



JUSTIFICATION OF THE CONTENT OF THE 8-YEAR-OLD PILOT CHILD QUESTIONNAIRE

Introduction

This draft document is to be read in conjunction with the Young Lives Study 8-year-old child questionnaire. The child questionnaire complements the household and community questionnaires and focuses on data that is collected directly from the child. The reader is also referred to the justification documents from previous rounds, as well as the fieldworker manuals for more guidance.

0. Preliminary information
1. School and work activities
2. Feelings and attitudes
3. Social networks, social skills and social support
4. Risk games
5. Pets (Peru only)

Each section of this document:

1. Describes the rationale of the section
2. Explains the intended use of the data, for example, motivation for calculation of scores and indexes.

The aim of the questionnaires is to include key measures of the child outcome variables (health, nutritional status, cognitive development and educational achievement), and factors that are likely to affect these outcomes as well as outcomes measured in later rounds. It is important to remember that the child questionnaire is just one data collection instrument and will be used in conjunction with country-specific modules/questions, the household and community questionnaires.

For the discussion on questionnaire development and data analysis, please see the justification documentation for the 15-year old (Older Cohort) child questionnaire.

Section 0: Locating information, ID's and data handlers

The information collected in this section allows the children to be linked to future rounds and to the household, anthropometry and community surveys. The identification information is also useful for quality checks and for locating individual questionnaires if there are data queries. **It is essential for continuity purposes that it is consistent between rounds in a panel survey.**

Section 1: School and work activities

School

During Round 2, the younger cohort was aged between 5 and 6 years and was too young to be enrolled in primary school in some of the countries. In Round 3, they are aged between 8 and 9 years and are *officially* old enough to go to primary school. This section assesses primary school enrolment and attendance. When reasons for not being enrolled in school are poverty-related, many children may not be sent to school at all or may have poor attendance even if they are enrolled in school. Therefore, this

section will gather information on periods of absence from school in the previous 12 months, including the reasons for these absences.

As in the 15-year-old child questionnaire, this questionnaire also includes a few questions on the quality of the school environment. These are complemented with a survey of schools, so only questions that need to be answered by the children themselves are included in this instrument. The questions include a short set of questions about school climate, from the second study on school achievement by UNESCO in Latin America.

For some of the survey countries, we include a section on intervention programmes that are run in primary schools, for example, on the Midday Meal Scheme in India. This may help us assess the impact of such programmes on health and education outcomes and/or evaluate the effectiveness of such programmes and make recommendations for policy.

Poverty affects the roles and responsibilities assumed by children and the ways in which they use their time. This section aims to establish the range of activities undertaken by children on a daily basis and over the course of a year. This information then provides a context for obtaining children's perspectives on their lives and roles, as well as for asking about their social support, skills and other feelings (see later sections).

The questions complement data collected in the household questionnaire and detailed justification for the inclusion of these topics can be found in the household questionnaire justification document. As in the household questionnaire, some of the questions on child work are taken from the International Labour Organisations (ILO) standardised survey, which was developed as part of the Statistical Information and Monitoring Programme on Child Labour (SIMPOC) (Jensen 2001). The school and work questions also draw on the experiences of the UNICEF (1999) and the World Bank's (2001) *Voices of Poor Children*. As the children grow older, their labour market roles change, and become closer to the labour market roles taken on by adults. The labour market questions therefore also draw on the experiences of the Tanzania and Ghana Household worker surveys, designed by The Centre for the Study of African Economies (CSAE) at Oxford University in collaboration with the Ghana Statistical Office (GSO) and the Tanzania National Bureau of Statistics (NBS). These surveys were designed to analyse the labour market experiences of adults aged 15 years and older. The questions also draw on the experience of the World Bank Living Standard Measurement Surveys (LSMS) (Grosh and Glewwe, 2000).

While the information about school and work is collected over the previous 12 months, the previous day's activities are collected in more detail to give an idea of the balance of time spent on different activities by the child. This section also gives detailed information about the child's leisure activities. Children have different perspectives on their time use and activities that are different from those of their caregivers, so it is essential to ask these questions directly to the 8 year-olds.

Some changes have been made to this section since Round 2, to reflect the changing labour market roles of the children. The section begins by asking the child to classify their activity status. This information will help the enumerator to frame their

questions. It will also be of interest to compare this “standard” classification with the information later in the questionnaire.

A wider definition of work is adopted than that used in Round 2; children are asked about anything they did to help their families or to get things for themselves, including paid or unpaid jobs or chores done at home. The reason for widening the definition is that qualitative work in Young Lives communities has found that many children who answer negatively to the question “have you done work or anything to get money or things for yourself or your family” actually have substantial work commitments. Further, domestic work and chores often have significant impacts on the lives and well-being of children, in particular, on their school attendance, and on the time they are able to spend studying. The Round 3 questionnaire therefore hopes to capture these forms of work in more detail, as well as asking the children whether they or their household receive any form of payment for their work. The Round 2 question is, however, retained for comparison.

As in Round 2, children are not asked whether they like doing paid work but are asked what they like and dislike about their main occupation. This is an important distinction, since research with working children has shown that children’s views about work go beyond a simple ‘like’ or ‘don’t like’: children demonstrate a nuanced understanding of the pros and cons of work (Woodhead, 1998). It is important to get the whole picture about child labour to accurately inform any policies concerning it. Questions about uses of any money earned helps to build up a picture of how work can, in some cases, benefit children, and help them to develop their own identity and independence.

References

- Grosh, M. and Glewwe, P., (2000), *Designing Household Surveys for Developing Countries, Lessons from 15 Years of the Living Standards Measurement Study*, The World Bank Group, Washington
- Jensen R T (2001) *Development of Indicators on Child Labour*. Ph.D. thesis, published on <http://www.ilo.org/public/english/standards/ipecc/simpoc/jensen/index.htm>. 2001
- UNESCO (Institute for Statistics) (2002/3) *Country Profiles*, available from http://www.uis.unesco.org/profiles/selectCountry_en.aspx
- UNICEF (1999) *Voices of Children and Adolescents in Latin America and the Caribbean*. UNICEF, New York.
- Woodhead, M. (1998) *Childrens perspectives on their working lives: a participatory study in Bangladesh, Ethiopia, the Philippines, Guatemala, El Salvador and Nicaragua* Stockholm: Raedda Barnen
- World Bank (2001) *World Development Report: attacking Poverty*. Oxford University Press, Oxford.

Section 2: Feelings and attitudes

A subset of the items used in the household questionnaire are used to explore children's expectations for their future and whether they feel these are attainable. The include expectations such as the length of time they would like to spend in education, what they want to be when they grow up. As well as allowing for collection of children's attitudes, which are important as they are likely to influence their later behaviour, this will allow for the comparison of intergenerational attitudes on this subject. (More detailed information on these measures is included in the justification of the household questionnaire.)

A key aim of the YL project is to research the effects of poverty on children's psychosocial capacities. The focus on capacities reflects the recognition that children often demonstrate great resilience in the face of adversity to the extent that this can be understood to be 'ordinary' (Masten 2001). However, different aspects of poverty are hypothesised to affect children's psychosocial capacities in different ways. For example, the facets of poverty in which they grow up will influence children's agency (their ability and opportunity to make their own decisions). This may increase or decrease their feelings of pride and shame, agency, trust, and stigma and discrimination. These themes are also explored in Section 11 of the caregiver's questionnaire, to allow for a comparison of the feelings and perceptions of caregivers and children.

The method used is a Likert-type response scale in which children indicate their dis-/agreement with various statements in terms of how much they sound like themselves. This Likert scale has 5 points with a 'don't know' option included in the coding, as for other questions in the questionnaire, if children really cannot answer. A 5 point scale is widely recommended, for example by Likert (1933), DeVellis (2003), and Nunally and Bernstein (1994).

Life satisfaction

Happiness, or satisfaction, is important to consider in poverty research because the poorest are not necessarily the least happy and there is growing recognition that people's own perceptions of their situation should be taken into account when seeking to develop or improve their living conditions (Camfield and McGregor 2005). Consequently, a simple measure, using the Life Satisfaction Ladder has been included. This item was originally developed in a medical context, to test the perceived life satisfaction of patients (Cantril 1965). However, it has recently been used in all over the world in happiness studies (Veenhoven, n.d.) and in studies of poverty and development in a number of countries, including Ethiopia and India (Bourai et al. 1997). After asking children's caregivers to indicate their position between their best- and worst- possible lives on a nine-point scale, fieldworkers then ask them to indicate whether they expect they will be able to increase their life satisfaction in the next four years. This time span was chosen to coincide with the next round of data collection. The Ladder was used successfully in most countries in Round 2, with both caregivers and the older children (aged 12 at that time), and subsequently in analysis for country reports and papers. Administration will be improved with further training and the use of visual aids.

Trust and perception of service quality

There are several types of trust: within established relationships and social networks; trust extended to strangers (often based on expectations of behaviour or a sense of shared norms); trust in the institutions of governance (including fairness of rules, official procedures, and dispute resolution and resource allocation). Young Lives tries to assess different dimensions of trust using Likert-like scales. Questions were mainly taken from the World Bank social capital assessment tool (Grootaert et al. 2004) Trust and perceptions of the quality of services might shape confidence and subsequent behaviour with regard to choice and usage of the available services.

The following three sub scales have been created from statements made by children living in extreme poverty in various countries in the world, in conjunction with Martin Woodhead. The items on pride/shame and self-efficacy underwent psychometric validation as five-item scales (Leight, 2008) and were used in papers on youth resilience and psychosocial competencies (Boyden 2008; Dercon and Sanchez 2008). However, as the other sets of items have not been validated as scales, they will need to be analysed as single items.

Stigma and discrimination:

Qualitative work by UNICEF (1999) and the World Bank (2001) on voices of poor people around the world identified indicators of well being which are important to children. One of these indicators was the degree to which people treat children badly or look down on them. Children become particularly sensitive to issues of stigma and discrimination during middle and late childhood, as peers and social groups become increasingly important to them (Boyden et al. 2003). We have attempted to separate out the issue of perceived discrimination (i.e. ‘how others treat me’) from the issue of reduced self-esteem, or shame (i.e. ‘how that makes me feel). These two dimensions are likely to be highly correlated. The questions in this section have been developed in close cooperation with Martin Woodhead and are based on statements from children living in poverty that feels discriminated against.

