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Working Paper

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An International Study of Childhood Poverty

The Relationship of Household Monetary Poverty and Multidimensional Child Deprivation

A Longitudinal Study of Children Growing Up in India

Renu Singh and Sudipa Sarkar

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Summary

Using longitudinal dataset from Young Lives, this paper aims to measure multidimensional childhood deprivation in Andhra Pradesh, India. We employ the counting approach of Alkire and Foster (2011) to estimate multidimensional childhood deprivation. We use household- and child-related data of 975 children in two different age points (12 and 15 years) and seek to establish the fact that childhood deprivation is not confined only to monetarily poor households. Our analysis is based on 15 indicators cutting across four major dimensions – education, health, housing quality, and subjective well-being. Comparison has been made between households who have been consistently in the bottom quartile of monthly per capita consumption expenditure (*chronically poor*) and the top quartile (*least poor*) in the two rounds of survey conducted in 2006 and 2009. Overall child deprivation is higher for chronically poor households across all the indicators, as compared to those belonging to the least poor in our sample. However, 95 per cent of children belonging to least poor households face one or more deprivations at age 12 and 15. The estimates have also been decomposed by rural and urban location as well as by gender. Rural children in both chronically poor as well as least poor households, experience higher deprivation, which remains static across rounds. Boys at the age of 12 are more deprived than girls in the chronically poor households, though boys show substantial decrease in deprivation over time. Among the child-related indicators, schooling, ability to read and write, thinness and nutrition have emerged in general as important contributors towards children's deprivation. The paper recommends social policies to be based on alternative principles of universalism and self-selection to ensure that no child falls between the cracks and to focus efforts to remove child deprivation, particularly in rural areas.

The Authors

Renu Singh has over 20 years' experience in teaching, teacher education, education policy analysis and research, both in India and abroad. She was trained as a Montessorian and special educator. Her doctoral study was on the inclusion of marginalised children and her special interests remain early childhood development, teacher education, inclusion and gender. She has held a number of prestigious positions at NGOs, including Save the Children, and in university departments. She has also advised the Indian Government by serving on a variety of working groups, committees and boards. Currently she is the Country Director at Young Lives India and Visiting Professor at Jamia Millia Islamia University, New Delhi.

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About Young Lives

Young Lives is an international study of childhood poverty, following the lives of 12,000 children in 4 countries (Ethiopia, India, Peru and Vietnam) over 15 years. **www.younglives.org.uk**

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1. Introduction

It is increasingly recognised that monetary measures of income or expenditure provide only partial insights into standards of living or well-being. Many researchers have noted that poverty is multidimensional, reflecting a range of deprivations (e.g. Bourguignon and Chakravarty 2003) and that monetary measures are merely one-dimensional (Sen 1983). Sen (1999) further developed this argument by emphasising that 'real' poverty can be defined in terms of 'capability deprivation', which refers to deprivation of opportunities, choice and entitlements. The sole use of monetary measures of poverty has been criticised for 'poverty of measurement' (Greeley 1994) and researchers have highlighted the need not to rely on simple 'basic needs' measures but to rise to the challenge by combining methods, indicators and thresholds (Streeten 1994).

India has witnessed a sustained economic growth that has been notable, particularly when the economic downturn negatively affected economic growth in some of the world's most developed countries. The Planning Commission used data on household consumer expenditure (based on the 66th round of the National Sample Survey in 2009–10) to estimate that the proportion of poor people in India was 29.8 per cent in 2009–10, down from 37.2 per cent in 2004–5. However, a large number of Indians continue to live in poverty and disparities in income and human development are on the rise. As debates about the development agenda after 2015, following the expiry of the Millennium Development Goals (MDGs), take place, it is increasingly clear that general indicators measuring macro-level development, which remain the focus of large national and state datasets, miss vital information about inequalities between and within households. Missing from these datasets are child-specific data based on location, gender and indicators relevant to children's non-monetary quality of life. Very poor children suffer from the negative consequences of being exposed to multiple risks, as a result of the interaction of multiple deprivations; less poor children may still suffer from limited access to services and resources.

1.1 Children and poverty

UNICEF's 2005 *State of the World's Children* report stated, 'the lives of over 1 billion children are blighted by poverty, despite the wealth of nations' (UNICEF 2005: 10), and it warned that not one of the Millennium Development Goals – those idealistic objectives of the international community – would be attained if childhood continued under the current level of attack. The report set out a working definition of child poverty inspired by the UN Convention on the Rights of the Child:

> Children living in poverty experience deprivation of the material, spiritual, and emotional resources needed to survive, develop and thrive, leaving them unable to enjoy their rights, achieve their full potential or participate as full and equal members of society.

The importance of studying childhood deprivation has grown in recent years due to evidence that childhood poverty has life-long consequences, and also because it differs from adult poverty (Bradbury et al. 2001; CHIP 2004; Grantham-McGregor et al. 2007; Minujin 2009; UNDP 2004). While a lot of literature has been generated regarding child poverty and deprivation in developing countries, very little of it has been written regarding the Indian context, even though children under the age of 18 constitute more than a third of India's population (Government of India 2012). The way 'childhood poverty' is defined and understood, has tremendous bearing on how it is measured and analysed. Feeney and

Boyden (2003) point out that poverty is a deeply relational and relative dynamic, and view child poverty as embracing three interrelated domains (i) deprivation (a lack of material conditions and services generally held to be essential to the development of children's full potential); (ii) exclusion (the result of unjust processes through which children's dignity, voice and rights are denied, or their existence threatened and (iii) vulnerability (an inability of society to cope with existing or probable threats to children in their environment).

A common approach adopted to deal with the multidimensionality of poverty has been the use of aggregated indices. While some of the poverty research has combined monetary indicators with deprivation indicators, other researchers have discussed monetary poverty as related to but conceptually distinct from deprivation (e.g. Bradshaw et al. 2012). Bastos (2001) emphasised that the concept of child poverty cannot assume the classic form of the poverty concept, founded on a threshold of monetary poverty, and that the concept of child poverty must be based on an analysis of the child's living conditions and not on the family level of income.

In line with this, and for clarity of expression, we use the term 'poverty' when referring to monetary measures and 'deprivation' to capture a broader sense of the multidimensional impact of poverty on children. Despite the various perspectives on childhood poverty and deprivation and the varied approaches adopted, there is consensus that the concepts of childhood poverty and deprivation are linked. The most important attempt to measure global child poverty with a focus on rights, was conducted by Gordon et al. (2003) in a study funded by UNICEF, using a methodology of measuring deprivation that became known as the Bristol Methodology or the Bristol Indicators. The study measured absolute poverty among children by defining eight threshold measures of severe deprivation of basic human need encapsulating food, safe drinking water, sanitation facilities, health, shelter, education, information and access to services. Using these eight severe deprivation indicators, the Bristol approach estimated a 'poverty headcount' and the term 'absolute poverty' was used in instances where children experienced two or more deprivations. The study highlighted that the distribution of income among members of a household is not always fair and does not always obey the principle of 'equal sharing' assumed by equivalence scales, and therefore poor children do not necessarily live in (monetarily) poor households. This may well be because children have some needs that are specific to them and the forms of deprivation that affect them may be different from those affecting adults (Bastos 2001). Nguetse Tegoum and Hevi (2009) developed a Composite Poverty Index (using the five dimensions of nutrition, potable water, health, education and lodging), and investigated determinants of child multidimensional poverty and its relationship with household poverty. Their study of children under 5 years old in Cameroon demonstrated that though the correlation between child poverty and household poverty was very strong, 27.6 per cent of children living in the least poor households were also affected by child poverty.

The recently developed Multidimensional Poverty Index (MPI) (Alkire and Santos 2010), which deliberately incorporated a few child-specific indicators in the context of multidimensional deprivation, ranked India 74th of 104 countries, with an MPI value of 0.29 (UNDP 2010). It is interesting to note that research in developing countries has revealed that one child out of two is considered to be poor (Minujin et al. 2009). On the other hand, the recently published UNICEF-IHD report (Rustagi et al. 2012) on India reports that 62 per cent of children there experience at least two forms of deprivation. It also notes that the difference in deprivations of children living in households in the middle wealth quintiles and those in the bottom quintiles is not very significant.

Despite the growth in child poverty research, most studies are focused on developed countries and are usually cross-sectional, which does not allow for consideration of life trajectories and the critical role played by individual children's own beliefs, expectations and resilience.

