor households. The second most popular thing about school was children's experience of 'learning' (26 per cent), with slightly more children from rural areas and from the poorest households giving this reason.

The most common past-time reported by children was playing with their friends (60 per cent), although this was more popular among those from rural areas and from the poorest group. Watching television is popular, particularly among children from urban and from less poor backgrounds. It is interesting that a small number of rural children and those from the poorest wealth group considered helping their parents as a fun activity.

## 4.5. Child work

Sixty-two children reported that they had worked to get money or things for themselves or other members of their family in the year prior to interview. Forty-eight of these children enjoyed working although 14 did not, of whom seven reported that working left them with no time for school, five had a poor working environment and one child said that they had no time to play. Thirteen children reported that they have missed school because of work.

Further data checks will be carried out and the child's report of their working behaviour will be compared to data collected from their caregiver. Analysis will identify the key determinants of child

work. Although the level of child economic activity is currently low, the children are still only eight years of age. The longitudinal dimension of Young Lives will highlight the changing nature and magnitude of economic activity as the children grow older and its impact upon school enrolment and child wellbeing.

## 4.6. Child mental health

Child mental health was assessed using the SDQ, (Goodman, 1997), details of which can be found at www.sdqinfo.com.

The SDQ is a brief behavioural screening tool which can be used with children aged 3–16 years. It has good specificity and moderate sensitivity. The version used in Young Lives was answered by the caregiver and consists of 25 core questions which explore the psychological attributes of the child. The 25 items are divided between five component scales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and pro-social behaviour. The scores from the first four scales (excluding pro-social) are summed and a total difficulties score generated.

The scoring system classifies the child as 'normal', 'borderline' or 'abnormal' with regard to the five component scales and the total difficulties score. An 'abnormal' score on the total difficulties scale can be used to identify likely 'cases' of mental disorder. Typically in a community sample approximately ten per cent of children will score in the 'abnormal' category, with a further ten pert cent rated in the 'borderline' category. The exact proportions vary according to country, age and gender.

**TABLE 27: CHILD'S MENTAL HEALTH BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Normal** | 603 | 62 | 73 | 59 | 57 | 58 | 71 |
| **Borderline 'case'** | 187 | 19 | 17 | 20 | 20 | 21 | 17 |
| **Abnormal 'case'** | 180 | 19 | 10 | 21 | 23 | 22 | 12 |
| **(N=970)** | | | | | | | |

Young Lives results were higher with nearly 20 per cent of children classified as 'abnormal' and a further 20 per cent classified as 'borderline'. However, these results should be interpreted with caution since the SDQ has not been validated in Andhra Pradesh and normative data is not available.

The Young Lives results suggest that child behavioural disorders may be a potential problem in Andhra Pradesh, particularly in rural areas and amongst children from the poorest groups, where the prevalence of abnormal 'cases' is over 20 per cent.

An additional supplementary question was included in the SDQ schedule with the approval of the instrument's author. This question asked caregivers for their overall opinion on whether the child had difficulties in one or more of the behavioural domains described. Twenty per cent of caregivers reported that the child had no difficulties in emotions, concentration or behaviour, with caregivers from urban areas (30 per cent) and from the least poor households (26 per cent) more likely to report

that the children did not have any difficulties. There appears to be an association between caregivers' subjective report of child behavioural difficulties (definite or severe reported difficulties) and household location and wealth index. Twenty-one per cent of children from rural areas were reported to have this level of difficulty compared to nine per cent from urban areas; while 22 per cent of children from the poorest group were perceived to have definite or severe problems in comparison to 12 per cent from the least poor group.

This is the first time the SDQ has been used in Andhra Pradesh and the findings suggest that child mental ill health may be a potential problem. Plans are being developed to formally validate the SDQ in Andhra Pradesh.

## 4.7. Child's perception of wellbeing

Young Lives has incorporated questions which explore the child's own perception of their wellbeing and quality of life.

Nearly all eight-year-old children (95 per cent) believe that the water they drink is 'good'. While only two per cent of children feel that the drinking water is 'bad', four per cent perceive the air they breathe to be 'bad' and 34 per cent feel that the amount of rubbish in their local streets is 'bad', with no clear apparent variation across location or wealth groups. Caregivers report that 16 per cent of children live in households that do not have protected sources of hygienic drinking water (22 per cent rural areas, 20 per cent of the poorest households). Therefore, some disparity exists between the child's assessment of their drinking water and the reality. Children appear to be more aware of the visible manifestations of environmental pollution (rubbish) compared to the more abstract 'invisible' forms (water, air). Around 90 per cent of children report that they feel safe in their local areas with little variation between rural and urban groups or between wealth groups.