Pride and shame:

Pride and shame are more ‘everyday’ words for the psychological concept of self-esteem. Contextualising the questions makes them easier for children to answer and also recognises that such feelings are likely to depend on the situation. Those who are able to help their families report a sense of pride and responsibility (Woodhead 1998, Punch 2004) whereas the poorest of the poor often report feelings of shame and low self-esteem, because of the stigmatisation and discrimination they experience, as well as their limited opportunities for change (Boyden et al. 2003). Collecting data on children’s levels of pride and shame at this stage will allow us to see how much these feelings facilitate or debilitate children’s opportunities and strategies for improving their situation in life.

Self-efficacy

Self-efficacy can be understood as ‘a child’s sense of agency or mastery’ or their sense of competence (Brewer 2003: pp. 93) and corresponds to other psychological concepts in psychology: an internal locus of control; the opposite of helplessness. As well as the statements included in the Likert-scale response section, self-efficacy is also addressed through the ‘ladder of life satisfaction’ (see above). After asking children to indicate their current level of satisfaction with their life, fieldworkers then

ask children to indicate whether they expect they will be able to increase their life satisfaction in the next four years. This time span was chosen to coincide with the next round of data collection.

Perceptions of wealth

The final concerns children's perception of their family's poverty, firstly in absolute terms and secondly in relation to others. This is included because it has been shown that it is children's perceptions of relative poverty that lead to distress and low self esteem (Boyden et al 2003). This is supplemented with similar questions in the questionnaire administered to the household.

References

- Boyden, J., Eyber, C., Feeny, T. and Scott, C. (2003) *Children and Poverty: Experiences and Perceptions from Belarus, Bolivia, India, Kenya and Sierra Leone*, Virginia: Christian Children's Fund
- Brewer, S.E. (2003) *Instrument for Assessing the Psychological Effects of Child Domestic Work*, London: Anti-Slavery International, August
- Bourai, V.A., Bahadur, S.R., Panwa, K.M., Mishra, K.M. (1997) Props for research *PLA Notes* 28: 91-92, London: IIED
- Camfield, L. and McGregor, A. (2005) Resilience and Well-Being in Developing Countries in *Handbook for Working with children and youth: Pathways to Resilience across Cultures and Contexts*.
- Cantril, H. (1965). *The pattern of human concern*. New Brunswick, New Jersey: Rutgers University Press
- Dercon, S., Sanchez, A. (2008). Poverty, Malnutrition and its Psycho-social Impact on Children, Working Paper 39, Oxford: Young Lives.
- DeVellis, R. F. (2003). *Scale development: Theory and applications* (2nd ed. Vol. 26). Thousand Oaks, CA: Sage.
- Grootaret C, Narayan D, Jones VN, Woolcock M (2004) *Measuring Social Capital*. The World Bank. Washington DC, USA
- Leight, J. (2008). Validation of dependent variables: Validating measures of psychosocial outcomes. Unpublished document, available on request.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 150, 5-53.
- Masten, A.S. (2001) *Ordinary Magic: Resilience Processes in Development*, *American Psychologist* 56 (3): 227-238.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

Punch, S. (2004) 'Negotiating Autonomy: Children's use of time and Space in Rural Bolivia' 94-114 in Lewis, V., Kellett, M., Robinson, C., Fraser, S. and Ding, S. (Eds) *The Reality of Research with Children and Young People*, London: Sage.

UNICEF (1999) *Voices of Children and Adolescents in Latin America and the Caribbean*. UNICEF, New York.

Veenhoven, R. (n.d.) *World Database of Happiness, Item bank*. Erasmus University Rotterdam,

Woodhead, M. (1998) *Childrens perspectives on their working lives: a participatory study in Bangladesh, Ethiopia, the Philippines, Guatemala, El Salvador and Nicaragua* Stockholm: Raedda Barnen

World Bank (2001) *World Development Report: attacking Poverty*. Oxford University Press, Oxford.

Section 3: Social networks, social skills and social support

The fact that adults' social capital should not be used as a proxy for children's social capital is only slowly being recognised (Jack and Jordon 1999, Morrow 1999; 2001, Runyan et al 1998, Harpham et al. 2002). Previous research plays down children's 'agency' and overemphasises the influence of parents on children's lives. YL provides an opportunity to begin to explore the difference between children's social capital and caregivers' social capital and the role that each of them plays in the child's well-being. Qualitative work on UK children's social capital by Morrow has demonstrated that it is possible and meaningful to separate structural social capital (connectedness) from cognitive social capital (feeling supported/helped). Connectedness in YL is measured through asking about number of friends spoken to in the past week and group membership; support is measured by asking about availability of someone to help the child. This section was previously only administered to the older cohort. In Round 3, we also administer this section to the younger cohort. However, we drop the generic questions asked to the older cohort in Rounds 1 and 2 but still ask for the availability of someone to help in some specific instances in which a child may need help.

Children's social networks also provide a context for the development of social skills. 'Social skills' in this context refer to a person's 'ability to interact effectively with others and deal with various social situations and demands' (Brewer 2003). Skills such as these normally develop through interactions with parents, relatives and peers from early childhood onwards. Successful social interactions are important for daily life and successful living. There are serious consequences for people who fail to develop adequate social skills including low self-esteem, loneliness and lack of social support (ibid) since they may not know how to assert themselves, resolve conflict or make friends. Some poor children living in isolated situations, for example through being excluded and stigmatised at school or through working alone as a domestic worker (Stegmann 2003) lack the opportunity to develop these skills, making their lives harder in the future. Conversely, those who develop good social skills may find that these facilitate routes out of poverty. If social skill development can be measured early in the Young Lives Project the extent to which it moderates the effects of poverty on children's futures can be analysed in the future.

Questions in this section assess children's (self-reported) social skills. The majority are set in the context of school or work to give a specific situation for children to relate to and will only be asked if the individual child is at school and/or working. These questions have mostly been adapted from Brewer's (2003) recommended instrument for research with child domestic workers. She drew the questions from various psychological instruments for assessing social skills in North American and European contexts. However, they have not been validated cross-culturally and this precise selection and wording of questions has not been used before and will thus need to be analysed for reliability. Through comparison with qualitative work with individual children and analysis of their correlations with future social integration, it may also be possible to assess the validity of their scores on these questions and potentially develop a social skills scale for use in other developing world contexts.

The Round 3 questionnaire aims to extend the information collected in previous rounds on structural social capital and on political capital. By the age of 8, children may have their own links to social organizations and networks. To this end, questions pertaining to the child's peers and interactions with the peers are addressed to the child.

References

- Brewer, S.E. (2003) *Instrument for Assessing the Psychological Effects of Child Domestic Work*, London: Anti-Slavery International, August
- Harpham T, Grant E and Thomas E (2002) Measuring social capital in health surveys. *Health Planning and Policy* 17(1): 106-111.
- Jack G, and Jordan B (1999) Social capital and child welfare. *Child and Society* 13: 242-256.
- Morrow V (1999) Conceptualising social capital in relation to the well-being of children and young people: a critical review. *Sociological Review* 47 (4): 744-765.
- Morrow V (2001) Using qualitative methods to elicit young people's perspectives on their environments: some ideas for community health initiatives. *Health Education Research* 16 (3): 255-268.
- Runyan D, Hunter W, Socolar R, and Amaya-Jackson L (1998) Children who prosper in unfavourable environments: the relationship to social capital. *Pediatrics* 101: 12-18.
- Stegmann, K. (2003). *Child Health and the Worst Forms of Child Labour: The Psychological Impact of Work on the Working Child*, London: Anti-Slavery International

Section 4: Risk game (only Peru and India)

Research shows that one can even elicit risk preferences from very young children (Levin and Hart, 2003), we feel the inclusion of such questions will be a valid and

informative exercise for Round 3. The data generated from the questions will be fairly unique as the majority of risk studies focus on either adults in developing countries or children in the developed world. Aside from its inherent research value, we think the exercise will create a fun diversion from long survey questions that these children must answer.

After some discussion concerning the various methods of assessing risk-preference such as the Choose Lottery and the Accept/Reject lottery, we have decided that the original method introduced by Binswanger (1980) best combines simplicity of use with enough structure to allow researchers some room in categorizing risk preferences. We would prefer to perform the gambles with real payoffs but recognise this might not be economically feasible for the programme. Where it is not possible or inappropriate to use real payoffs, we use chips.

Offering a variety of gambles to children can be ethically tricky. Despite the research possibilities (Kahneman and Tversky, 1979; Harbaugh, Krause and Vesterlund, 2002) that data on risk preference in the domain of losses could generate, we feel that games that could result in real losses for the children (even if these losses are of sums gained from previous games) are not appropriate. The game should therefore be restricted to positive outcomes.

The structure of the risk questionnaire is country-specific. The amounts presented in the gambles are comparable, perhaps by setting them equal to a given fraction of the daily wage in each country. There are also cultural factors that could be pertinent, such as familiarity with certain games. The Binswanger method is flexible enough to be presented a number of ways (flipping a coin, hiding the payoffs in different hands behind the back, etc).

The inclusion of the question on time-discounting is more straightforward. It is included as a question without a real payoff, with a slight modification to prevent confounding time and risk preferences. The principal investigator of the Peruvian team noted that the main flaw with this type of discount rate question is that it mixes feelings about time preferences and risk-aversion. The subject is faced with a promise of consumption later, not guaranteed consumption, and so he/she must judge it with some uncertainty, possibly over-biasing the decision in favour of consumption now. Both (Coller and Williams, 1999) and (Harrison, Lau, and Williams, 2002) used a method of 'front-end delaying' to eliminate the credibility problem. Instead of asking 'how much money would you accept today?' the question is rephrased so the money would be delivered the next day. The researcher should be as trustworthy in the near future as the far future, eliminating the uncertainty bias.

References:

- Binswanger, H. P. (1980). Attitudes toward risk: experimental measurement in rural India. *American Journal of Agricultural Economics*, 62 (3), 395-407.
- Coller, M., and Williams, M. B. (1999). Eliciting Individual Discount Rates. *Experimental Economics*, 2, 107-127.

Harbaugh, W. T., Krause, K., and Vesterlund, L. (2002). Risk Attitudes of Children and Adults: Choices Over Small and Large Probability Gains and Losses. *Experimental Economics*, 5, 53-84.

Harrison, G. W., Lau, M. I., and Williams, M. B. (2002). Estimating individual discount rates in Denmark: a field experiment. *American Economic Review*, 92 (5), 1606-1617.

Kahneman, D., and Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47 (2), 263-91.

Levin, I. P., and Hart, S. S. (2003). Risk Preferences in Young Children: Early Evidence of Individual Differences in Reaction to Potential Gains and Losses. *Journal of Behavioral Decision Making*, 16, 397-413.