Young Lives is a longitudinal study in four countries (Ethiopia, Peru, Vietnam, and the stage of Andhra Pradesh in India) that seeks to improve understanding of the causes and consequences of childhood poverty and of the factors that contribute to breaking cycles of poverty and reducing the inequality that underpins it. Young Lives takes a multidimensional approach to poverty, which it sees as a complex, dynamic phenomenon that is subject to both contextual specificity and multiple, interacting causes. The approach of Young Lives to poverty and well-being was influenced by participatory research, enabling multidimensional and often non-material conceptions of poverty (Dercon and Cooper 2007). The study captures children's responses to poverty as well as their perspectives regarding subjective well-being. Young Lives is concerned about the persistent disadvantage among and exclusion of some groups of children (Boyden and Dercon 2012) and the longitudinal data have supported analysis of factors leading to chronic poverty among certain households (Vennam and Andharia 2012).

Drawing upon work done by UNICEF and the Oxford Poverty and Human Development Initiative (OPHI),[1] this paper analyses childhood deprivation, using longitudinal data collected by Young Lives in Andhra Pradesh, India. The theoretical underpinning of this paper is that monetary income alone is insufficient to provide us with a complete picture of children's experiences since it fails to take into consideration unequal sharing of material resources among family members based on persisting gender bias, social prejudices and geographical or locational disadvantage. While the majority of the research on child deprivation and poverty has used cross-sectional data, this can underestimate the dynamic nature of child poverty, since families also experience 'transient poverty' and move into and out of poverty. The necessities of life vary over time and space and as changes occur in society (Townsend 1985). Therefore a dynamic analysis of deprivation over time allows us to understand how children experience poverty when their families remain poor over a longer period of time. The panel data are particularly valuable since they allow exploration of household dynamics and disparities in deprivation experienced by Young Lives children over time. By using a time dimension and panel data, we are able to distinguish between transient and chronic poverty and focus on children in households that remained 'persistently poor' or 'chronically poor' as well as those 'persistently non-poor' or 'least poor' between 2006 and 2009. Cognisant of the fact that poverty comprises not only the material dimensions of deprivation, but also social and subjective well-being dimensions, this paper attempts to answer the following two questions:

- Is childhood multidimensional deprivation confined to monetarily poor households?
- Are there any specific patterns of multidimensional deprivation for different groups of children – by age, rural/urban location or gender?

The paper is organised as follows. Section 2 presents the data. Section 3 describes the methodology used in this paper. Section 4 provides the empirical results, and Section 5 offers a conclusion, followed by a policy discussion in Section 6.

1 Apart from the OPHI studies already cited (Alkire and Foster 2007; Alkire and Santos 2010), we draw on Alkire and Foster (2011). UNICEF's work includes Gordon et al. (2003), Rustagi et al. (2012) and the Global Study on Child Poverty and Disparities (https://sites.google.com/site/whatithechildpovertystudy/).

2. Data

We analyse panel data from Young Lives, a longitudinal research study on childhood poverty following 3,000 children in Andhra Pradesh, India.[2] Andhra Pradesh is the fifth-largest state in India, with a total population of 84.6 million (Government of India, 2012). During the 11th Five-Year Plan period (2007/8 to 2011/12), the State registered an average growth rate in its Gross State Domestic Product of 8.33 per cent (at 2004/5 prices), even surpassing the All-India GDP growth rate of 7.94 per cent during the same period (Planning Department, Andhra Pradesh 2012). Two cohorts of children aged 8 years old and 1 year old in 2002 have been followed since 2002 and three rounds of data have been collected at child, household and community level. Bearing in mind that childhood poverty is a complex issue, best described and analysed by integrating multiple disciplines (Brock and Knowles 2012), both quantitative and qualitative research are used by Young Lives to investigate the changing nature of children's lives. This paper analyses both quantitative and qualitative panel data collected in Andhra Pradesh, which allows us to examine the poverty mobility of households since 2002. We use quantitative data related to Older Cohort children from Round 2 (2006) and Round 3 (2009), when the children were around 12 and 15 years old[3] and qualitative data from three rounds. The latter were collected when the children were aged 13 years (2007), 14 years (2008) and 16 years in (2010). The rationale for choosing the Older Cohort is because data on some of the dimensions of childhood deprivation explored in this paper are not available for the Younger Cohort; for example, indicators of subjective well-being.

The Young Lives panel data allow us to explore children's status across time, which is crucial, given the dynamic nature of poverty and the fact that a static poverty profile fails to address questions concerning changes over time and the persistence of poverty (Addison et al. 2009). In this paper we seek to measure multidimensional childhood deprivation across two different age points, i.e. at the ages of 12 and 15 years, and examine its relation with household poverty.

Because Young Lives is a panel study, changes between rounds reflect both societal changes (including economic growth) and 'age-stage' factors (household members becoming more established). The Round 3 country report for India (Galab et al. 2011) stated that while absolute poverty (measured by consumption levels) had declined from 24 per cent of Young Lives households in 2006 to 16 per cent in 2009, inequalities among the Young Lives sample had remained more or less the same between 2006 and 2009. Table 1 presents the percentage of children living in absolute poverty as well as monthly per capita consumption expenditure among Young Lives sample children (Older Cohort) in Rounds 2 and 3, disaggregated by urban/rural location and caste grouping. The percentage of children living below the poverty line has decreased for every category, but gaps between children from the Scheduled Tribes, Scheduled Castes, Backward Classes and Other Castes persist.[4] The average real monthly per capita expenditure[5] of the households of Young Lives Older Cohort

2 For detailed information on Young Lives sampling, see Kumra (2008).

3 The final sample consists of 975 children who were there in both the rounds.

4 Scheduled Tribes, Scheduled Castes, and Backward Classes are official groupings recognised in the Constitution of India as historically disadvantaged. Other Castes are more privileged and socially and educationally advantaged class.

5 Monthly per capita expenditure is real (at 2006 price level) and adjusted for price differences between communities.

children increased from 900 to 1,076 rupees between the two rounds. However, it is important to note that the average consumption expenditure of Scheduled Tribe households is less than half of the average expenditure of Other Caste households in both the rounds and reflects the inequities that persist.

Table 1. *Changes in absolute poverty and consumption expenditure among Older Cohort Young Lives households, 2006–9*

	Absolute poverty		Real monthly per capita expenditure (Rs)	
	Round 2 (2006) (%)	Round 3 (2009) (%)	Round 2 (2006) (mean)	Round 3 (2009) (mean)
Urban	17.7	13.1*	1,048.8	1,261.9***
Rural	20.6	13.8***	848.9	1,013.7***
Scheduled Tribes	43.3	30.1**	662.7	780**
Scheduled Castes	21.1	17.7	792	920.1**
Backward Classes	19.3	11.5***	874.3	1,110.2***
Other Castes	8.5	5.8	1,175.4	1303.8
All	19.8	13.6***	900.5	1,076.7***
Number of children	975	975	975	975

Note: * p<0.1, ** p<0.05, *** p<0.01 in *t*-test for significant difference in Round 3 absolute poverty and monthly per capita consumption expenditure from Round 2. (i.e. the testing is 'within row', testing the significance of the difference in poverty levels or expenditure between 2006 and 2009 for each group).

3. Methodology

According to Sen (1976), the measurement of poverty involves two steps: *identification* (who is poor), and *construction of an index* (how characteristics can be combined to give an aggregated measure). The approach taken within Young Lives highlights the potential for exploring multiple dimensions of childhood deprivation, positioning children's well-being at the core of the research design. The strong ethical underpinnings are that research should focus on children's strengths, connect with their vision of a good life and explore how they understand and make sense of their experiences. Thus poverty is manifested primarily by diverse material deficiencies, susceptibility to risk due to social discrimination and attrition of social networks, and constraint on choice and opportunity at household, societal and individual level (Dornan and Boyden 2011).

Table 2 shows the indicators we have chosen based on the literature related to multidimensional deprivation across the four dimensions of education, health, housing quality and subjective well-being. Out of a total of 15 indicators there are 11 child-level variables, which cover education, health and subjective well–being. The subjective well-being indicators cover trust, leisure, agency, inclusion and support networks. Four variables cover household factors related to housing, electricity, drinking water and toilet facilities. We give equal weight to each of the 15 indicators. The dimension of education consists of children's enrolment

status and their ability to read and write.[6] Children's BMI-for-age, or thinness, which is a widely used indicator to measure child health, is included in the health dimension. Additionally we use information on children's consumption of fruit and vegetables in last 24 hours, which is a very important measure of a balanced diet and has implications for children's micro-nutrient status. Housing quality is measured by a set of four indicators – availability of drinking water from a tap, access to flush/septic toilet, *pukka* (solid) roofing and access to electricity. These are basic necessities that provide safety as well as protection from infection and disease. Besides the above-mentioned indicators, we examine subjective well-being indicators, which aim to capture a child's self-reported feeling about different aspects of their life and ensure that children 'remain at the centre of the poverty debate' (Dornan and Boyden 2011). The Report by the Commission on the Measurement of Economic Performance and Social Progress specially recommends the inclusion of 'subjective well-being' measures along with 'objective' measures on national surveys (Stiglitz et al. 2009). The Young Lives survey collects both objective and subjective information on children's lives. Time spent on leisure activities like playing, watching TV, chatting with friends on a typical day, along with children's perceptions of social support available at home and among friends, and safety issues have been reported by the children. Important information on whether children get respect from the adults in their community, whether they feel safe outside their home, their self-esteem and their own perception of the household economic situation are added indicators that draw upon the data available from Young Lives child questionnaires.