### TABLE 28: CHILD'S PERCEPTION OF WELLBEING BY LOCATION AND WEALTH INDEX

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Is the water people drink around here (N=997)** | | | | | | | |
| *Good* | 948 | 95 | 96 | 95 | 96 | 94 | 96 |
| *Bad* | 23 | 2 | - | 3 | 2 | 3 | 1 |
| *Average* | 26 | 3 | 4 | 2 | 2 | 3 | 3 |
| **Is the air people breath around here (N=988)** | | | | | | | |
| *Good* | 891 | 90 | 85 | 92 | 93 | 91 | 87 |
| *Bad* | 42 | 4 | 5 | 4 | 4 | 4 | 5 |
| *Average* | 55 | 6 | 10 | 4 | 3 | 5 | 8 |
| **Is the amount of rubbish on the street (N=997)** | | | | | | | |
| *Good* | 415 | 41 | 30 | 46 | 43 | 47 | 36 |
| *Bad* | 338 | 34 | 33 | 34 | 38 | 31 | 33 |
| *Average* | 244 | 25 | 37 | 20 | 19 | 22 | 32 |
| Is the area you live in safe for children (N=986) | | | | | | | |
| Yes | 891 | 90 | 89 | 91 | 88 | 93 | 90 |
| No | 95 | 10 | 11 | 9 | 12 | 7 | 10 |

## 4.8. Child's social capital

Young Lives adopted an innovative approach to estimate the child's own social capital, rather than using the parents' social capital as a proxy for the child's social capital status. Questions were included which explored the child's social relations and level of connectedness within their own community. Eighty-two per cent of children report that they play with their friends daily, although more children from rural backgrounds (85 per cent) and from the poorest households (87per cent) play with their friends with this regularity, compared to their urban and better off peers. When they have a problem, 92 per cent of children have a source of support. A slightly higher proportion of children from urban areas (98 per cent) and from the least poor households (95 per cent) have someone to turn to, compared to rural children (90 per cent) and those from the poorest backgrounds (90 per cent).

## 4.9. Literacy and numeracy

Literacy and numeracy are important life skills and are considered key child outcome measures within the Young Lives conceptual framework.

**TABLE 29: LITERACY AND NUMERACY OF EIGHT-YEAR-OLDS BY LOCATION AND WEALTH INDEX**

| | TOTAL (N=1008) | % | URBAN % (N=251) | RURAL % (N=757) | POOREST % (N=325) | VERY POOR % (N=335) | LEAST POOR % (N=348) |
|---|---|---|---|---|---|---|---|
| **Reading (N=986)** | | | | | | | |
| *Cannot read anything** | 77 | 8 | 6 | 9 | 12 | 8 | 4 |
| *Can read letters only* | 271 | 28 | 16 | 31 | 35 | 32 | 16 |
| *Can read words only* | 131 | 13 | 10 | 14 | 15 | 15 | 10 |
| *Can read sentence* | 507 | 51 | 68 | 46 | 38 | 45 | 70 |
| **Writing (N=965)** | | | | | | | |
| *Could not write sentence*** | 183 | 19 | 8 | 22 | 30 | 20 | 7 |
| *Wrote without difficulty or errors* | 508 | 53 | 73 | 46 | 38 | 48 | 73 |
| *Wrote with difficulty or errors* | 274 | 28 | 19 | 32 | 33 | 32 | 20 |
| **Numeracy (N=953)** | | | | | | | |
| *Multiply correct**** | 861 | 90 | 94 | 89 | 85 | 92 | 94 |
| *Multiply incorrect* | 92 | 10 | 6 | 11 | 15 | 8 | 6 |

* Sentence = It's hot in summer
** Sentence = I like dogs
*** 2 x 4 = ?

Fifty-one per cent of the children who completed the age-appropriate literacy test were able to read the test sentence correctly and 53 per cent were able to write the sentence with no errors. A higher proportion of children were successful in the numeracy test with 90 per cent calculating the multiplication correctly.