Section 5: Pets (Peru only)

Attachment to pets can play a role in children socio-emotional development (Siegel 1995, Vidovic et al. 1999) health status and well-being (Nicholas et al. 2005; Wells 2009). Most studies focus on high-income country settings and there are very few studies that explore the relationship between children and pets in low-income country settings.

References:

McNicholas J., Gilbey A., Rennie A., Ahmedzai S., Dono J-A. & Ormerod E. (2005) Pet ownership and human health: a brief review of evidence and issues. *British Medical Journal* 331, 1252-1254

Siegel, J. M. 1995. Pet ownership and the importance of pets among adolescents. *Anthrozoös* 8: 217–223

Vidovic, V. V., Stetic, V. V. and Bratko, D. 1999. Pet ownership, type of pet and socio-emotional development of school children. *Anthrozoös* 12: 211–217

Wells, D. L. (2009). The effects of animals on human health and well-being. *Journal of Social Issues*, 65, 523–543

**JUSTIFICATION OF THE CONTENT OF THE 15-YEAR-OLD CHILD
QUESTIONNAIRE**

Introduction

This draft document is to be read in conjunction with the Young Lives 15-year-old child questionnaire (Round 3). The child questionnaire complements the household and community questionnaires and focuses on data that is collected directly from the child. The reader is also referred to the justification documents from previous rounds, as well as the fieldworker manuals for more guidance. Additionally to the child questionnaire, there is also a new self-administered questionnaire for the 15-year olds. This questionnaire aims to collect data on more sensitive issues that might affect adolescents' lives. For further details, see the justification document for the self-administered questionnaire.

0. Preliminary information
1. Time use and work activities
2. Feelings and attitudes
3. School and school environment
4. Child health
5. Social networks, social skills and social support
6. Migration
7. Household issues
8. Children (girls only, only Ethiopia, Vietnam)
9. Risk and time discounting
10. Pet ownership (Peru only)

For the achievement and cognitive development tests see the household justification document.

For each section the document:

1. Describes the rationale of the section
2. Explains the intended use of the data, for example for calculation of scores and indexes.

The aim of the questionnaires is to include key measures of the child outcome variables (health, nutritional status, cognitive development and educational achievement), and factors that are likely to affect these outcomes as well as outcomes measured in later rounds. It is important to remember that the child questionnaire is just one data collection instrument and will be used in conjunction with country-specific modules/questions, the household and the community questionnaire.

During the questionnaire design, a number of issues had to be balanced:

1. Questionnaire development:

Minimising the respondent burden, recall error, question clarity, order and sensitivity were considered when designing the YLS questionnaire. The YLS aims to cover the multidimensional nature of childhood poverty rather than to investigate single issues in depth. This was quite a challenge for this questionnaire, as there are many new

issues that are relevant to 15-year old children in the study countries. However we had to prioritise, as our target was to have an instrument that did not take longer than about an hour, given that we also conduct cognitive tests and a self-administered questionnaire on more sensitive issues. A first analysis of round 2 allowed us to eliminate questions that elicited a high degree of non-response or not-applicable answers. The priority was given to longitudinal consistency and questions that had a clear purpose for research. Finally, during piloting, questions that were difficult to administer, were not clearly enough worded or appeared to trouble the child were dropped or reformulated.

2. Data analysis:

After each round of data collection, limited use of the data will be for a cross-sectional basis:

- (i) To provide descriptive information on the whole sample.
- (ii) To compare subgroups, at this point in time. For example, compare between types of community, compare between gender groups
- (iii) To compare results between countries. However, any comparisons made must bear in mind the fact that sampling procedures have differed between countries, so the samples are not strictly comparable, and the fact that many of the responses to questions are culturally specific.

From round 2 onwards, longitudinal analysis of the data has been possible, and this will continue to be the priority in round 3:-

- (iv) To link measurements from an earlier round with outcomes from a latter round. For example, to examine whether certain critical events impacted on a child's schooling (controlling for confounding factors)
- (v) To study differential child outcomes in communities which experienced some kind of shock such as natural disaster or in which a particular policy was implemented.

Note also that in round 3, the Younger Cohort are the age that the Older Cohort were in round 1, so there will be a possibility to compare outcomes of 8-year olds in the two cohorts over time.

The data being collected vary greatly in their nature, and the extents to which they can be used for different types of analysis vary. We need to consider the following:

- (a) Some variables are *transitory* in nature. For example, the measures of child physical morbidity refer to a particular point/period in time. Cross-sectional analyses are possible, but their use for longitudinal analysis is limited. For example, the prevalence of diarrhoea is a useful morbidity indicator for cross-sectional analysis. However, linking whether or not a child had diarrhoea in Round 1 with any outcome indicators in later rounds is unlikely to have much validity. Less transient variables, such as the height-for-age index, are more

useful for longitudinal analysis. The height-for-age index is often used as an indicator for long-term health and nutritional status in children and this will continue into round 3, with the caveat that adolescence is a time with a lot of “noise” in growth.

- (b) Some measures *vary* within an individual. This has implications for how a variable is composed and used in analysis. An example is measurement of behaviours. One might ask what is ‘usually done’ or, alternatively, what was ‘done last time a particular event occurred’. Each has its strengths and weaknesses but frequently the resulting variable is more useful for ‘population analyses’ than ‘individual analyses’. For example, when interviewing children directly, it might be easier to ask with reference to a specific event, i.e. ‘did you do take care of your younger brother yesterday?’ where taking care of siblings might be something which children do on some days but not on others. We can use that information to compare the occurrence of siblings care between, for example, gender groups. If we repeated the question a week later then we might expect similar proportions of children to answer in the affirmative but they will not necessarily be the same ones as the previous week. This makes linking the occurrence of siblings care asked in this way to an outcome more problematic because of the internal variability of the siblings care measure.
- (c) Some variables are very *culture-specific*. This limits the validity of cross-country comparative analyses, and possibly some sub-group analyses within countries. Even variables, which appear objective, are often culture-specific. For example, children of identical birth weights might be categorised as small, average or large in different contexts. Asking mothers to categorise birth-weight will be of less value than collecting the actual birth weight and calibrating against local standards.
- (d) Some variables are *proxies* for other variables that are difficult or impossible to measure. This affects their interpretation, especially when attempting to establish causation. For example, attendance at antenatal care can reflect a number of different factors (foetal nutrition, childcare practices, and maternal knowledge), some or all of which might be associated with an outcome variable.

Section 0: Locating information, ID’s and data handlers

The information collected in this section allows the children to be linked to future rounds and to the household, anthropometry and community surveys. The identification information is also useful for quality checks and for locating individual questionnaires if there are data queries. **It is essential for continuity purposes that it is consistent between rounds in a panel survey.**

Section 1: Time use and work activities

Poverty affects the roles and responsibilities assumed by children and the ways in which they use their time. This section aims to establish the range of activities

undertaken by children on a daily basis and over the course of a year. This information then provides a context for obtaining children's perspectives on their lives and roles, as well as for asking about their social support, skills and other feelings (see later sections).

The questions complement data collected in the household questionnaire and detailed justification for the inclusion of these topics can be found in the household questionnaire justification document. As in the household questionnaire, some of the questions on child work are taken from the International Labour Organisations (ILO) standardised survey, which was developed as part of the Statistical Information and Monitoring Programme on Child Labour (SIMPOC) (Jensen 2001). The school and work questions also draw on the experiences of the UNICEF (1999) and the World Bank's (2001) *Voices of Poor Children*. As the children grow older, their labour market roles change, and become closer to the labour market roles taken on by adults. The labour market questions therefore also draw on the experiences of the Tanzania and Ghana Household worker surveys, designed by The Centre for the Study of African Economies (CSAE) at Oxford University in collaboration with the Ghana Statistical Office (GSO) and the Tanzania National Bureau of Statistics (NBS). These surveys were designed to analyse the labour market experiences of adults aged 15 years and older. The questions also draw on the experience of the World Bank LSMS surveys (Grosh and Glewwe, 2000).

While the information about school and work is collected over the previous 12 months, the previous day's activities are collected in more detail to give an idea of the balance of time spent on different activities by the child. This section also gives detailed information about the child's leisure activities. Children have different perspectives on their time use and activities to their caregivers, so it is essential to ask these questions directly to the 15 year-olds.

Some changes have been made to this section since Round 2, to reflect the changing labour market roles of the children. The section begins by asking the child to classify their activity status. This information will help the enumerator to frame their questions. It will also be of interest to compare this "standard" classification with the information later in the questionnaire.

A wider definition of work is adopted than that used in Round 2; children are asked about anything they did to help their families or to get things for themselves, including paid or unpaid jobs or chores done at home. The reason for widening the definition is that qualitative work in Young Lives communities has found that many children who answer negatively to the question "have you done work or anything to get money or things for yourself or your family" actually have substantial work commitments. Further, domestic work and chores often have significant impacts on the lives and well-being of children, in particular on their school attendance, and on the time they are able to spend studying. The Round 3 questionnaire therefore hopes to capture these forms of work in more detail, as well as asking the children whether they or their household receive any form of payment for their work. The Round 2 question is, however, retained for comparison.

Children are asked to report wages for whatever time period they find easiest. Combined with information on the amount of time the child spent working, this will make it possible to calculate an hourly wage rate. This makes it possible to compute, for example, rates of return to education, as well as making it possible to assess the contribution these children make to household income.

As in Round 2, children are not asked whether they like doing paid work, but are asked what they like and dislike about their main occupation. This is an important distinction, since research with working children has shown that children's views about work go beyond a simple 'like' or 'don't like'. Children demonstrate a nuanced understanding of the pros and cons of work. It is important to get the whole picture about child labour to accurately inform any policies concerning it. Questions about uses of any money earned helps to build up a picture of how work can, in some cases, benefit children, and help them to develop their own identity and independence.

Injuries and illnesses incurred whilst doing paid work and whilst helping out with family farms, businesses, or chores, are a significant risk for young people. The survey therefore includes a set of questions on hazards children face whilst doing work activities, and about any injuries or illnesses, these activities may have caused. The questions cover all health hazards suggested by ILO, with the addition of some hazards that urban children may face, such as being close to moving vehicles or driving.