Table 2. *Childhood dimensions and indicators*

	Dimension	Indicators for childhood deprivation[a]	The child is deprived if
1	**Education**	Enrolment	Not enrolled in school (=1, 0 otherwise)
		Reading and writing skill	Cannot read and write (=1, 0 otherwise)
2	**Health**	Thinness	BMI-for-age z-score < -2 standard deviation (=1, 0 otherwise)
		Nutrition	Not eaten any fruit and vegetables in last 24 hrs (=1, 0 otherwise)
3	**Housing and quality of living**	Drinking water	No tap drinking water (=1, 0 otherwise)
		Sanitation	No flush/septic toilet (=1, 0 otherwise)
		Roof	No *pukka* roof (e.g. roofing sheets/concrete/cement/asbestos plates) =1, 0 otherwise
		Electricity	No electricity in the house (=1, 0 otherwise)
4	**Subjective well-being**	**Leisure:** Time available for leisure activities (playing, seeing friends) in a typical day	Not spending more than 1 hour in a day (=1, 0 otherwise)
		Social support: Is there someone to help if you are teased or bullied?	No (=1, 0 otherwise)
		Home support: Is there someone to help at home if you are worried?	No (=1, 0 otherwise)
		Trust: I feel safe when I go out of the house	Disagreed with the statement (=1, 0 otherwise)
		Agency: If I try hard I can improve my situation in life	Disagreed with the statement (=1, 0 otherwise)
		Inclusion: Adults in my community treat me as well as they treat other children	Disagreed with the statement (=1, 0 otherwise)
		Child perception of household situation: How would you describe your household?	Poor/destitute (=1, 0 otherwise)

[a] Each of these indicators is equally weighted.

6 Children's reading and writing skills were tested in Round 2 when majority of the Older Cohort children were 12 years old. In Round 3, for the same children a cloze test was administered. Children who could not read and write were either not able to take the test or scored zero.

We begin the analysis by calculating the percentage of children deprived in each indicator. However, this does not reveal the depth and severity of deprivation in terms of multidimensional deprivation. So, in the second stage of analysis, following Alkire and Foster (2007), we employ the counting approach to measure headcount ratio (*H*), proportion of maximum possible multidimensional deprivations for poor children (*A*) and adjusted headcount ratio (*M*).

At this point, for ease of presentation, let us introduce some notation. At any time period, let *D* be the matrix of observations on *N* children for *I* (15, in our case) indicator variables. An element of this matrix is denoted by D_{ni} , which is a dummy variable indicating whether the *n*th child ($n = 1,\ldots,N$) is deprived in the *i*th dimension $(i = 1,\ldots,I)$. We first look at the proportion of children deprived in each indicator ($\Sigma_i D_{ni}/N$) to analyse the trend in deprivation over time in terms of each of these indicators. Then for each child, we calculate the total number of indicators in which s/he is found deprived. Let us denote this number by:

$$P_n = \Sigma_i D_{ni} \qquad (1)$$

Thus, P_n indicates the extent of multidimensional deprivation the *n*th child has experienced. In the next step, we estimate the multidimensional headcount ratio (*H*) and compare it between the least poor and the poorest sections of the households by their location and the gender of the children in two rounds. We do this as follows: for any multidimensional deprivation cut-off $c \in \{1,\ldots,15\}$, a child is considered to be multidimensionally deprived if he/she is deprived in at least *c* indicators, i.e., $P_n \geq c$. Then, the headcount ratio is defined as:

$$H(c) = \Sigma_n 1(P_n \geq c) \big/ N \qquad (2)$$

where 1(.) is an indicator function which takes the value 1 if the argument ($P_n \geq c$) is true, and zero otherwise.

Now we consider only the multidimensionally deprived children (based on the cut-off *c*) and calculate the average number of deprivation as a proportion of maximum possible deprivations experienced by them:

$$A = \Sigma_n (P_n \geq c) P_n \big/ I\, N\, H(c) \qquad (3)$$

Next we calculate the adjusted headcount ratio (*M*) which can be expressed by the following formula:

$$M = \Sigma_n (P_n \geq c) P_n \big/ N\, I \qquad (4)$$

Therefore, the adjusted headcount ratio (*M*) is defined as the average number of deprivations experienced by the deprived children as a proportion of the total number of deprivations experienced by all the children (poorest and least poor). Thus, it can also be written as a combination of *H(c)* and *A*:

$$M = H(c)A \qquad (5)$$

We present all the definitions in Table 3.

Table 3. *Definitions of the measurements*

Headcount ratio (*H*)	*H* expresses the percentage of children experiencing multidimensional deprivation. The percentage of children defined as deprived using *H* will depend on where the cut-off (*C*) is set of how many deprivations constitute multidimensional deprivation. If, for example, the threshold is set at four deprivations, *H* will express the percentage of children experiencing four or more deprivations.
Average share (*A*)	*A* expresses the average number of deprivations experienced by children defined as multidimensionally poor (using *H*). This measure therefore expresses the extent of the depth or poverty gap.
Adjusted headcount ratio (*M*)	*M* combines the headcount ratio (*H*) and the average share (*A*) to provide measure of both the extent of deprivation in the sample and the average depth.

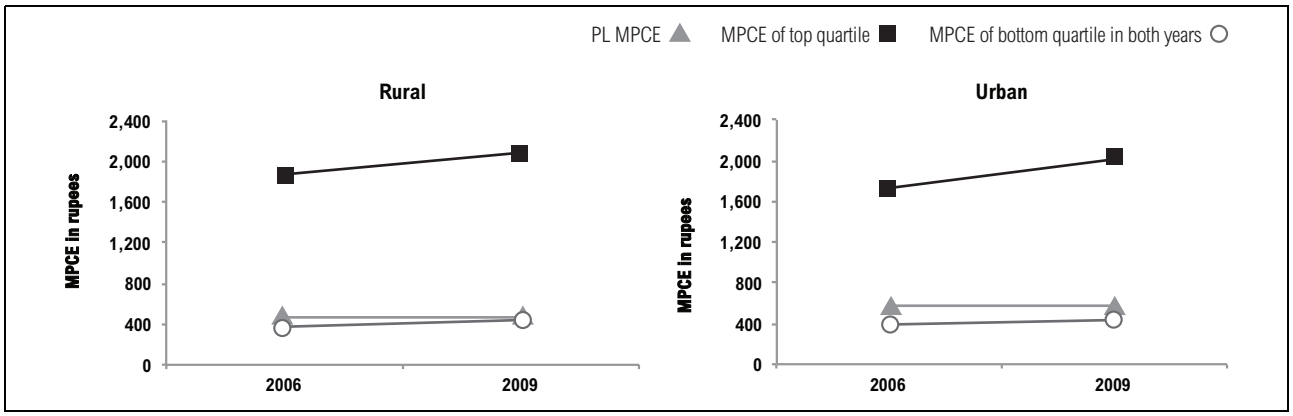
Therefore, the headcount ratio (*H*) is the proportion of children suffering from multidimensional deprivation in the sample and the adjusted headcount ratio is the combination of *H* and *A*. Note that all the measurements of multidimensional deprivation depend on the cut-off *c*. When *c* equals 1, according to the headcount measure a child is considered to be 'poor' if he/she is deprived in any one indicator. In the literature, the corresponding headcount ratio is called as the *union* headcount ratio (Atkinson 2003). However, this approach does not differentiate between a person who is poor in one indicator and a person who is poor across many indicators. Similarly, if *c* is 15, then a child is considered to be deprived multidimensionally only if he/she is deprived in all the indicators, and this gives the concept of *intersection* headcount ratio. According to Bourguignon and Chakravarty (2003) this method is a very extreme way to define poverty as it can exclude many persons from the 'poor' category. The choice of *c* in determining who is deprived multidimensionally, and who is not, is not straightforward. Therefore, using Alkire and Foster's approach we estimate the headcount ratio for each value of *c*, and plot them to see how the multidimensional measurements move along the multidimensional deprivation cut-off. This approach will capture the severity of deprivation in terms of the number of indicators that show deprivation (P_n). The larger the number of indicators in which the child will be deprived, the higher the deprivation she/he will face. Any two groups can be compared for a range of *c.* Though we look at the entire sample of children at two time points (2006 and 2009), one of our major objectives is to explore the relationship between childhood deprivation and household poverty. Therefore, we also compare a sub-sample of children in 'chronically poor' and 'least poor' households, taking the advantage of the Young Lives longitudinal dataset. The selection of households as 'chronically poor' and 'least poor' is discussed in the next section.