A high degree of variation is seen between children from different locations and wealth groups. Rural children performed less well on the literacy tests than the urban children, although there was near equity of performance on the numeracy test. There was also a large disparity between wealth groups with regard to literacy, with children from the least poor group performing better than the poorer

children. There was some difference with respect to numeracy, although less marked, with 85 per cent of the poorest children answering the numeracy test correctly compared to 94 per cent of the least poor children.

Less than 50 per cent of the rural and fewer than 40 per cent of the poorest children have age-appropriate literacy skills. With school enrolment rates high (94 per cent) for both groups, it is important to question the quality of primary education that these children are receiving. If these results are an indication of educational attainment it is likely that these children may leave primary level education without adequate literacy skills. The longitudinal aspect of Young Lives will allow us to revisit this issue and chart participant educational outcomes over time.

## 4.10. Child development

In order to assess child intellectual development, Young Lives adopted the Raven's CPM. This is a set of 36 test items arranged in three sets of 12 problems – set A, set AB and set B. The sets as a whole allow the child three opportunities to develop a consistent theme of thought in their approach to solving the visual problems. The Raven's CPM has been successfully applied in cross-cultural settings and in non-literate populations. The three problem sets are presented as coloured illustrations which enable the problems to be solved with the minimum possible verbal explanation.

**TABLE 30: RAVEN'S CPM TEST RESULTS BY LOCATION AND WEALTH INDEX**

| | TOTAL | % | URBAN % | RURAL % | POOREST % | VERY POOR % | LEAST POOR % |
|---|---|---|---|---|---|---|---|
| **Set A (N=1008)** | | | | | | | |
| *Low (0-4)* | 34 | 3 | 2 | 4 | 4 | 3 | 3 |
| *Average (5-8)* | 250 | 25 | 18 | 27 | 29 | 26 | 20 |
| *High (9-12)* | 724 | 72 | 80 | 69 | 67 | 71 | 77 |
| **Set AB (N=1008)** | | | | | | | |
| *Low (0-4)* | 140 | 14 | 11 | 15 | 14 | 15 | 12 |
| Average (5-8) | 562 | 56 | 51 | 57 | 63 | 54 | 51 |
| *High (9-12)* | 306 | 30 | 38 | 28 | 23 | 31 | 37 |
| **Set B (N=1008)** | | | | | | | |
| *Low (0-4)* | 248 | 25 | 19 | 26 | 26 | 27 | 21 |
| *Average (5-8)* | 250 | 53 | 56 | 52 | 55 | 47 | 56 |
| *High (9-12)* | 724 | 27 | 25 | 22 | 19 | 26 | 23 |

All children attempted the Raven's CPM. In set A, only three per cent of children received a low score with little variation by location or wealth group. For set A, 72 per cent of children received a high score, although a higher proportion of urban children (80 per cent) gained a high score compared to those from rural areas (69 per cent), with those from the less poor group (77 per cent) more likely to gain a high score than those from the poorest group (67 per cent).

For set AB, 30 per cent of children scored a high mark. A slightly higher proportion of children from urban areas (39 per cent) and from least poor households (37 per cent) gained a high mark compared to their peers from rural areas (28 per cent) and the poorest families (23 per cent) respectively.

In the final set of problems (set B), 22 per cent of children attained a high score. More children from urban (26 per cent) and the least poor (23 per cent) households attained a high score in B compared to children from rural areas (22 per cent) and the poorest families (19 per cent).

Total scores on the Raven's CPM test range from 0–36, the mean test score is 22.0 (95% CI: 8.2–35.8). Children from urban areas had significantly higher Raven's CPM test scores than those from rural areas ($p<0.001$) while children from the least poor group had significantly higher scores than those from the poorest group ($p<0.005$).

# 5. Provisional conclusions and policy implications

In India, the Young Lives study is likely to generate research evidence that will have major policy implications, due to the study's multi-dimensional conceptualisation of child poverty. In the context of Andhra Pradesh, it takes the debate beyond the realm of child labour and into that of child wellbeing. The focus on child poverty, with its broad conceptual underpinning and the integration of policy tracking within the methodology will focus attention on public policy. This process is significant for Andhra Pradesh since few other states have been successful in addressing child poverty through policy interventions amidst low growth rates.

This section discusses the key findings of the first round of the Young Lives survey and their implications for policy.