References

Grosh, M. and Glewwe, P., (2000), *Designing Household Surveys for Developing Countries, Lessons from 15 Years of the Living Standards Measurement Study*, The World Bank Group, Washington

Jensen R T (2001) *Development of Indicators on Child Labour*. Ph.D. thesis, published on <http://www.ilo.org/public/english/standards/ipec/simpoc/jensen/index.htm>. 2001

UNESCO (Institute for Statistics) (2002/3) *Country Profiles*, available from http://www.uis.unesco.org/profiles/selectCountry_en.aspx

UNICEF (1999) *Voices of Children and Adolescents in Latin America and the Caribbean*. UNICEF, New York.

Woodhead, M. (1998) *Childrens perspectives on their working lives: a participatory study in Bangladesh, Ethiopia, the Philippines, Guatemala, El Salvador and Nicaragua* Stockholm: Raedda Barnen

World Bank (2001) *World Development Report: attacking Poverty*. Oxford University Press, Oxford.

Section 2: Feelings and attitudes

A subset of the items used in the household questionnaire is used to explore children's expectations for their future and whether they feel these are attainable. For example, the length of time they would like to spend in education, the kinds of work they will be doing aged 25 and the skills they will need for this, and the age at which they will pass through key life stages such as parenthood. As well as allowing for collection of children's attitudes, which are important as they are likely to influence their later behaviour (Leone et al. 1999), this will allow for the comparison of intergenerational attitudes on this subject. (More detailed information on these measures is included in the justification of the household questionnaire.)

A key aim of the YL project is to research the effects of poverty on children's psychosocial capacities. The focus on capacities reflects the recognition that children often demonstrate great resilience in the face of adversity to the extent that this can be understood to be 'ordinary' (Masten 2001). However, different aspects of poverty are hypothesised to affect children's psychosocial capacities in different ways. For example, the facets of poverty in which they grow up will influence children's agency (their ability and opportunity to make their own decisions). This may increase or decrease their feelings of pride and shame, agency, trust, and stigma and discrimination. These themes are also explored in section 11 of the caregiver's questionnaire, to allow for a comparison of the feelings and perceptions of caregivers and children.

The method used is a Likert-type response scale in which children indicate their dis-/agreement with various statements in terms of how much they sound like themselves. This Likert scale has 5 points with a 'don't know' option included in the coding, as for other questions in the questionnaire, if children really cannot answer. A 5 point scale is widely recommended, for example by Likert (1933), DeVellis (2003), and Nunally and Bernstein (1994). We used 5 faces to symbolise the 5 different answer options and increase participant ease in answering these questions.

Life satisfaction

Happiness, or satisfaction, is important to consider in poverty research because the poorest are not necessarily the least happy and there is growing recognition that people's own perceptions of their situation should be taken into account when seeking to develop or improve their living conditions (Camfield and McGregor 2005). Consequently, a simple measure, using the Life Satisfaction Ladder has been included. This item was originally developed in a medical context, to test the perceived life satisfaction of patients (Cantril 1965). However, it has recently been used in all over the world in happiness studies (Veenhoven, n.d.) and in studies of poverty and development in a number of countries, including Ethiopia (Addis Ababa University et al. 2004) and India (Bourai et al. 1997). After asking caregivers to indicate their position between their best- and worst- possible lives on a nine-point scale, fieldworkers then ask them to indicate whether they expect they will be able to increase their life satisfaction in the next four years. This time span was chosen to coincide with the next round of data collection. The Ladder was used successfully in most countries in Round 2, with both caregivers and the older children (aged 12 at

that time), and subsequently in analysis for country reports and papers. Administration will be improved with further training and the use of visual aids.

In Round 3 the Ladder has been supplemented with the Personal Wellbeing Index in Vietnam. This is an 8-item scale that has been used in over 50 countries (Cummins and Lau, 2005). This clear and comprehensive measure covers children and adult's perceptions of wellbeing in seven domains (e.g. family) and of their life as a whole. There are versions for adults (PWI, used in the household questionnaire) and for children and young people (PWI-SC, younger and older cohort questionnaires), which have near-identical content.

In this section we have measures with a five-point response scale and various methods have been piloted to increase its comprehensibility, for example, smiley faces, visual analogue scales, and mechanical aids. Countries have decided on appropriate methods for their context, for example in Ethiopia, the smiley-faces will not be used, in India faces coloured light brown were chosen.

Trust and perception of service quality

There are several types of trust: within established relationships and social networks; trust extended to strangers (often based on expectations of behaviour or a sense of shared norms); trust in the institutions of governance (including fairness of rules, official procedures, and dispute resolution and resource allocation). Young Lives tries to assess different dimensions of trust using Likert-like scales. Questions were mainly taken from the World Bank social capital assessment tool (Grootaert et al. 2004) Trust and perceptions of service quality might shape confidence and subsequent behaviour with regard to choice and usage of the available services.

The following three sub scales have been created from statements made by children living in extreme poverty in various countries in the world, in conjunction with Martin Woodhead. The items on pride/shame and self-efficacy underwent psychometric validation as five-item scales (Leight, 2008) and were used in papers on youth resilience and psychosocial competencies (Boyden 2008; Dercon and Sanchez 2008). However, as the other sets of items have not been validated as scales, they will need to be analysed as single items.

Stigma and discrimination:

Qualitative work by UNICEF (1999) and the World Bank (2001) on voices of poor people around the world identified indicators of well being which are important to children. One of these indicators was the degree to which people treat children badly or look down on them. Children become particularly sensitive to issues of stigma and discrimination during middle and late childhood, as peers and social groups become increasingly important to them (Boyden et al. 2003). We have attempted to separate out the issue of perceived discrimination (i.e. 'how others treat me') from the issue of reduced self-esteem, or shame (i.e. 'how that makes me feel'). These two dimensions are likely to be highly correlated. The questions in this section have been developed in close cooperation with Martin Woodhead and are based on statements from children living in poverty that feels discriminated against.

Pride and shame:

Pride and shame are more ‘everyday’ words for the psychological concept of self-esteem. Contextualising the questions makes them easier for children to answer and also recognises that such feelings are likely to depend on the situation. Those who are able to help their families report a sense of pride and responsibility (Woodhead 1998, Punch 2004) whereas the poorest of the poor often report feelings of shame and low self-esteem, because of the stigmatisation and discrimination they experience, as well as their limited opportunities for change (Boyden et al. 2003). Collecting data on children’s levels of pride and shame at this stage will allow us to see how much these feelings facilitate or debilitate children’s opportunities and strategies for improving their situation in life.

Self-efficacy

Self-efficacy can be understood as ‘a child’s sense of agency or mastery’ or their sense of competence (Brewer 2003: 93) and corresponds to other psychological concepts in psychology: an internal locus of control; the opposite of helplessness. As well as the statements included in the Likert-scale response section, self-efficacy is also addressed through the ‘ladder of life satisfaction’ (see above). After asking children to indicate their current level of satisfaction with their life, fieldworkers then ask children to indicate whether they expect they will be able to increase their life satisfaction in the next four years. This time span was chosen to coincide with the next round of data collection.

Hopes for the future

The making of plans and aspirations seems to be common to children in many contexts, regardless of whether they are achievable or not (see for example the aspirations of South African girls in townships with low social mobility Kritzing, 2002, Brewer 2003). Two questions are included in Round 2, one allowing children to imagine their ideal job and the other assessing their more realistic expectations. Feedback from fieldworkers and country teams indicated that children had trouble understanding the difference between these two questions. Therefore, the question about expectations is omitted in Round 3, and children are simply asked whether, given their current situation, they expect to be able to get that kind of job. A question was added, asking children what skills they believe they would need to get that kind of job. This is intended to get the child’s perception of what might help them in the labour market. This can then be compared with the perceptions of caregivers and of policymakers.

Perceptions of wealth

The final concerns children’s perception of their family’s poverty, firstly in absolute terms and secondly in relation to others. This is included because it has been shown that it is children’s perceptions of relative poverty that lead to distress and low self-esteem (Boyden et al 2003).

References

- Boyden, J., Eyber, C., Feeny, T. and Scott, C. (2003) *Children and Poverty: Experiences and Perceptions from Belarus, Bolivia, India, Kenya and Sierra Leone*, Virginia: Christian Children's Fund
- Boyden, J. (2008). Children's Social Cognition and Development in the Context of Adversity in Ethiopia. Young Lives Global Challenges Symposium, 12-13 December 2008, Oxford University.
- Brewer, S.E. (2003) *Instrument for Assessing the Psychological Effects of Child Domestic Work*, London: Anti-Slavery International, August
- Bourai, V.A., Bahadur, S.R., Panwa, K.M., Mishra, K.M. (1997) Props for research *PLA Notes* 28: 91-92, London: IIED
- Camfield, L. and McGregor, A. (2005) Resilience and Well-Being in Developing Countries in *Handbook for Working with children and youth: Pathways to Resilience across Cultures and Contexts*.
- Cantril, H. (1965). *The pattern of human concern*. New Brunswick, New Jersey: Rutgers University Press
- Cummins, R.A., Lau, A. (2005). Personal Wellbeing Index –School Children (PWI-SC) (English) 3rd Edition.
- Dercon, S., Sanchez, A. (2008). Poverty, Malnutrition and its Psycho-social Impact on Children, Working Paper 39, Oxford: Young Lives.
- DeVellis, R. F. (2003). *Scale development: Theory and applications* (2nd ed. Vol. 26). Thousand Oaks, CA: Sage.
- Grootaret C, Narayan D, Jones VN, Woolcock M (2004) *Measuring Social Capital*. The World Bank. Washington DC, USA
- Leight, J. (2008). Validation of dependent variables: Validating measures of psychosocial outcomes. Unpublished document, available on request.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 150, 5-53.
- Masten, A.S. (2001) Ordinary Magic: Resilience Processes in Development, *American Psychologist* 56 (3): 227-238.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

Punch, S. (2004) 'Negotiating Autonomy: Children's use of time and Space in Rural Bolivia' 94-114 in Lewis, V., Kellett, M., Robinson, C., Fraser, S. and Ding, S. (Eds) *The Reality of Research with Children and Young People*, London: Sage.

Rossiter, J.R. (1977) 'Reliability of a Short Test Measuring Children's Attitudes towards TV Commercials' *The Journal of Consumer Research* 3(4): 179-184

Sa'di, I. (2001) 'An attitudes to school scale for primary school children' *Research in Education*, November. Available from:
http://www.findarticles.com/p/articles/mi_qa3765/is_200111/ai_n8987944

UNICEF (1999) *Voices of Children and Adolescents in Latin America and the Caribbean*. UNICEF, New York.