3.1. Identifying chronically poor and least poor households

In India, households are classified as 'poor' on the basis of a poverty line based on a cut-off determined by monthly per capita expenditure. A household is labelled 'poor' if its expenditure falls below the poverty line, and children belonging to that household are also considered poor. In this paper we seek to establish the fact that childhood deprivation is multidimensional and may not be confined to monetarily poor households; i.e. children from monetarily rich families may also experience deprivation. We, therefore, divide the households of sample children (975) into quartiles, based on their monthly per capita expenditure in each of the 2006 and 2009 surveys. For the purposes of the analysis, we focus on those children who belong to households that have been in the bottom expenditure quartile in both the 2006 and 2009 surveys and those belonging to households which have been in the top expenditure quartile in both those surveys. The average expenditure of these

two sets of households in both the rounds has been presented in Figure 1, along with the respective poverty lines applying to rural and urban Andhra Pradesh.

Figure 1. *Comparing chronically poor and least poor Young Lives households with the Andhra Pradesh poverty line*



Note: MPCE = Monthly per capita consumption expenditure. Poverty lines are from the Indian Planning Commission estimated by 2009 updated methodology for the year 2004/5, state of Andhra Pradesh. Young Lives data used in the paper are from 2006 and 2009. So, the real poverty lines have been adjusted using 2004/05–2006 price ratio from Indian Labour Bureau CPI of Andhra Pradesh.

Figure 1 clearly shows that an average household belonging to the bottom expenditure quartile in both rounds lies just below the poverty line across both the rounds, in both rural and urban locations. On the other hand, an average household belonging to top quartile in both rounds is far above the poverty line and shows improvement in terms of their monthly per capita expenditure over time. We label the households that have persistently been in the bottom quartile in both 2006 and 2009 surveys 'chronically poor' and those in the top quartile in both the rounds 'least poor'. By plotting the deprivation of children belonging to chronically poor and least poor households, we compare the incidence of (multidimensional) childhood deprivation between these two sets of households, in rural and urban areas, as well as for boys and girls. Using panel data we are able to draw upon the dynamic nature of childhood deprivation as children move into late adolescence.

In Table 4 we present the summary statistics, breaking up the sample into chronically poor and least poor households. As presented in Table 4, least poor households have a monthly expenditure on average five times higher than that of chronically poor households. Forty-seven per cent of households belonging to the chronically poor category are from the Scheduled Castes and Scheduled Tribes, and more than 80 per cent are located in rural areas. By contrast, almost half of the least poor households belong to the Other Castes (or upper castes), while Other Castes constitutes less than 10 per cent of the chronically poor. In terms of education, both parents in least poor households have spent many more years in school than in chronically poor households. It is important to point out that Young Lives has a 'pro-poor' sample and, considering the difference in deprivation between these two groups as revealed in the analysis, societal differences between children from the poorest households and children from middle class and wealthy families would be much greater.

Table 4. *Summary statistics*

	Chronically poor	Least poor	All
Expenditure (Rs)			
Expenditure in 2006	374.1***	1,790.1	900.5
Expenditure in 2009	436.5***	2,039.8	1,076.7
Ethnic/ Caste grouping (%)			
Scheduled Tribes	29.2	6.3	10.9
Scheduled Castes	17.7	7.4	21.0
Backward Classes	43.4	39	46.6
Other Castes	9.7	47.4	21.5
Gender (%)			
Boys	51.3	47.4	49.3
Girls	48.7	52.6	50.7
Location (%, N)			
Rural	83.2 (94)	42.1 (40)	74.6 (727)
Urban	16.8 (19)	57.9 (55)	25.4 (248)
Parental education (years)			
Mother's education	1.2	6.7	4.5
Father's education	2.4	8.7	5.7
Number of obs.	**113**	**95**	**975**

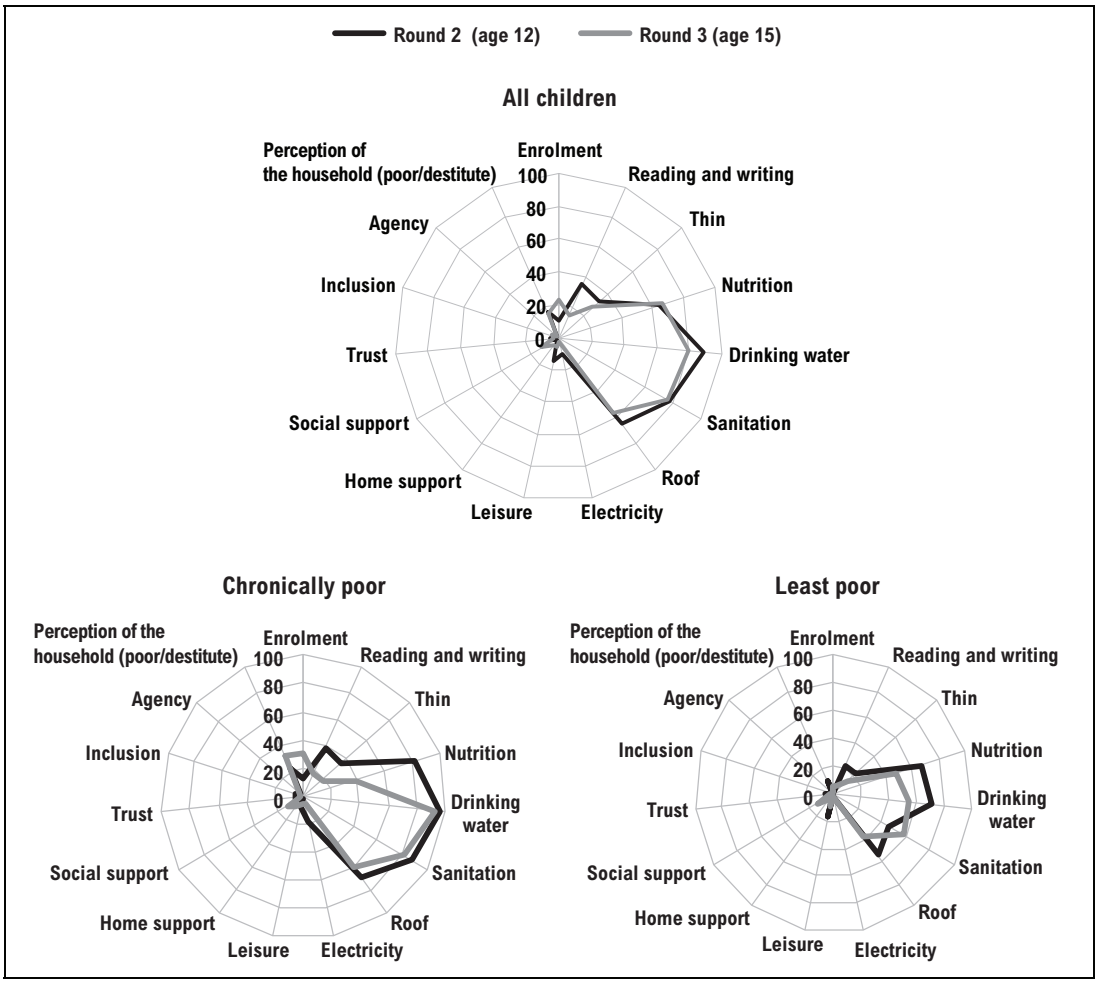
Note: * p<0.1, ** p<0.05, *** p<0.01 in *t*-test for significant difference in monthly per capita consumption expenditure between chronically poor and least poor households.

4. Empirical results

4.1. Indicator deprivation

The percentage of children deprived in each indicator across both the rounds is presented in Figure 2. This reveals that the incidence of childhood deprivation varies for different indicators. Children belonging to both chronically poor and least poor households show a reduction in deprivation in most indicators, with the clear exception of school enrolment and social support, which have shown a negative trend across the two rounds, i.e. when the children were aged 12 and 15 years. Childhood deprivation with reference to school enrolment shows that 23 per cent of the children were no longer enrolled in school as they turned 15 years old, an increase in deprivation for 13 per cent of the children. The deprivation percentage for enrolment stands at 31 per cent in 2009 (an 18 percentage point increase from 2006 when children were 12 years old) for chronically poor households. This is largely due to children moving from elementary to secondary education, when a large number of children are observed to drop out of school.

Figure 2. *Indicator deprivation for all children, chronically poor and least poor children, by round*



Note: Figures relate to the percentage of children experiencing each deprivation.