## 5.1. Nutritional status

Among one-year-old and eight-year-old children, those living in rural areas and those from the poorest households were more likely to be stunted and underweight. The prevalence of wasting was very high across locations and wealth groups, although the prevalence was higher among one-year-olds (20 per cent) than among eight-year-olds (15 per cent). In the light of recent changes in policies and programmes related to nutrition and health, these findings are alarming. While the major nutritional programme in the state, ICDS, is burdened with problems related to efficiency, leakage and reach, these findings highlight the urgent need to increase the coverage and reach of self-targeted nutritional programmes directed at the poorer households and those in rural areas.

## 5.2. Immunisation

Infant immunisation has a high coverage rate, and 84 per cent of children aged over one year had received vaccinations for measles and polio, and BCG. These impressive figures are largely attributable to the centrally sponsored campaign of Polio Free India. Nonetheless, lower coverage among children from the poorest wealth group indicates that the economically disadvantaged still lag behind in terms of accessing basic public health services.

## 5.3. Physical health

Children from the poorest households and those from rural areas (both one-year-olds and eight-year-olds) are more likely to experience episodes of acute and chronic illness, life threatening illness and severe accidents or injuries. Among eight-year-old children who had suffered a life threatening illness, poorer families and those from rural areas were less likely to seek treatment for their child's life threatening illness.

High levels of child morbidity have serious implications for the physical and intellectual development of the child. Health sector reforms initiated by the state government in the aftermath of structural

adjustment programmes pose a serious threat to the already low levels of health care service use among the poorest households. Introduction of user charges in government hospitals and the entry of the private sector into secondary level hospitals are likely to make health care unaffordable for the poor. In addition, the exemption criterion of white ration cards (implying below the poverty line) is going to be halved by the state thereby limiting the number of people who will be entitled to free treatment. In the absence of social security and health insurance, health contingencies and emergencies continue to be a major cause of rural indebtedness. Access to health services to the poor may be further limited by the planned privatisation of the health sector.

## 5.4. Antenatal care

The high uptake of antenatal care (88 per cent) is a positive outcome for governmental efforts. Nonetheless, a high proportion of deliveries occur at home (46 per cent overall; 56 per cent in rural areas and 65 per cent among the poorest households), and a high proportion of births are attended by untrained personnel (39 per cent overall; 49 per cent in rural areas and 58 per cent among the poorest households). Therefore, notwithstanding the efforts of the state government to improve access to and quality of health facilities, the state still has much to do to promote and ensure safe motherhood. For women from the poorest households, the first choice of safe motherhood is through government health delivery systems. With the dwindling resources of the government health sector and its low service quality, the government initiatives to privatise healthcare services leave poorer women with limited choices for safe motherhood, a reality which may jeopardise the progress made in reducing IMR and MMR. Emphasis should be placed on improving access to and efficiency of government health systems. Since nearly half the women in rural areas and from the poorest wealth groups reported deliveries attended by untrained personnel, state government should reconsider its policy to withdraw the training and tool kit support previously given to traditional birth attendants. As stated in Andhra Pradesh's Vision 2020 policy document, community health workers require further training in safe delivery practice.

## 5.5. Schooling and literacy

Near universal levels of enrolment and attendance are reported among eight-year-olds. However, poor competency levels are recorded in literacy skills, with only 51 per cent and 53 per cent of children able to complete correctly the age-appropriate reading and writing tasks respectively. While several concerted efforts by government organisations and NGOs have contributed to impressive enrolment rates, it has to be mentioned that most of these programmes in primary education are externally funded and their sustainability is precarious. Between 1991 and 2001, the share of Andhra Pradesh's state budget allocated to education dropped from 19.1 to 16.6 per cent, and in terms of expenditure Andhra Pradesh's budgetary allocation for education is lower than for all other southern Indian states. In many programmes, enrolment is given a higher priority than pupil retention. In a cohort of eight-year-olds school enrolment will tend to be high, but national and state level figures suggest that children will tend to drop out of school over the age of nine years.

Quality of education is yet to become a priority for the policy-makers and advocates of child wellbeing. Interventions to improve community participation in primary education, through village education

committees, together with formal primary school teacher assessment could tackle issues of educational quality; while the provision of pre-school services in rural areas and poorer clusters could promote a smooth transition to primary school. In addition the removal of corporal punishments might stem the number of school drop-outs.