Veenhoven, R. (n.d.) *World Database of Happiness, Item bank*. Erasmus University Rotterdam,

Woodhead, M. (1998) *Childrens perspectives on their working lives: a participatory study in Bangladesh, Ethiopia, the Philippines, Guatemala, El Salvador and Nicaragua* Stockholm: Raedda Barnen

World Bank (2001). *World Development Report: attacking Poverty*. Oxford University Press, Oxford.

Section 3: School

On the basis of the 'school life expectancy' figures published by UNESCO (2010) , at age 15, the majority of children are still expected to be attending school in the YL countries, with the possible exception of Ethiopia, where the average number of years spent in school was estimated to be about 8 in 2007. In any of the countries many children may already have dropped-out of school, especially among the poorest households. Many children will be facing increasing demands on their time even if they are in school. Because this is a key issue for 15 year olds, a wider range of possible codes have been added to the 'reasons why left school' since Round 2.

When reasons for leaving school are poverty-related, many children leave school gradually over a period of time, or may have poor attendance even if they are enrolled in school. Therefore, this section will gather information on periods of absence from school in the previous 12 months, including the reasons for these absences. Lack of time to complete homework or study may also affect child achievement at school, so a question has been added asking children whether they ever fail to complete homework or preparation.

In recognition of the importance of learning achievement as well as enrolment, the 'Education For All' framework (UNESCO 2000) makes increasing the quality of education and the school environment a specific policy aim. An added section in Round 3 therefore aims to address the quality of the school environment. A few key

questions are asked about important school quality indicators. These will be complemented with a survey of schools, so only questions that need to be answered by the children themselves are included in this instrument. The questions include a short set of questions about school climate, from the second study on school achievement by UNESCO (2008) in Latin America.

Reference

UNESCO (2010) Social Indicators – Indicators on education. (accessed: 28.11.2010)
<http://unstats.un.org/unsd/demographic/products/socind/education.htm>

UNESCO (2000) Dakar Framework for Action, Education for All: Meeting Our Collective Commitments.(accessed: 28.11.2010)
http://www.unesco.org/education/efa/ed_for_all/dakfram_eng.shtml

UNESCO (2008). School climate is the variable with the strongest impact on achievement among Latin American students- Results of the Second Regional Comparative and Explanatory Study, SERCE (accessed 28.11.2010)
http://portal.unesco.org/geography/en/ev.php-URL_ID=9076&URL_DO=DO_TOPIC&URL_SECTION=201.html

Section 4: Health

Perceived health status

The global health question is a conversational way to open questions on health and most frequently used health status measures. It provides a valid, reliable, cost-effective tool of health assessment especially in multidisciplinary studies in which other forms of health information lack (Kaplan 2000). The self-rated health indicator is often described as the indicator of ‘true health’ as it can incorporate many different dimensions (mental, physical, emotional health and well-being).

The assessment of perceived health is useful in detecting groups with greater needs and identifying inequalities in health and use of health care facilities. It can provide valid directions for planning and targeting of health-promoting programs and interventions for adolescents and children. In children/adolescents, rating self-rated health status is also a very good predictor for health-promoting behaviours (Mechanic 2000) and mortality, morbidity and future health service use.

Younger people seem to take different aspects into consideration than old people when rating their health (for example physical, mental well being and other aspects such as socio-economic status, school performance, stress, social capital) and also seem to have a much more spontaneous assessment view of their general health (Erginoz, Mechanic, Manderbacka, Lunderbeck, Sweeting and others).

In Round 3, the response scale was changed to the much more common 5-item scale to allow a more detailed analysis and to improve comparability with other studies. 3-item rating of ‘same, better, worse’ are not used with children or adolescents but older

people who tend to compare themselves to age peers. Young people are less likely to compare themselves to other children. Especially, children with poor health status or chronic illnesses do not compare their health to people of same age so as not to feel worse (Smith et al. 2000, Kaplan et al. 1993, Idler et al. 1995, 97, 98, Idler 1999, Krause and Jay 1994, Sieving et al 2001, etc.). To allow comparison with Round 1 and 2 data 5-item scales can easily be transformed to 3 item scales for the analysis. There are just a few studies on self-rated health in adolescents and children particularly from low-income settings. The Young Lives study provides a unique opportunity to analyse associations between self-rated health status and a huge variety of social, economic, cultural and psychological factors.

Injury

Injuries are a major public health problem for adolescents in developed and developing countries. Injuries from accidents are more likely at this age than at any other age (WHO 2005) and they are a major cause of death and disability among young children (WHO 2005). Globally, injuries are among the ten leading causes of death and disease burden at ages 0–4, 5–14, and 15–29 years (Peden et al. 2002, Hyder et al 200). Each year, about 875,000 children under the age of 18 die from injuries and 10 to 30 million have their lives affected by injury. Road traffic accidents are a leading cause of death among boys in many countries and account for 5% of all Disability Adjusted Life Years lost among adolescents (WHO 1998). Many unintentional injuries lead to permanent disability and brain damage, depression, substance abuse, suicide attempts, and the adoption of health risk behaviours. Poor adolescents are more prone to injuries and are less likely to recover completely.

In the recently launched UNICEF/WHO World Report on child injury prevention, large global inequities in the frequency of injuries were identified. Children in Africa have the highest unintentional injury rates in the world at 53.1 per 100,000, followed by Southeast Asia where the rate is 49.0 per 100,000, compared with an average global rate of 38.8 per 100 000 children. Countries such as Australia, Sweden, the UK, and Canada have the lowest rates of child at around five per 100 000 children (Peden et al 2008, Hyder and Peden 2008).

As injuries are a major health risk for adolescents, a new, more comprehensive module on injuries was introduced in Round 3 compared to Round 2 of Young Lives. The model was adapted from the violence and injury model developed by the WHO Global School-based Student Health Survey (GSHS) (WHO 2004) (<http://www.who.int/chp/gshs/en/index.html>).

The data will allow us to identify risk factors and determinants for injuries. This information will be helpful for the development of country-specific policies and programmes aimed at injury prevention

Long-term health problems

These questions ask about physical functioning and common long-term health problems, which can affect children's education and work potential in short and long

term. Some of the questions are based on child utility measurements (Mark III health status classification system). Questions on hearing, vision and speech are set into the environmental context of the child, which make them less abstract and will help caregivers/children to answer. The focus is on long-term illnesses and health problems that could affect adolescents' abilities to work or attend school.

Meal frequency

The number of times a person eats in a day is often used as a proxy for the adequacy of child's macronutrient (calories and protein) intake. Meal frequency is a very culture-specific concept. In some cultures, it is common to eat three main meals per day, while in other cultures one primary meal is consumed. To take account for this cultural differences Young Lives asks for 'food eaten' at different times of the day and not after breakfast, lunch and dinner. Due to cultural differences, meal frequencies from the four Young Lives countries should not be compared with each other. A model with 7 pre-defined eating occasions developed by Food and Nutrition Technical Assistance was used in the household questionnaires and the child questionnaire for the older cohort to measure meal frequency (Swindale and Ohri-Vachaspati 1999).

Individual dietary diversity

Dietary diversity can be used as a proxy for the nutrient adequacy of the child, including probability of adequate micronutrient intake (FAO 2007). It is measured as the number of different food groups consumed over the last 24 hours inside and outside the household. The different food groups are based on a model developed by the Food and Agriculture Organisation (FAO) for the measurement of dietary diversity (FAO 2007). The food groups put emphasis on micronutrient intake. Specific iron and Vitamin A-rich food groups were included to enable assessment of intake of these micronutrients on population level. An individual dietary diversity score, as well as Vitamin A and Iron intake scores can be calculated based on the measurements.

To get a more complete picture of the quality and quantity of the nutrition of the Young Lives children, individual dietary diversity and meal frequency should always be used in combination.

Fast food consumption

Obesity rates are rising globally at an alarming rate. For several decades, it has been assumed that obesity in low-income countries might be a disease only of the higher socio-economic groups of the population. More recent studies, however, found an inverse or at least curvilinear association between socio-economic status and adult obesity in several low and middle-income countries. One of the main causes for rising obesity in developing countries is the shift from a traditional plant based diet to a modern, westernised diet with high amounts of sugar, fat and processed food. This phenomenon is often described as the nutritional transition (Popkin 2004) Obesity has long been recognised as a risk factor for a number of non-communicable diseases including cardiovascular disorder, dyslipidemia, non-insulin dependent diabetes

mellitus and some cancers. Obesity and its associated diseases threaten to overwhelm health-care systems of many low-income countries that are already strained by the burden of infectious diseases and HIV/AIDS. Obesity could also present a tremendous economic burden that includes costs for lost work productivity due to morbidity and preliminary mortality. Early prevention of the development of obesity in children and adolescents is important to keep the long-term health of a population. There is evidence that India, Vietnam and Peru have entered and are in different stages of the nutritional transition (Nguyen et al. 2007, Griffith et al. 2001, Uagy 2001). The questions assess the current habitual intake of fast foods by adolescents in low-income groups in the Young Lives country setting. This information will help to develop health-promotion strategies that could help to redirect the impacts of the nutritional transition in the country-specific settings (Popkin et al. 2000, 2001, 2006, Doak, Monterio)

Physical activity

Participating in adequate physical activity throughout the life span and maintaining normal weight are the most effective ways of preventing many chronic diseases, including cardiovascular disease, hypertension and diabetes. Participating in adequate physical activity also helps build and maintain healthy bones and muscles, control weight, reduce blood pressure, ensure a healthy blood profile, reduce fat, and promote psychological well-being. Roughly, 60% of the world's population is estimated to not get enough physical activity. Patterns of physical activity acquired during childhood and adolescence are more likely to be maintained throughout the life span, thus sedentary behaviour adopted at a young age is likely to persist. The suggested questions are based on International Physical Activity Questionnaire and WHO GSHS, both are extensively validated in developing country context.

References

FAO (2007) Guidelines for Measuring Household and Individual Dietary Diversity- version 3. Rome

Garnier D, Simondan KB, Benefice E (2005) Longitudinal estimates of puberty timing in Senegalese adolescent girls. *American Journal of Human Biology*, 17(6):718-73

Griffiths PL, Bentley ME. The nutrition transition is underway in India. *Journal of Nutrition* 2001 Oct;131(10): 2692-700.

Idler EL, Benyamini Y. (1997) Self-rated health and mortality: a review of twenty-seven community studies. *J Health Soc Behav.*;38(1):21-37.