There are many causes for this phenomenon. Many children drop out of school on failing internal and external exams, particularly as they move to senior secondary education (at the age of around 16). This may be caused by both in-school factors and extraneous factors, for example, a sudden shock such as the death of a family member or frequent absences from school to work on their family's land.

Ranadeep, a boy aged 15 from a Backward Class household living in Poompuhar, a poor mandal in rural Telangana, dropped out of school in Grade 10 after failing in mathematics.[7] He reports that out of a class of 43 students, only 23 students managed to pass the exams. Ranadeep feels very sorry that he is no longer with his classmates, some of whom have joined junior college or senior secondary school, and explains that the main reason for his having failed was his irregular attendance, since his family insisted on his working on the farm. He says that he was absent for long periods because of work in the cotton fields: **"**If the plant gets flowers, my parents stop me from going to school, since we cannot afford to pay 100 rupees per day for labour charges."

7 All names of children and research sites are pseudonyms, to protect respondents' identity.

The Round 3 survey report for India (Galab et al. 2011) revealed that more girls had had left school between ages of 12 and 15 years (15 per cent) than boys (10 per cent), because of long distances to school, inadequate transport and lack of basic amenities, like toilets, at school. Regarding continuation of studies, a sarpanch (village headman) refers to gendered perceptions related to the education of boys and girls within the community. He says, 'Poor families think that it is appropriate to stop a girl's education once she attains puberty … Regarding boys, [if they are poor] they stop education after [Grade 7], and believe the son should help the family looking after oxen, watering fields, etc.' Safety issues are another barrier to staying at school for girls once they begin to menstruate and Mamatha's mother explains why her daughter, a 15-year-old girl from the Backward Classes, has left school. "We thought we will continue my daughter's education but there is no facility to travel. They have to go to school walking [long distances] and it is not safe for girls near the canal … that's why we stopped her studies."

The analysis also highlights that while 35 per cent of the children were unable to read and write at the age of 12, this deprivation decreased to 16 per cent as the children turned 15. However, the fact that 35 per cent of the children were unable to read and write in 2006, raises major concerns about the quality of education imparted in elementary schools, particularly since 90 per cent of the cohort was enrolled in school at the age of 12.

During the qualitative research group exercises conducted with children regarding their opinion of how schools were and should be, children complained about the lack of teaching and learning material and subject-specific teachers, as well as teachers "who failed to provide [us] with motivational drive". A sarpanch reveals that 'Other Castes [high caste people] will enrol their children in the private English-medium schools, [where] total responsibility is laid upon teachers, so [the children] will [learn to] read well. In government schools teachers will be negligent and won't teach properly.' This is corroborated by Young Lives research, which has shown that students in private schools have an average score in mathematics 6.7 per cent higher than students in public schools (Singh and Sarkar 2012).

The other indicator that has shown an increase in deprivation for both groups of children is the social support indicator. There are more children who report not getting social support from friends and families in 2009 than there were in 2006, when they were younger. In 2009, girls belonging to both chronically poor and least poor households experienced a lack of support, with 20 per cent reporting deprivation at the age of 15, an increase from 3 per cent at the age of 12.

This is extremely worrying since young adults need confidantes and support systems to guide them through the turbulence of adolescence. Also, the absence of significant others as formal and informal social support can cause children immense psychological harm.

The qualitative interviews conducted with children provide insight into how they may be affected psychologically by this phenomenon.

Santhi is a Scheduled Tribe girl living in a tribal mandal of north coastal Andhra, whose father is a teacher in an ashram school. She belongs to a better-off tribal family, which is very different from many of the other families in the same tribal sub-group. Santhi went to a private elementary school. At 15, she joined a hostel in Grade 10, but does not share her problems with anyone. Santhi has become a little cynical and believes that "If I am close to someone they just go away … for example, Rohini – who was my close friend till yesterday – she left me and went away." She seems to hesitate to share her difficulties even with her

family and has still not told her mother that she was getting her menstrual cycle twice a month, even though this worries her a lot.

Figure 2 clearly shows that children in both chronically poor and least poor households continue to experience major deprivation in housing indicators, though there has been a reduction across rounds. Despite the reduction, deprivations still remain alarmingly high for drinking water, sanitation and roof quality in Round 3. Eighty per cent of children remained deprived of drinkable tap water at home at the age of 15 in 2009, while 76 per cent did not have access to a flush/septic toilet and 56 per cent had no solid roof on their homes.

The lack of clean drinking water has a direct impact on the health of children, leading to malnutrition, which in turn may affect the education and long-term development of children.

Prasad, a boy from an Other Caste household living in Katur, a rural village in naxal-affected Rayalseema,[8] told us that the village had suffered a water scarcity problem for the past five to six months, during Round 3 qualitative interviews. The existing bore well was not functioning, as a result of which the villagers had to fetch water from a well 3km away. The richer families [from the Kamma caste] were able to fetch water by tractor, but poorer families had to carry the water themselves. He complains that "the village sarpanch will not take any initiative as he consumes alcohol all the time. Even though taps have been fitted, there is lot of uncertainty about the timings of water taps and the water might have insects."

Thinness (low BMI-for-age) has shown a significant reduction in Round 3. This reflects the fact that some children have been able to demonstrate catch-up in terms of weight-for-age as they have got older. However, more than 27 per cent of the children continued to be thin in Round 3, when they were 15. This shows that they were significantly undernourished, while overall most children were lacking in micro-nutrients since the nutrition indicator shows that 65 per cent of them did not have fruit and vegetables as part of their daily diet. Both crop failure and food price rises are key factors that have a negative impact on the kind of nutrition children are able to obtain. Young Lives qualitative research gathered the perspectives of community members, children and caregivers on how risks and vulnerability associated with economic change affected children in their communities.

A village sarpanch told us that during the period 2000 to 2005 crops were good, but in 2009 the situation was bad and all the cultivators were losing hope. He said: 'The impact on children is that there is less protein food, so they are fed mainly ration rice and tomato curry. Due to this the children will be of less growth, even mentally.' Another community member said that 'during our childhood we used to cultivate all food grains like *jonnalu, kandulu, senagalu, raagulu, korralu* but now they are not cultivating these.' This is because there has been a growing trend of cultivating cash crops such as cotton. Alisha's mother, from the Other Castes, said during the group interview conducted in Hyderabad, the capital of Andhra Pradesh, "Rich people can afford good-quality food like fruit, variety of vegetables, etc; but we have to think a lot before buying anything." Muntaja's mother added, "I don't prepare any breakfast. We directly have lunch in the afternoon."

We further calculate the percentages of deprivation on these indicators for boys and girls in these two sets of households (presented in Appendix Table A2). This shows how different indicators are important for boys and girls at different points of age. There are more boys than girls among chronically poor households who were out of school and who could not

[8] The region of Rayalaseema has witnessed insurgency from Naxalite movements (militant communists).

read and write a sentence at the age of 12 as well as at the age of 15. However, this analysis reveals that there is double the number of girls dropping out of school in least poor households than boys in the same, though the percentages remain small for both (4 per cent boys and 8 per cent girls). Weight-for-age has emerged as an important indicator in terms of deprivation for boys in both sets of households. Almost half the boys were thin in both chronically poor and least poor households at the age of 12, though the incidence decreases as the boys get older. Another important finding is that the deprivation in the social support indicator increases only for girls, not for boys, in both chronically poor and least poor households The percentages of girls who have reported 'no one to help if teased/bullied by someone' are equal for both chronically poor and least poor households in Round 3.

In Hyderabad the children told us that "every girl in the locality is subject to teasing while going to school and hence the police people should punish them". A sarpanch discussing changes in the community is of the opinion that 'some of the teenagers are going into bad ways: they watch blue films on mobiles, and do not obey their parents. Some of the boys tease girls going to fetch water.'