## 5.6. Work of child

Among the eight-year-old children surveyed, only a small proportion report that they work for money or goods (six per cent). However, Andhra Pradesh has the highest level of child labour participation among nine to 14 year olds throughout India. This low level of reported child work can be attributed to the age of the children surveyed. The longitudinal nature of the study will enable the working behaviour of these children to be tracked, and will map child working practices over time, in the context of relevant state level policy changes or shifts.

## 5.7. Child mental health

A high proportion of children may be classified, according to the SDQ guidelines, as potentially having a mental disorder (19 per cent) with a higher prevalence observed among rural children and those from the poorest households. With regard to policy, recognition of child mental health issues has been absolutely lacking in the Indian context where child outcomes have previously only been correlated to physical health. The promotion of research in this area in order to generate basic data to inform policy development is vital, and the preliminary Young Lives results should be effectively utilised for this purpose.

## 5.8. Environmental health

Children's perception of the safety of their drinking water does not tally with the hygienic status of its source. This suggests that it may be important to raise the profile of environmental health on the school syllabus.

## 5.9. Basic household amenities

While 82 per cent of one-year-olds live in households with an electricity supply, only 52 per cent of the poorest households have electricity. Seventeen per cent of index child households do not have a protected source of drinking water (22 per cent in rural areas and 21 per cent among the poorest households) and 68 per cent have no toilet facilities (87 per cent in rural areas and 94 per cent among the poorest).

Several programmes are in place to reach out to the poor in terms of basic amenities. However, as the survey results reveal, the reach and coverage of these schemes could be improved among the poorest families and those in rural areas. In addition, as in the case of other services, the implementation of water and sanitation services are increasingly under the control of external agencies and state level initiatives are on the wane. There is an urgent need to identify and promote community owned initiatives in rural areas, particularly with respect to water and sanitation provision.

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# Appendix

## 1. HOUSEHOLD PARTICULARS - COMMON TO 1 YEAR AND 8 YEAR OLD QUESTIONNAIRES

### 1. Household Composition and demographics

- Name
- Sex
- Age
- Relationship with the index child
- Current schooling
- Education level completed
- Chronic diseases/injuries
- Member Caring Index Child (only for 1 year old)
- Support index child with cash/kinds last 6 months

### 2. Livelihoods

- Three most important activities
- Description of activities
- Employed or Own Account
- Number of working months last 12 months
- Number of -working days per week

### 3. Remittances and Donations

- Remittance last 12 months
- Receive cash or in kind for self-caregiver
- Relationship between the sender and the child
- Times receive money / goods last 12 months
- Donation/offering last 12 months
- Relationship between receiver and child
- Times of sending money / goods

### 4. Debts

- Any large debt
- Lending sources
- Able to repay debt

### 5. Economic situation of household

- House Characteristics
- Ownership of dwelling
- Number of rooms
- Electricity supply
- Wall material
- Roof material
- Material of dwelling floor
- Source of drinking water
- Toilet facility
- Fuel Used for cooking
- Durable goods owned
- List of 16 specific durable goods owned

### 6. Land investment and livestock

- Land Holding particulars
- Plot size of land used
- Land owned / rented/Hired out
- Purposes of land use
- Use irrigation last 12 months
- Total are of land use irrigation
- Use chemical and fertilizer last 12 months
- Amount of used chemical and fertilizer
- Sharing agricultural machinery last 12 months
- Exchanging labor with others last 12 months
- Livestock last 12 months
- Types of livestock
- Number of livestock owned currently
- Number of livestock bought last 12 months
- Number of livestock sold last 12 months

### 7. Shocks during the last 3 years (during pregnancy of mother in case of 1 year old)

- Events changing Economic welfare of household
- Specify major events
- Events affects household economy most
- Coping strategy with economic shocks
  Change of household economy compared to 3 years ago

# 2 PRIMARY CAREGIVER

**1. Background information**
- Place of living
- Time living in the commune
- Ethnic group
- Religion
- Literacy
- Reading newspaper/magazine
- Fluency in major regional language
- Education

**2. Marital Status**
- Ever married
- Currently married
- Living with current partner
- Head of household or not

**3 Pregnancy (1 year old Specific)**
- Any prenatal check-up
- Month of pregnancy for the first prenatal check-up
- Times of prenatal check-up
- Vaccination against tetanus
- Received Iron Folic Tablets
- Desire for pregnancy
- Perceived health status during pregnancy