Krause NM, Jay GM (1994) What do global self-rated health items measure? *Med Care*; 32(9):930-42

M Peden, K McGee and G Sharma, Editors, The  chart book: a graphical overview of the global burden of  (2002)

Lundberg O, Manderbacka K. (1996) Assessing reliability of a measure of self-rated health. *Scand J Soc Med*; 24(3):218-24

Manderbacka K, Lahelma E, Martikainen P (1998) Examining the continuity of self-rated health. *Int J Epidemiol*; 27(2):208-13

Nguyen MD, Beresford SAA, Drewnowski A. Trends in overweight by socio-economic status in Vietnam: 1992 to 2002. *Public Health Nutrition* 2007 Feb;10(2): 115-21.

Swindale A, Ohri-Vachaspati P. (1999) *Measuring Household Food Consumption: A Technical Guide*. FANTA. Washington

Uauy R, Albala C, Kain J. Obesity trends in Latin America: Transiting from under- to overweight. *Journal of Nutrition* 2001 Mar;131(3): 893s-9s.

Popkin BM, Gordon-Larsen P. The nutrition transition: worldwide obesity dynamics and their determinants. *Int J Obesity* 2004 Nov;28: S2-S9.

WHO. Diet, Physical Activity and Health: Report by the Secretariat. Fifty-fifth World Health Assembly, Provisional agenda item 13.11, 2002.

Pinhas-Hamiel O, Zeitler P. The Global Spread of Type 2 Diabetes Mellitus in Children and Adolescents. *The Journal of Pediatrics* 146 (5): 693-700, 2005.

Warburton DER, Nicol CW, Bredin SSD. Health benefits of physical activity: the evidence. *Canadian Medical Association Journal* 174 (6): 801-809, 2006.

WHO. Information Sheet on Physical Activity. Geneva, Switzerland, 2003. Available on-line at: http://www.who.int/dietphysicalactivity/media/en/gsf_pa.pdf

Section 5: Social networks, social skills and social support

The fact that adults' social capital should not be used as a proxy for children's social capital is only slowly being recognised (Jack and Gordon 1999, Morrow 1999, Morrow 2001, Runyan et al 1998, Harpham 2002). Previous research plays down children's 'agency' and overemphasises the influence of parents on children's lives. YL provides an opportunity to begin to explore the difference between children's social capital and caregivers' social capital and the role that each of them plays in the child's well-being. Qualitative work on UK children's social capital by Morrow has demonstrated that it is possible and meaningful to separate structural social capital (connectedness) from cognitive social capital (feeling supported/helped). Connectedness in YL is measured through asking about number of friends spoken to in the past week and group membership and support is measured by asking about availability of someone to help the child. Round 3 drops the generic question used in

Rounds 1 and 2, but still asks for the availability of someone to help in some specific instances in which a child may need help.

Children's social networks also provide a context for the development of social skills. 'Social skills' in this context refer to a person's 'ability to interact effectively with others and deal with various social situations and demands' (Brewer 2003). Skills such as these normally develop through interactions with parents, relatives and peers from early childhood onwards. Successful social interactions are important for daily life and successful living. There are serious consequences for people who fail to develop adequate social skills including low self-esteem, loneliness and lack of social support (Brewer 2003) since they may not know how to assert themselves, resolve conflict, or make friends. Some poor children living in isolated situations, for example through being excluded and stigmatised at school or through working alone as a domestic worker (Stegmann 2003) lack the opportunity to develop these skills, making their lives harder in the future. Conversely, those who develop good social skills may find that these facilitate routes out of poverty.

Questions in this section assess children's (self-reported) social skills. The majority are set in the context of school or work to give a specific situation for children to relate to and will only be asked if the individual child is at school and/or working. These questions have mostly been adapted from Brewer's (2003) recommended instrument for research with child domestic workers. She drew the questions from various psychological instruments for assessing social skills in North American and European contexts. However, they have not been validated cross-culturally and this precise selection and wording of questions has not been used before and therefore has been carefully piloted analysed for reliability. Through comparison with qualitative work with individual children and analysis of their correlations with future social integration, it may also be possible to assess the validity of their scores on these questions and potentially develop a social skills scale for use in other developing world contexts.

The Round 3 questionnaire aims to extend the information collected in previous rounds on structural social capital and on political capital. By the age of 15, children may have their own links to social organizations and networks. To this end, questions from the Round 2 caregiver questionnaire about membership of groups, duration of membership and whether the child has an important role in the group, are addressed to the child here. Even though they are ineligible to vote, children may nonetheless be politically informed or active. A series of questions are therefore added in Peru and India to assess the extent of their political activity. Some questions are not administered in Vietnam and Ethiopia due to non-relevance or sensitivity of the questions in the country context that was discovered in piloting.

Finally, as internet use has become widespread around the world, and much social interaction is based on electronic communication, we have added two questions on access to internet and frequency of use.

References

- Brewer, S.E. (2003) *Instrument for Assessing the Psychological Effects of Child Domestic Work*, London: Anti-Slavery International, August
- Harpham T, Grant E and Thomas E (2002) Measuring social capital in health surveys. *Health Planning and Policy* 17(1): 106-111.
- Jack G, and Jordan B (1999) Social capital and child welfare. *Child and Society* 13: 242-256.
- Morrow V (1999) Conceptualising social capital in relation to the well-being of children and young people: a critical review. *Sociological Review* 47 (4): 744-765.
- Morrow V (2001) Using qualitative methods to elicit young people's perspectives on their environments: some ideas for community health initiatives. *Health Education Research* 16 (3): 255-268.
- Runyan D, Hunter W, Socolar R, and Amaya-Jackson L (1998) Children who prosper in unfavourable environments: the relationship to social capital. *Pediatrics* 101: 12-18.
- Stegmann, K. (2003). *Child Health and the Worst Forms of Child Labour: The Psychological Impact of Work on the Working Child*, London: Anti-Slavery International

Section 6: Migration

More people migrate internationally now than at any other point in human history (Gramagena 2008). Internal migration and intra-regional migration are even more important forms of migration for poor people. Between survey Rounds 1 and 2, nearly 7 per cent of Young Lives households left their original Young Lives communities. The highest rates of migration are documented for the younger cohort in Peru, at nearly 14 per cent; while the older cohort is also relatively high at over 9 per cent. Migration is ranked by UNESCO (2010) as one of the key challenges facing the modern world. We can expect the lives and trajectories of many Young Lives children to be impacted by migration, either their own, or that of a household member.

Migration can have both positive and negative effects. Migration has been highlighted as a possible contributor to development (e.g. through material and 'social' remittances) and to the realization of the Millennium Development Goals (MDGs), particularly those targeting poverty reduction, gender equality, health, education and the improvement of the lives of so-called 'slum dwellers' (IOM 2005). On the other hand, migrants, and in particular children, may be negatively affected. For example, in many cases, migrants lack access to services such as health and education, face stigma and discrimination, or are vulnerable to falling into poverty.

Migration is a major policy concern in developed and developing countries. Governments spend considerable sums on the maintenance of their borders and the careful ‘selection’ of entrants (Castles 2003). Both between and often within countries, bodies aimed at ‘controlling’ or reducing migratory flows are matched at the legal level by legislation aimed at the repression of unrestricted movement. These policies to restrict population movement can have negative effects on the well-being of poor people (Kempadoo 2005). Some research has begun to focus on how policies to restrict migration impact on children. Studies such as those of Hashim and Whitehead at the Migration DRC in Sussex have shown migrant children to be social and economic actors in their own right, whose freedom of movement and future ‘development’ are increasingly obstructed by the exercise of poorly informed policies that aim at keeping them at home (Howard forthcoming).

Migration is also hypothesised to be closely connected to climate change. However, the literature on this topic remains unclear. Some authors have published sensationalist figures citing hundreds of millions of ‘environmental refugees’ (Myers and Kent 1995). Others have questioned such predictions and warned against the use of such sensational language (Black 2001). All, however, have warned of the potentially profound impact global climate change might have on migration patterns – particularly in the developing world (Castles 2002). In fact, Peru has been recognized as one of the countries most vulnerable to climate change. There is a wealth of evidence indicating that the environment young people will experience in their lifetimes will be profoundly different from that of their parents (IPCC 2007). Given the inevitability of climate change (Wigley 2005), the likelihood that poorer communities will be most vulnerable to its effects, and the hypothesised link to migration, it is essential that Young Lives generate relevant child-focused data.

Furthermore, given the sociological importance of movement and of notions of home and belonging to understanding the experiences and trajectories of children and young people growing up in poverty, it is essential that Young Lives adopt a stronger migration lens in Round 3 in order to analyse both the determinants and the effects of migration.

Therefore, a short migration module has been added to the older child questionnaire in Round 3. All children are asked about their intentions to migrate. Those who have moved to a new community are asked about their motivations for moving, in terms of both “push” and “pull” factors, and about any arrangements made for their movement.

Reference

Black L. (2001). Environmental refugees: myth or reality?’ *New Issues in Refugee Research: Working Paper No. 34*. United Nations High Commissioner for Refugees

Castles S., (2002). Environmental change and forced migration: making sense of the debate. *New Issues in Refugee Research: Working Paper No. 70*. United Nations High Commissioner for Refugees

Castles, S. (2003) *The age of migration*, Guilford Press, New York

Gramagena, M. (2008), 'Human Trafficking: Policy Needs and Political Responses,' *stair* 4:1 (2008): 63-75.

Howard, N.P (forthcoming), 'Independent Child Migration in Southern Benin: An Ethnographic Challenge to the "Pathological" Paradigm', IDS Working Paper Series, IDS, Sussex. This paper is a version of the thesis submitted for the Mphil.

IOM (2005) *The Millenium Development Goals and Migration*, IOM Migration Research Series, no. 20,
http://www.iom.int/jahia/webdav/site/myjahiasite/shared/shared/mainsite/published_docs/serial_publications/mrs20.pdf

Kempadoo, K. 'From Moral Panic to Global Justice: Changing Perspectives on Trafficking,' in K. Kempadoo, J. Sanghera, and B. Pattanaik, *Trafficking and Prostitution Reconsidered: New Perspectives on Migration, Sex Work and Human Rights* (Boulder, CO: Paradigm, 2005)

Myers N, Kent J. (1995). *Environmental exodus: An emergent crisis in the global arena*. Washington D.C.: Climate Institute.