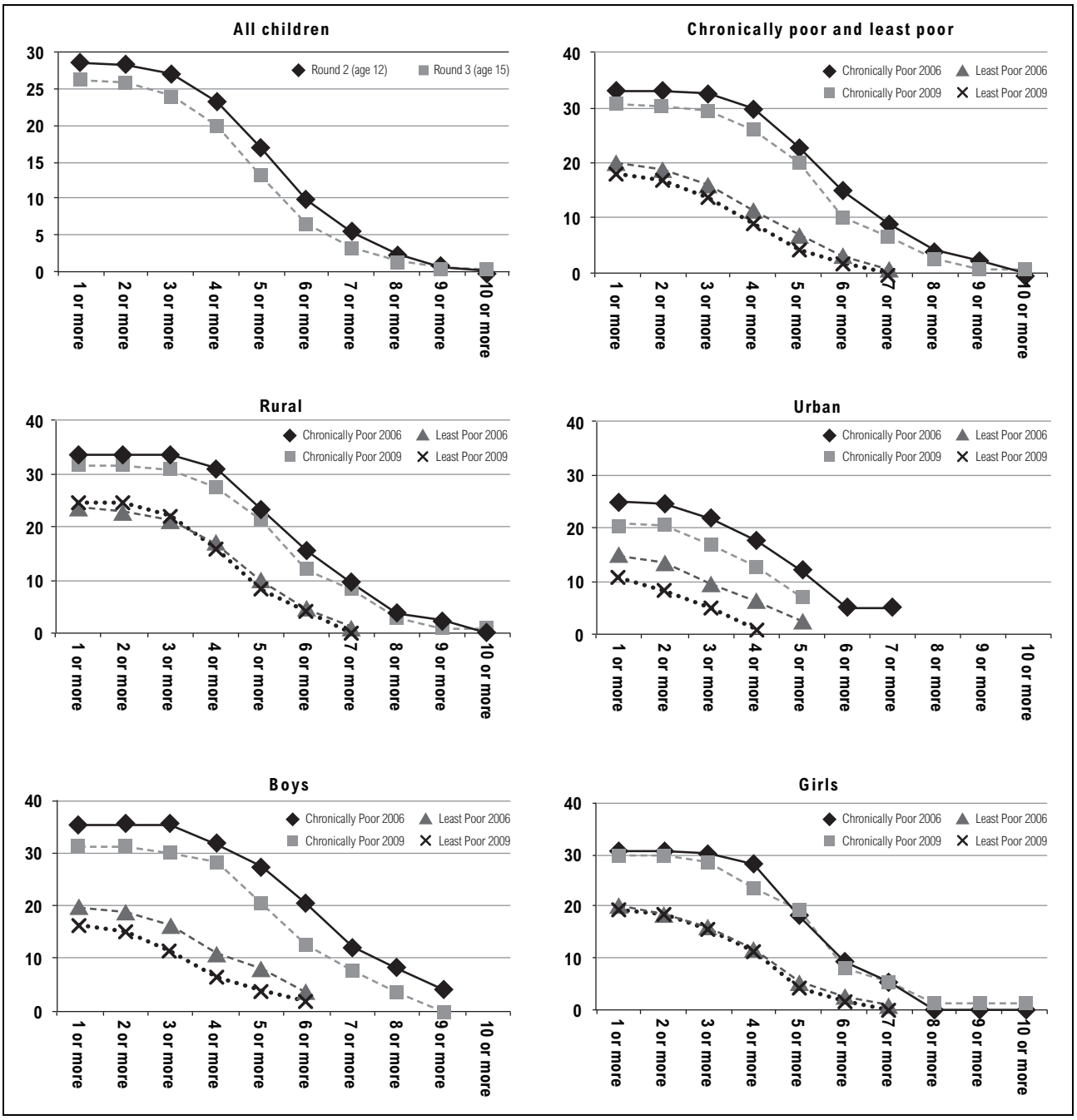
4.2. Measuring deprivation multidimensionally

Next we move from considering deprivation on individual indicators to considering deprivation multidimensionally. Using head count ratio one can simply look at the percentage of children who are deprived (presented in Table A3). But this does not take into account the total number of deprivation (in terms of indicators) one is experiencing. Another important measurement is adjusted head count ratio (*M*) which is defined as the total number of deprivations experienced by the poor divided by the maximum number of possible deprivations experienced by all children in the sample. Definitions for the measurements are in Table 3 (above). So *M* considers head count as well as average share of deprivation together and is a better indicator of depth as well as extent of deprivation.

In Figure 3 we present the adjusted head count ratio (in percentage) for all children, as well as for those from chronically poor and least poor households. We also document the patterns for these two sets of households in rural and urban locations, as well as for boys and girls. The estimates are for both the rounds and for all multidimensional cut-offs. There has been an overall reduction in deprivation across rounds for all children as well as children from chronically poor and least poor households. However on examining adjusted headcount ratio by location, the deprivation trends show a different picture[9]. There is a clear reduction in deprivation among children from both chronically poor and least poor households living in urban area. This is not true for rural area as children from least poor households do not experience any reduction. In rural areas children from least poor households face high levels of deprivation and the depth of deprivation can be equated with deprivation faced by chronically poor children in urban areas. However the severity of deprivation among chronically poor children in rural areas remains much higher than among least poor children. The urban least poor children faced the least disadvantage in Round 3 and urban children in both chronically poor and least poor households experienced a substantial reduction in deprivation over time.

[9] However we also acknowledge the fact that the small size of sample in each group has the potential to influence the results.

Figure 3. *Adjusted headcount ratio (%)*



The adjusted headcount graphs for boys and girls in the two sets of households show that boys and girls from least poor households experience very similar multidimensional deprivation in terms of adjusted headcount measure at the age of 12. However, the experience of multidimensional deprivation is higher for boys than girls among chronically poor households. The chart also shows that though boys from both chronically poor and least poor households experienced a reduction in deprivation between 2006 and 2009, girls from both types of household remained at around the same level for every multidimensional cut-off. In short, girls were in a better position at the age of 12 than the boys, but have not shown any particular decrease in deprivation over time.

Overall the headcount ratio, *H,* (presented in Table A3 in the Appendix) and the adjusted headcount ratio, *M,* show similar trends. It is observed that there has been reduction in percentage of deprived children across rounds and there are more deprived children in chronically poor households as compared to least poor households. For example, on examining children deprived by 4 or more deprivations we find that four out of five (80 percent) children in chronically poor households were deprived at the age of 12 and three out of four (75 percent) were deprived at 15 as compared to 1 in 3 children in least poor households at the ages of 12 and 15 (36 and 30 per cent). But the reduction in deprivation has not shown a monotonic pattern for every category – rural, urban, boys and girls in chronically poor and least poor households. In short the deprivation trends estimated by *H* are not very clear as those found in Adjusted Headcount Ratio (Figure 3).

4.3. Deprivation status at the age of 15

In this section we present the summary findings (*H, A* and *M* together) and analyse the chronically poor and least poor households by location and gender in Round 3 (Table 5). We also classify the level of deprivation as low, moderate or severe for the cut-offs *c*=2 or more deprivations, *c*=4 or more and *c*=6 or more, respectively. Headcount (*H*) and adjusted headcount (*M*) measures decrease as the cut-off level (*c*) increases, while the share of maximum possible deprivation by a deprived child (*A*) increases with the increasing cut-off.

Table 5. *Measurements of multidimensional deprivation, Round 3 (2009)*

Severity of deprivation[a]	Chronically poor			Least poor		
	H (%)	A	M (%)	H (%)	A	M (%)
All						
low	99.1	0.3	30.5	77.9	0.2	16.9
moderate	73.9	0.4	25.9	29.5	0.3	8.9
severe	22.5	0.5	10.3	4.2	0.4	1.7
Rural						
Low	100.0	0.3	31.7	100.0	0.2	24.5
Moderate	77.2	0.4	27.5	52.5	0.3	16.2
Severe	26.1	0.5	12.0	10.0	0.4	4.0
Urban						
Low	94.7	0.3	24.6	61.8	0.2	11.4
Moderate	57.9	0.3	18.2	12.7	0.3	3.6
Severe	5.3	0.0	2.1	0.0	0.0	0.0
Boys						
Low	98.2	0.3	31.2	73.3	0.2	15.1
Moderate	80.7	0.4	28.3	20.0	0.3	6.4
Severe	28.1	0.5	12.7	4.4	0.4	1.8
Girls						
Low	100.0	0.3	29.6	82.0	0.2	18.5
Moderate	66.7	0.4	23.5	38.0	0.3	11.2
Severe	16.7	0.5	7.8	4.0	0.0	1.6

[a] 2 or more deprivations = low, 4 or more = moderate, 6 or more = severe.

Overall, children in chronically poor households experienced more deprivation in terms of *H*, *A* and *M* as compared to those in least poor households. However, by location, based on the measurements, rural chronically poor households and least poor households were the most disadvantaged, with 100 per cent of children deprived in 2 or more deprivations. There was no difference between these two sets of households in terms of *H* at a low level of childhood deprivation, while at moderate and severe levels the deprivation is less in least poor households. However, in terms of *A* and *M* children in urban chronically poor households experienced lower deprivation than their rural counterparts. The analysis shows that children in least poor households also suffer from high level of deprivation (H and M) in the rural area. Based on the statistics presented in Table 5, overall boys in chronically poor households faced more deprivation than girls across low, moderate and severe categories at the age of 15 (except the fact that there are more girls facing a low level of deprivation in terms of *H*). Girls in least poor households, however, are seen to be at a greater disadvantage than boys in terms of *H* and *M* if facing low or moderate levels of deprivation. (Boys are slightly more disadvanaged when it comes to severe deprivation.) It is important to understand that many of the boys are expected to start working for wages or on their family's land at an early age, as a result of which a larger number of boys tend to stop attending school around the age of 10–12 years. Girls on the other hand tend to leave school once they reach puberty, when families are often worried for their safety and reputation and girls have to travel out of their villages to secondary schools situated at a distance from home. The fact that larger numbers of boys in least poor households (compared with boys in the chronically poor households) are seen to be deprived of one hour of leisure per day, indicates that they are probably combining work and studies, leaving them with no free time.