**4. Delivery (1 year old Specific)**
- Difficulty with labour
- Place of birth
- Undergoing an operation
- Aware of the operation
- Person who attended the delivery
- Birth premature
- Perceive birth size of index child at birth

**5. Child Care (Specific to 1 year Old)**
- Frequency meet child
- Sending child to childcare facility since born
- Months old when enrolment
- Sending child to childcare facility last 6 months
- Relationship between caregiver and child
- Months taking care child
- Payment for child care
- Leaving child alone every week last 6 months

**6. Breastfeeding (Specific to 1 year old)**
- Ever breastfed child
- Duration of breastfeeding
- When Solid and Mushy food started
- **Participation of child in nutrition programs**

**7. Maternal Depression (Specific to 1 year old)**
- SRQ20 questions about mother's mental health

**9. Social Capital**
- Active member of community groups
- Receiving any spiritual/ physical support
- Trust/feel to be a part of community
- Working with others to solve common problems

**10. Births History**
- Total number of births
- Number of boys
- Number of girls
- Number of children still living
- Number of children die before 5 years old

# 3 1-YEAR-OLD CHILD

## 1. Anthropometry

- Birth weight
- Weight measurement at survey time
- Weight for Age
- Weight for Height
- Height for Age

## 2. Child health

- Perceived general health
- Illness since yesterday up to now
- Ever serious illness or trauma that might die
- Types of illness/trauma
- Hospitalization
- Ever burn that left a scar
- Ever broken bone
- Ever severe fall
- Effect of severe fall
- Chronic diseases/Disabilities
- Types of disease/disability
- Vaccination

# 4. 8-YEAR-OLD CHILD

### 1. Anthropometry
- Birth weight
- Weight measurement at survey time
- Weight for Age
- Weight for Height
- Height for Age

### 2. Child health
- Perceived general health
- Illness last 2 weeks
- Types of illness
- Health problem affects ability to make friends or
- Plays
- Types of problem
- Health problem affects ability to attend school or work
- Types of problem
- Chronic diseases
- Types of disease
- Serious illness / trauma might die last 3 years
- Types of illness/trauma
- Hospitalization
- Toothache that could not eat

### 4. Child mental health
- 26 questions about child mental health

### 5. Child school
- Ever attend school
- Age of enrolment
- Years of schooling
- Highest grade
- Currently attending school
- Main reasons not attending school
- Type of school
- Activities for fun last 6 months

### 6. Child work
- Undertake formal/informal activities for cash/ kinds
- Age when start working
- Time for working
- Keep/save money from earning
- Main reasons working
- Involve in house chores last 7 days
- Working hours per day
- Receive cash/goods
- Serious illness/injuries while working
- Types of illness / injuries

### 7. Child's perception about life
- Career ambitions of the child
- Reasons
- What makes child happy
- What makes child unhappy
- Like about living in the neighborhood
- Unlike about living in the neighborhood
- Perception about quality of drinking water
- Main reasons
- Perception about quality air
- Main reason not clean air
- Perception about rubbish
- Describe dirt
- Amount of rubbish
- Perception about safety of place
- Main reasons for being not safe place
- Have Enough food
- Treating equality between boys and girls

### 8. Child 's social relations Membership in children clubs
- Frequency of playing with friends
- Person who help child when having problem
- Relationship with child

**9. Child's perceived health**

- Health problems limits ability to make friends or plays
- Types of problem
- Health problems stop study or work
- Types of problem
- Other health problems
- Types of problem

**10. Child's literacy and numeracy**

- Reading ability
- Writing ability
- Multiplication ability
- Colored Progress Matrices Test

**11. Child's study and work**

- Go to school last year
- Worst things in school
- Likes about school
- Earning money for self and family
- Types of job
- Like / unlike each job
- Main reasons unlike this job
- Miss School due to work

Young Lives is an international longitudinal study of childhood poverty, taking place in Ethiopia, India, Peru and Vietnam, and funded by DfID. The project aims to improve our understanding of the causes and consequences of childhood poverty in the developing world by following the lives of a group of 8000 children and their families over a 15 year period. Through the involvement of academic, government and NGO partners in the aforementioned countries, South Africa and the UK, the Young Lives project will highlight ways in which policy can be improved to more effectively tackle child poverty.

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