PCC (Intergovernmental Panel on Climate Change), 2007a. Available:
<http://www.ipcc.ch/>

UNESCO (2010). Migration website. http://portal.unesco.org/shs/en/ev.php-URL_ID=4493&URL_DO=DO_TOPIC&URL_SECTION=201.html://www.unesco.org/new/index.php?id=19165&L=0 (accessed 01.10.2010)

Wigley T., (2005). *The Climate Change Commitment*. *Science*, 307(5716), pp. 1766-1769

Section 7: Household issues

This section attempts to address the degree to which children perceive they are able to negotiate with their parents and have some say in decisions that matter to them. The questions about asset ownership mirror the questions to the caregiver in R2. They aim to assess the degree to which the child is already given responsibility and power within the household, and how this affects outcomes for them. The section was considerably longer before piloting, but has been cut in the interests of keeping the questionnaires manageable. We also shifted some sensitive questions to the new SAQ.

References

Kakama, P.T. (2002) *Deprivation of Basic Needs as a Motivator for Criminal Activities among Children* Cluster C Report, Kampala: Save the Children (UK), May

Punch, S. (2004) 'Negotiating Autonomy: Children's use of time and Space in Rural Bolivia' 94-114 in Lewis, V., Kellett, M., Robinson, C., Fraser, S. and Ding, S. (Eds) *The Reality of Research with Children and Young People*, London: Sage.

Reynolds, P. (1991) *Dance Civet Cat: Child Labour in the Zambezi Valley*. Athens, OH: Ohio University Press.

Section 8: Children

We collected some data on potential children of Young Lives children in Vietnam and Ethiopia. We asked for birth weight and whether the child was breastfed and for how long.

Low-birth weight due to intra-uterine growth restriction has been shown to have long-term consequences on cognitive development, behavioural development and health outcomes (Walker et al. 2007). It is known to be a powerful predictor (and confounder) of infant growth, morbidity and mental development (Aylward et al 1989) and infants born with low birth weight (less than 2500g) begin life immediately disadvantaged.

The most reliable sources of birth weight data are hospital, clinic or maternity home documents and, where possible, these will be used as the data source. It is likely that in many sites, caretakers will not have these records or they may not exist; in such cases recalled data will have to be substituted. Studies have found that mothers in developing countries whose babies were born in hospital, can recall birth weights accurately but that these need to be obtained at as early an age as possible (Gofin et al. 2000).

Breastfeeding is widely acknowledged as the optimal nutrition for the newborn. It has been shown to promote health, growth, and development, protect from gastrointestinal infection and respiratory diseases and support maternal health (Kramer and Kakuma 2004). The World Health Organization (WHO 2002) recommends the practice of exclusive breastfeeding for 6 months and thereafter introduction of complimentary foods. Despite the widespread recognition of the benefits of exclusive breastfeeding, the prevalence is still low and many low and middle-income countries (Lauer et al 2006; Bhutta et al. 2008). We enquire whether the child was breastfed and when first complementary foods were fed. This data will help us to determine the length of exclusive breastfeeding.

Reference

Aylward GP, Pfeiffer SI, Wright A, Verhulst SJ. Outcome studies of low birth weight infants published in the last decade: a meta-analysis. *Pediatrics*. 1989;115:515-520

Bhutta ZA, Ahmed T, Black RE, et al, for the Maternal and Child Undernutrition Study Group. What works? Interventions for maternal and child undernutrition and survival. *Lancet* 2008; published online Jan 17. DOI: 10.16/S0140-6736(07)61693-6

Gofin R, Neumark YD, Adler B (2000). Birthweight recall by mothers of Israeli children. *Public Health* 2000; 114:161-163

Lauer JA, Betran AP, Barros AJ, de Onis M. Deaths and years of life lost due to suboptimal breast-feeding among children in the developing world: a global ecological risk assessment. *Public Health Nutr* 2006; **9**: 673–85.

Kramer MS, Kakuma R. (2004). The optimal duration of exclusive breastfeeding: a systematic review. *Advances in Experimental Medicine and Biology*, 554:63-77.

WHO (2002). World Health Organization. Infant and young child nutrition: global strategy on infant and young child feeding. Geneva; 2002. (Fifty-fifth World Health Assembly, A55/15)

Walker SP, Wachs TD, Gardner JM, et al. (2007). Child development: risk factors for adverse outcomes in developing countries. *Lancet*; 369: 145–57

Section 9: Risk aversion and time discounting games

Research shows that one can even elicit risk preferences from very young children (Levin & Hart, 2003), we feel the inclusion of such questions will be a valid and informative exercise for Round 3. The data generated from the questions will be fairly unique as the majority of risk studies focus on either adults in developing countries or children in the developed world. Aside from its inherent research value, we think the exercise will create a fun diversion from long survey these children must answer.

After some discussion concerning the various methods of assessing risk-preference such as the Choose Lottery and the Accept/Reject lottery, we have decided that the original method introduced by Binswanger (1980) best combines simplicity of use with enough structure to allow researchers some room in categorizing risk preference. We would prefer to perform the gambles with real payoffs, but recognise this might not be economically feasible for the programme. Where it is not possible or inappropriate to use real payoffs, we use chips.

Offering a variety of gambles to children can be ethically tricky. Despite the research possibilities (Kahneman & Tversky, 1979; Harbaugh, Krause, & Vesterlund, 2002) that data on risk preference in the domain of losses could generate, we feel that games that could result in real losses for the children (even if these losses are of sums gained from previous games) are not appropriate. The game should therefore be restricted to positive outcomes.

The structure of the risk questionnaire is country-specific. The amounts presented in the gambles are comparable, perhaps by setting them equal to a given fraction of the daily wage in each country. There are also cultural factors that could be pertinent, such as familiarity with certain games. The Binswanger method is flexible enough to be presented a number of ways (flipping a coin, hiding the payoffs in different hands behind the back, etc).

The inclusion of the question on time-discounting is more straightforward. It is included as a question without a real payoff, with a slight modification to prevent confounding time and risk preferences. The principal investigator of the Peruvian

team noted that the main flaw with this type of discount rate question is that it mixes feelings about time preferences and risk-aversion. The subject is faced with a promise of consumption later, not guaranteed consumption, and so he/she must judge it with some uncertainty, possibly over-biasing the decision in favour of consumption now. Both (Coller & Williams, 1999) and (Harrison, Lau, & Williams, 2002) used a method of "front-end delaying" to eliminate the credibility problem. Instead of asking "how much money would you accept today?" the question is rephrased so the money would be delivered the next day. The researcher should be as trustworthy in the near future as the far future, eliminating the uncertainty bias.

References:

- Binswanger, H. P. (1980). Attitudes toward risk: experimental measurement in rural India. *American Journal of Agricultural Economics* , 62 (3), 395-407.
- Coller, M., & Williams, M. B. (1999). Eliciting Individual Discount Rates. *Experimental Economics* , 2, 107-127.
- Harbaugh, W. T., Krause, K., & Vesterlund, L. (2002). Risk Attitudes of Children and Adults: Choices Over Small and Large Probability Gains and Losses. *Experimental Economics* , 5, 53-84.
- Harrison, G. W., Lau, M. I., & Williams, M. B. (2002). Estimating individual discount rates in Denmark: a field experiment. *American Economic Review* , 92 (5), 1606-1617.
- Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica* , 47 (2), 263-91.
- Levin, I. P., & Hart, S. S. (2003). Risk Preferences in Young Children: Early Evidence of Individual Differences in Reaction to Potential Gains and Losses. *Journal of Behavioral Decision Making* , 16, 397-413.

Section 10: Pets (in Peru only)

Attachment to pets can play a role in children socio-emotional development (Siegel 1995, Vidovic et al. 1999) health status and well-being (Nicholas et al. 2005; Wells 2009). Most studies focus on high-income country settings and there are very few studies that explore the relationship between children and pets in low-income country settings.

References:

- McNicholas J., Gilbey A., Rennie A., Ahmedzai S., Dono J-A. & Ormerod E. (2005) Pet ownership and human health: a brief review of evidence and issues. *British Medical Journal* 331, 1252-1254

Robinson I., Friedmann E. (1995) The role of pets in enhancing human well-being: physiological effects. In *The Waltham Book of Human-Animal Interaction: Benefits and Responsibilities of Pet Ownership*. Ed Robinson I. . Oxford, Elsevier Science. pp 33-53

Siegel, J. M. 1995. Pet ownership and the importance of pets among adolescents. *Anthrozoös* 8: 217–223

Vidovic, V. V., Stetic, V. V. and Bratko, D. 1999. Pet ownership, type of pet and socio-emotional development of school children. *Anthrozoös* 12: 211–217

Wells, D. L. (2009). The effects of animals on human health and well-being. *Journal of Social Issues*, 65, 523–543

JUSTIFICATION OF THE SELF-ADMINISTERED QUESTIONNAIRE, 15-YEAR-OLD COHORT

The purpose of this new research tool is to assess behavioural risk factors and protective factors that can have direct or indirect effects on young people's health and well-being as well as the long-term consequences of these effects on their opportunities for escaping poverty. The self-administered questionnaire consists of approximately 20 questions (there are some differences in this number to allow for country-specific questions). It will allow Young Lives to collect data on psychological well-being, experience of violence, intra-household issues, tobacco-and alcohol consumption, and sexual/reproductive health.

These topics are all highly relevant for adolescents in the four Young Lives study countries. However, these topics can be very sensitive and often stigmatising issues for young people. To increase adolescents' comfort answering sensitive questions a self-administered questionnaire was developed.

A self-administered questionnaire will help us to:

- Reduce under-reporting and non-response
- Reduce social desirability bias and increase likelihood of candid reporting which is unlikely in face-to-face interview
- Reduce interviewer bias

Many of the questions used in the self-administered questionnaire are adapted from the Global School-based Student Health Survey (GSSHS), a school-based surveillance survey on adolescents risk behaviours (WHO 2010). For more information: <http://www.who.int/chp/gshs/en/>.

Topics covered:

Section 1: Parental issues

With these questions we want to find out more about adolescents' home environment and how supported they feel by their parents. We also try to assess adolescents' 'bargaining power' within the household. Moreover, the model aims to assess potential and perceived gender differences within the household. It has been suggested that girls have more domestic responsibilities than boys, which can impinge strongly on girls' education (Glick and Sahn 2000, Fuwa et al. 2006). In Round 2 this model was part of the Older Cohort interviewer-administered questionnaire. However, as the questions can be sensitive for adolescents we decided to transfer the model to the self-administered questionnaire.

Section 2: Violence

Violence is a major public health concern for adolescents. This is especially true for adolescents who growing up in poverty that they are prone to violence. Violent attacks can have long-term effects on adolescents' psychological and physiological well-being (including depression, disabilities, behavioural problems, alcohol

problems). The overall aim of this section is to determine the overall magnitude of experiences of violence and violent behaviour of adolescents. In analyses, potential determinates of violent behaviour can be determined.