Mohan is a 15-year-old Backward Class boy belonging to the least poor quartile, living in Poompuhar, a very poor mandal in Southern Telengana. His father is a graduate, while his mother was only educated up to Grade 2. The family owns five acres of land. They have seen happier days in the past, when the father was elected as sarpanch. However, educational expenses for two children and failed crops for two consecutive years have led to Mohan being compelled to combine study and work. Mohan failed in five subjects the previous year and had to retake the examinations in these subjects. He would have preferred studying in a private college, but his parents had borrowed money to pay for healthcare and other expenditure and could not afford this luxury. Currently, he needs money to buy books and a bus pass and therefore works in the morning (in the Mahatma Gandhi National Rural Guarantee Scheme (MGNREGS) as well as other people's farms) and then goes to college after that. He says: "I am too tired to study when I come from work, but I have to work … If I don't have education I can live … and I need money for studies." He shares that "all Scheduled Caste and Backward Class children go to work, including those attending college, only Other Caste [Upper caste] children do not have to work." Mohan's elder sister failed her intermediate exam (Grade 10) and wanted to pursue a course in nursing, but Mohan's mother did not want to spend so much money on the daughter since "she is a girl and has to go to some other house".

5. Conclusion

This paper has estimated childhood deprivation multi-dimensionally and also compared it within chronically poor and least poor households at two different time/age points. It measures deprivation in each indicator as well as across multidimensional indicators. Once again it is important to point out that Young Lives has a 'pro-poor' sample and that deprivation levels of children from middle class and wealthy families have not been explored.

On analysing the entire sample, overall deprivation shows a reducing trend between 2006 and 2009 among the children aged 12 and 15 years. However there are certain dimensions that show increasing deprivation. As far as education is concerned, almost a quarter (23 per cent) of all children aged 15 years faced deprivation in terms of not being enrolled in school (up from 10 per cent [Figure 2]). This will be partly due to societal change, and partly due to 'age-stage' effects (children leaving school as they grow older). Although the literacy rate had increased across rounds, almost 15 per cent (one in seven) of the children could not read and write as they turned 15.

Social support is another area of concern, since three times the number of children reported having no support when teased at the age of 15, as compared to the age of 12. Access to basic services also remained a commonly reported deprivation for children and their households. Eighty per cent of children aged 15 remained deprived of drinkable tap water inside their house and 77 per cent were deprived of access to a flush/septic toilet as against 89 per cent and 78 per cent respectively three years earlier.

The empirical findings suggest that overall, children from chronically poor households face more deprivation than those from least poor households. Chronically poor households experience more deprivation under the housing dimension in terms of access to drinking water, sanitation and a *pukka* roof as well as in enrolment in school, reading and writing skill, thinness and micro-nutrients. Thus children in chronically poor households suffer more commonly from multidimensional poverty than those within least poor households. However, 95 per cent of children belonging to least poor households faced one or more deprivations at the ages of 12 and 15 (Table A3). For example, 18 per cent of children from least poor households remained thin while 58 and 57 per cent respectively had no access to drinking water from a tap inside the house and a flush/sceptic toilet in their house at the age of 15.

A decomposition of the estimates for rural and urban location as well as for boys and girls reveals the fact that rural children experience high deprivation in both chronically poor and least poor households. The adjusted headcount ratio also reveals that least poor children in rural areas have not experienced any decrease in deprivation across rounds. This highlights that children belonging to least poor households also face multidimensional deprivation. Based on the Alkire and Foster measurements (*H, A* and *M*), at the age of 12, boys were more deprived than girls in the chronically poor households, though boys showed a substantial decrease in deprivation over time. However, in terms of reduction in deprivation over time, rural children and girls remained almost static in both chronically poor and least poor households. Further analysis of indicator deprivation among boys and girls allowed us to identify the kinds of deprivations affecting each sub-group. Boys were more deprived in the indicators under the dimensions of education and health than girls. Very high percentages of boys were thin in both chronically poor and least poor households. However girls in both chronically poor and least poor households faced more deprivation in the subjective well-being dimension, in areas related to leisure and lack of social support.

6. Policy implications

Childhood deprivation is a crucial area of concern because of its role in jeopardising the rights and well-being of children and because deprived children are at risk of future poverty. Children in chronically poor households in the Young Lives sample were subjected to much higher multidimensional deprivation than children in the least poor households. Deprivations in various dimensions may be caused in complex ways by a variety of factors at various times during childhood, and aggregating dimensions may obscure rather than illuminate them (Dercon 2012). Analysis of multidimensional childhood deprivation highlights that children in rural areas suffered higher deprivation, particularly among the chronically poor households, in both rounds and showed a much slower reduction rate as compared to children in urban areas.

The persistent deprivation with age for girls in both the poorest and least poor households needs to be highlighted. The entrenched gendered role played by expectations of girls and boys can be a primary contributory factor. Given that the existing 'patriarchy' needs to be addressed within the social system, it is also important that social policies target both boys and girls in appropriate ways, as well as children living in rural areas, since children below and just above the poverty line are vulnerable to increased deprivation because of social, cultural and economic expectations and pressures. The increasing deprivation with age for girls in both the poorest and least poor households related to subjective well-being dimension and social support requires targeted intervention particularly in relation to safety, since they become particularly vulnerable as they approach menstruation.

Thus childhood deprivation is not confined to the 'poorest' households, since 95 per cent of children (according to simple headcount) belonging to least poor households seem to have faced one or more deprivations at the ages of 12 and 15 (Table A3). Undoubtedly, children from the chronically poor households suffered a much higher concentration of deprivation than those in least poor households. Looking at the overall figures regarding children aged 15 from both chronically poor and least poor households, there is an overall reduction in deprivation vis-à-vis the same children at the age of 12. But the adjusted headcount ratio also reveals that least poor children in rural areas as well as girls have not experienced any reduction in deprivation across rounds. Thus economic growth, witnessed by the sample households in terms of a reduction in absolute poverty, has not translated into corresponding reductions in childhood deprivations for girl children in our sample and for the least poor in rural areas during the period 2006 to 2009.

When examining the multidimensional deprivation of children, we cannot overlook the importance of the policy context. A lack of investment in good-quality education, health and other public services is as significant a cause of child deprivation as low family incomes (Mehrotra et al. 2000; Minujin et al. 2002). It is also important to understand that the quality of children's social, emotional, moral, and spiritual development, especially their feelings about their identity, self-worth, and personal well-being, is highly dependent on how they understand their relative social position, relative competence, and potential to access opportunities for personal, social and economic advancement (Boyden and Dercon 2012). Keeping in view that deprivation across more than one indicator in the dimension of well-being results in severe negative consequences for quality of life, well-being and future life chances for all individuals (Levitas et al. 2007) a convergent and coordinated policy response cutting across sectors and ministries is absolutely imperative. Children deserve a special

place on the anti-poverty agenda and specific attention must be given to adolescents, who number 243 million and comprise a quarter of India's population. Dreze and Sen (2013) have highlighted that India's experience with targeting is far from encouraging and that the notion of 'below the poverty line' is problematic since it tends to be a 'hit or miss affair, with plenty of inclusion or exclusion errors'. Perhaps, it is time that social policies were based on alternative principles of universalism and self-selection, such as in the case of the MGNREGS, which is based on families opting to access the scheme, in order to ensure that no child falls between the cracks. With the move towards universalisation of both elementary and secondary education, it is vital that parents are provided with avenues and skills for revenue-generation, insurance-based mechanisms for the protection of small farmers and incentives such as scholarships covering transport, books and other educational expenses, for both boys and girls, to ensure that children are not pulled out of school. The analysis further suggests that greater attention needs to be paid to children in rural areas, for which the country's rural development strategy needs to be intensified.

Going forward, the post-MDG debates must ensure that poverty monitoring systems capture the different deprivations faced by children and make recommendations for states to undertake impact evaluations that link changes in children's lives with the policies underpinning those changes. Undoubtedly, reducing childhood deprivation possibly represents the most challenging goal within the overall agenda of poverty eradication, but then it is also the one with the greatest potential returns.

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Appendix

Table A1. *Indicator deprivation experienced by rural and urban children in chronically poor and least poor households, by round (%)*

	Rural				Urban			
	Chronically poor		Least poor		Chronically poor		Least poor	
	Round 2 (2006)	Round 3 (2009)	Round 2 (2006)	Round 3 (2009)	Round 2 (2006)	Round 3 (2009)	Round 2 (2006)	Round 3 (2009)
Education indicators (%)								
Not enrolled	16	33	0	15	5.3	21.1	0	0
Can't read and write	42.6	17	32.5	10	31.6	21.1	12.7	3.6
Health indicators (%)								
Wasted	37	22.3	25	17.5	26.3	10.5	27.8	18.2
Not eaten any fruit and vegetabe in last 24 hr	83	68.1	45	55	78.9	63.2	34.5	41.8
Housing indicators (%)								
No access to tab drinking water	100	97.9	85	82.5	84.2	89.5	61.8	40
No access to flush/septic toilet	96.8	94.7	67.5	87.5	57.9	36.8	34.5	34.5
No pucca roof (ac roofing sheets/concrete/cement/asbestos plates)	75.5	66	67.5	55	68.4	52.6	41.8	34.5
No electricity	21.3	6.4	5	2.5	10.5	0	0	0
Subjective well-being (%)								
Not spend at least 1 hour for leisure	4.3	3.2	17.5	15	21.1	15.8	18.2	5.5
No one to help if worried	1.1	8.5	0	2.5	5.3	10.5	1.8	5.5
No one to help if teased by someone	3.2	14	2.5	12.5	5.3	10.5	5.5	10.9
Do not feel safe going out of the home	4.3	1.1	7.7	5	15.8	10.5	7.3	0
Do not get respect from adult in the community	4.3	4.3	2.5	2.5	10.5	0	0	1.8
Do not think to improve situation after working hard	1.1	3.2	0	0	10.5	0	0	3.6
Perception about the household (poor/destitute)	24.5	35.1	12.5	5	15.8	31.6	10.9	0
Number of children	**94**		**40**		**19**		**55**	

Table A2. *Indicator deprivation experienced by boys and girls in chronically poor and least poor households, by round (%)*

	Boys				Girls			
	Chronically poor		Least poor		Chronically poor		Least poor	
	Round 2 (2006)	Round 3 (2009)	Round 2 (2006)	Round 3 (2009)	Round 2 (2006)	Round 3 (2009)	Round 2 (2006)	Round 3 (2009)
Education indicators (%)								
Not enrolled	20.7	36.2	0	4.4	7.3	25.5	0	8
Can't read and write	48.3	19	22.2	6.7	32.7	16.4	20	6
Health indicators (%)								
Wasted	40.4	34.5	42.2	31.1	29.6	5.5	12.2	6
Not eaten any fruit and vegetable in last 24 hr	82.8	69	35.6	40	81.8	65.5	42	54
Housing indicators (%)								
No access to tab drinking water	96.6	98.3	66.7	57.8	98.2	94.5	76	58
No access to flush/septic toilet	91.4	87.9	46.7	55.6	89.1	81.8	50	58
No pucca roof (ac roofing sheets/concrete/cement/asbestos plates)	77.6	65.5	44.4	35.6	70.9	61.8	60	50
No electricity	27.6	6.9	2.2	0	10.9	3.6	2	2
Subjective well-being (%)								
Not spend at least 1 hour for leisure	5.2	0	15.6	4.4	9.1	10.9	20	14
No one to help if worried	1.7	6.9	0	2.2	1.8	10.9	2	6
No one to help if teased by someone	3.4	6.9	4.4	2.2	3.7	20.4	4	20
Do not feel safe going out of the home	5.3	0	4.4	2.2	7.3	5.5	10.2	2
Do not get respect from adult in the community	7	1.8	2.3	4.4	3.6	5.5	0	0
Do not think to improve situation after working hard	3.5	0	0	0	1.8	5.5	0	4
Perception about the household (poor/destitute)	24.1	36.2	11.1	0	21.8	32.7	12	4
Number of children	**58**		**45**		**55**		**50**	

Table A 3. *Headcount ratio, by round (%)*

		1 or more	2 or more	3 or more	4 or more	5 or more	6 or more	7 or more	8 or more	9 or more	10 or more	11 or more	12 or more	13 or more	14 or more
Overall	Round 2	98.9	94.7	86.1	66.2	43.3	22.2	10.8	4.1	1.2	0.2				
	Round 3	99.1	93.2	81.4	60.0	34.4	14.8	6.7	2.5	1.1	0.3				
Chronically poor	Round 2	100.0	98.2	97.3	82.7	56.4	32.7	17.3	7.3	3.6	0.0				
	Round 3	100.0	99.1	91.0	73.9	51.4	22.5	13.5	4.5	0.9	0.9				
Least poor	Round 2	96.7	79.1	59.3	36.3	18.7	7.7	1.1							
	Round 3	94.7	77.9	52.6	29.5	11.6	4.2	0.0							
Rural															
Chronically poor	Round 2	100.0	98.9	98.9	86.8	57.1	34.1	18.7	6.6	4.4	0.0				
	Round 3	100.0	100.0	93.5	77.2	54.3	26.1	16.3	5.4	1.1	1.1				
Least-poor	Round 2	100.0	89.5	76.3	52.6	26.3	10.5								
	Round 3	100.0	100.0	82.5	52.5	22.5	10.0								
Urban															
Chronically poor	Round 2	100.0	94.7	89.5	63.2	52.6	26.3	10.5	10.5						
	Round 3	100.0	94.7	78.9	57.9	36.8	5.3	0.0	0.0						
Least poor	Round 2	94.3	71.7	47.2	24.5	13.2	5.7								
	Round 3	90.9	61.8	30.9	12.7	3.6									
Boys															
Chronically poor	Round 2	100.0	98.2	98.2	80.7	64.9	43.9	22.8	14.0	7.0					
	Round 3	100.0	98.2	89.5	80.7	50.9	28.1	15.8	7.0	0.0					
Least poor	Round 2	93.2	79.5	59.1	34.1	22.7	9.1								
	Round 3	93.3	73.3	44.4	20.0	11.1	4.4								
Girls															
Chronically poor	Round 2	100.0	98.1	96.2	84.9	47.2	20.8	11.3	0.0	0.0	0.0				
	Round 3	100.0	100.0	92.6	66.7	51.9	16.7	11.1	1.9	1.9	1.9				
Least poor	Round 2	100	78.7	59.6	38.3	14.9	6.4	2.1							
	Round 3	96	82.0	60.0	38.0	12.0	4.0	0.0							

The Relationship of Household Monetary Poverty and Multidimensional Child Deprivation: A Longitudinal Study of Children Growing Up in India

Using longitudinal dataset from Young Lives, this paper aims to measure multidimensional childhood deprivation in Andhra Pradesh, India. We employ the counting approach of Alkire and Foster (2011) to estimate multidimensional childhood deprivation. We use household- and child-related data of 975 children in two different age points (12 and 15 years) and seek to establish the fact that childhood deprivation is not confined only to monetarily poor households.

Our analysis is based on 15 indicators cutting across four major dimensions – education, health, housing quality, and subjective well-being. Comparison has been made between households who have been consistently in the bottom quartile of monthly per capita consumption expenditure (chronically poor) and the top quartile (least poor) in the two rounds of survey conducted in 2006 and 2009. Overall child deprivation is higher for chronically poor households across all the indicators, as compared to those belonging to the least poor in our sample. However, 95 per cent of children belonging to least poor households face one or more deprivations at age 12 and 15. The estimates have also been decomposed by rural and urban location as well as by gender. Rural children in both chronically poor as well as least poor households, experience higher deprivation, which remains static across rounds. Boys at the age of 12 are more deprived than girls in the chronically poor households, though boys show substantial decrease in deprivation over time. Among the child-related indicators, schooling, ability to read and write, thinness and nutrition have emerged in general as important contributors towards children's deprivation. The paper recommends social policies to be based on alternative principles of universalism and self-selection to ensure that no child falls between the cracks and to focus efforts to remove child deprivation, particularly in rural areas.

Young Lives
An International Study of Childhood Poverty

About Young Lives

Young Lives is an international study of childhood poverty, involving 12,000 children in 4 countries over 15 years. It is led by a team in the Department of International Development at the University of Oxford in association with research and policy partners in the 4 study countries: Ethiopia, India, Peru and Vietnam.

Through researching different aspects of children's lives, we seek to improve policies and programmes for children.

Young Lives Partners

Young Lives is coordinated by a small team based at the University of Oxford, led by Professor Jo Boyden.

- *Ethiopian Development Research Institute, Ethiopia*
- *Pankhurst Development Research and Consulting plc*
- *Save the Children (Ethiopia programme)*
- *Centre for Economic and Social Sciences, Andhra Pradesh, India*
- *Save the Children India*
- *Sri Padmavathi Mahila Visvavidyalayam (Women's University), Andhra Pradesh, India*
- *Grupo de Análisis para el Desarollo (GRADE), Peru*
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