Main Outcome Measures:

1. Experience of physical attacks

Reason for questions:

- To establish which adolescents are particularly prone to becoming a victim of physical attacks (rural urban, economic status)
- To enable the targeting of violence prevention programmes

2. Carrying a weapon for protection

Weapon carrying is a well-developed measure of violent behaviour (Krug et al. 2002), Callahan and Rivara 1992). Moreover, carrying a weapon is a strong predictor of violence.

- Reason for questions:

- To establish which adolescents are particularly prone to violent behaviour (rural urban, economic status)
- To establish picture of living environments of adolescents
- To enable targeting of violence prevention programmes

3. Bullying

A 9-item, standardised ‘Social and Health Assessment Peer Victimization Scale’ (Ruchkin, Schwab-Stone, and Vermeiren, 2004), used in research with vulnerable children in Cape Town (Cluver 2009), was employed. This scale is adapted from the Multidimensional Peer Victimization Scale, and showed $\alpha=.82$ in a US validation study (Mynard and Joseph, 2000). Items included are being called names, being hit or threatened and having possessions broken or stolen. This measure generated a total global score of exposure to bullying. The bullying model has been extensively used in Sub-Saharan Africa context. Victims of bullying have increased stress and a reduced ability to concentrate and are at increased risk for substance abuse, aggressive behaviour, and suicide attempts.

Section 3: Tobacco consumption

Tobacco use is a leading cause for morbidity and mortality worldwide. Most people start using tobacco products prior to the age of 18 and keep the habit throughout life. There are limited data on the prevalence of and factors associated with smoking among adolescents in developing countries. There are legal regulations to reduce/prevent smoking and other forms of tobacco use in all four Young Lives study countries. With regards to poverty, tobacco not only impoverishes those who use it, it puts an enormous financial burden on countries. The costs of tobacco use at the national level encompass increased health-care costs, lost productivity due to illness and early death, foreign exchange losses, and environmental damage (WHO 2004a). For the poor, daily spending on tobacco represents a daily drain on family resources. Yet in many countries it is precisely the poor who use tobacco the most. Tobacco use (even when considering the employment that it generates and which is highly overestimated according to WHO) contributes to widening the gap even further between rich and poor.

Main Outcome Measures:

1. Smoking behaviours of parents/guardians and peers

Smoking at home adds the burden of secondary exposure of other persons and provides a bad role model. Children whose parents smoke are much more likely to smoke themselves. Furthermore, possible peer effects on adolescents smoking behaviour can be assessed based on data (Powell et al. 2005).

2. Age of smoking initiation

Age of smoking initiation is decreasing globally. Early smoking is linked to increased risk of diseases in later life. Early smoking is linked to an increased number of cigarettes smoked in adult life (Tailoi and Wymder 1991).

- to identify children who are particularly at risk for early smoking (rural/urban, socioeconomic status, ethnic group)
- to enable targeting of policies and programmes

3. Frequency of smoking cigarettes/use of other forms of tobacco

To establish adolescents smoking behaviour and patterns.

Section 4: Alcohol

Alcohol consumption is strongly related to unintentional injuries and results in disabilities, risky sexual behaviour. It is also linked to the psychological well-being of adolescents in developing countries (WHO 2004b). Moreover, there are many long-term effects of alcohol use. Alcohol use can also contribute to social and economic problems such as family disruption, violence, dependence, loss of work productivity and financial resources. In the context of unemployment and hopelessness, alcohol is often seen as the “easy way out”. The use of alcohol and its patterns starts usually during adolescence.

Main Outcome Measures:

- 1. Frequency and amount of alcohol consumption*
- 2. Adverse outcomes of alcohol consumption*

It will be possible to link alcohol consumption patterns to other indicators and to identify predictors for consumption and determinants of risky behaviour.

Section 5: Sexual health

Adolescents growing up in poverty often have limited to no access to sexual and reproductive health services and are highly vulnerable to sexual rights violations, unwanted, early pregnancies and contraction of sexually transmitted diseases including HIV/AIDS (De Francisco et al 2007). Young Lives assesses sexual health knowledge and access to sexual health services. Initially, we aimed to also assess sexual health behaviours, however, these questions caused huge discomfort in both the adolescents and the field teams during the piloting of the questionnaires. Consequently we removed these questions. For this section, we followed the recommendation from Lucie Cluver and her research group, who works on sexual health among adolescents (mainly) in South Africa.

We realise that sexuality includes not just sexual intercourse but as this questionnaire aims to identify potential risk factors and due to the extreme time restrictions for the administration we do not enquire about any emotional/romantic relationships or non-intercourse sexual experiences.

Based on literature review we do not expect that a large number of adolescents have actually had sexual intercourse, especially in India and Vietnam. Nevertheless, 15-year-olds will have started sexual maturation and therefore, need to be informed and educated about sexual matters and contraception.

Knowledge

Knowledge of methods of contraception and ways of safe sex is essential for adolescents' ability to make informed choices about their sexuality in a positive and responsible way. Knowledge about contraception is often incomplete and/or incorrect (De Francisco 2007).

Aim: To assess adolescents' knowledge levels and to link these with socio-economic, education, gender, area of residence characteristics.

Access to contraception/information

Family planning services are often only available to married women or not used by adolescents because of embarrassment, poor reception by staff, cultural and social perceptions around premarital sex, costs, concerns about side effects of contraception. Especially female adolescents often do not have access to contraception/protection (*ibid*).

There is evidence that boys and girls look to very different sources for contraception and sexual information (possibility of interventions with gendered sexual messages). Even when adolescents are not sexual initiated yet, information at an early point may support them in making safe choices.

Aim: To establish characteristics of adolescents who might not have sufficient access to family planning and contraception and to identify key sources of contraception.

Section 6: Mental health

Depression, anxiety and mood disorders are common mental health problems of adolescents in developing countries and are increasingly recognised as an important public health problem (for example recently released mental health policy for children and women in Vietnam, case studies from Ethiopia and India). Mental health problems influence the risk for communicable and non-communicable diseases and injuries, becoming a victim of abuse and violence, alcohol and drug use, and can also affect one's work productivity, educational outcomes, social networks and nutrition and health status.

In the self-administered questionnaire, we consider and accordingly assess emotional well-being as an important element of mental health using the emotional symptoms scale from the Strength and Difficulties Questionnaire. This questionnaire has been used extensively in the international context. Based on the five questions, a total score

for emotional well-being can be calculated. International cut-off points can be used defined to classify 'normal', 'borderline' and 'abnormal'.

The psychometric properties of the questionnaire have been evaluated in different studies. The results show that the validity of the questionnaire (criterion as well as construct validity) and the reliability (internal consistency test-re-test and inter-rater reliability) are acceptable (see for example Goodman 1999; 2001). For more detailed information: www.sdqinfo.com.

References and literature consulted:

Self-completed Questionnaire design, administration, ethical considerations

Plummer, Mary L., Wight, Daniel ; Ross, David A. , Balira, Rebecca ; Anemona, Alessandra ; Todd, Jim; Salamba, Zachayo ; Obasi, Angela I. N. ; Grosskurth, Heiner ; Changalunga, John ; Hayes, Richard J. (2004) Asking semi-literate adolescents about sexual behaviour: the validity of assisted self-completion questionnaire (ASCQ) data in rural Tanzania. *Tropical Medicine & International Health*. 9(6):737-754

M L Plummer, D A Ross, D Wight, J Changalucha, G Mshana, J Wamoyi, J Todd, A (2004). Tanzania using five methods sexual behaviour data collected in rural northern "A bit more truthful": the validity of adolescent Sex. *Transm. Inf.* 2004;80;ii49-ii56

Scott, J. (1997). Children as respondents: Methods for improving data quality. In: L. Lyberg (ed.), *Survey Measurements and Process Quality*. New York: Wiley.

Karen E.A. Burns, MD MSc, Mark Duffett, BScPharm, Michelle E. Kho, PT MSc, Maureen O. Meade, MD MSc, Neill K.J. Adhikari, MDCM MSc, Tasnim Sinuff, MD PhD, Deborah J. Cook, MD MSc for the ACCADEMY Group (2008) A guide for the design and conduct of self-administered surveys of clinicians *Can. Med. Assoc. J.*, p. 179: 245 - 252.

Durant L.E, Carey M.P (2000) Self-Administered Questionnaires versus Face-to-Face Interviews in Assessing Sexual Behavior in Young Women. *Archives of Sexual Behavior*, Volume 29, Number 4

Nederhof A (1984) Methods of coping with social desirability bias: A review *European Journal of Social Psychology* Volume 15 Issue 3, p. 263 - 280

Wai-Ching Leung (2001) How to design a questionnaire. *BMJ* Volume 9, p187-189

Liu H and Detels R (1999) An Approach to Improve Validity of Responses in a Sexual Behavior Study in a Rural Area of China *AIDS and Behavior*, Vol. 3, No. 3

Barbara S. Mensch, Paul C. Hewett, Richard Gregory, and Stephane Helleringer (2007) Sexual behavior and STI/HIV status among adolescents in rural Malawi: An evaluation of the effect of interview mode on reporting.

Stanley Presser, Jennifer M. Rothgeb, Mick P. Couper, Judith T. Lessler, Elizabeth Martin, Jean Martin, Eleanor Singer Contributor Stanley Presser, Jennifer M. Rothgeb, Mick P. Couper (2004) *Methods for Testing and Evaluating Survey Questionnaires*

Peter D. Watson, Simon J. Denny, Vivienne Adair, Shanthi N. Ameratunga, Terryann C. Clark, Sue M. Crengle, Robyn S. Dixon, Metua Fa'asisila, Sally N. Merry, Elizabeth M. Robinson, Andrew A. Sporle (2001) *Adolescents' perceptions of a health survey using multimedia computer-assisted self-administered interview*

Schenk K, Williamson J (2005) *Ethical Approaches to Gathering Information from Children and Adolescents in International Settings: Guidelines and Resources* Washington, DC: Population Council

Review of self-completed questionnaire from other large-scale longitudinal or cross-sectional studies:

- Birth to Twenty Study
<http://web.wits.ac.za/Academic/Health/Research/BirthTo20/Research/Questionnaire.htm>
- British Household Panel survey (<http://www.iser.essex.ac.uk/ulsc/bhps/doc/>)
WHO Global School Based Health Survey
(<http://www.who.int/chp/gshs/en/index.html>)
- British Millennium Cohort study
<http://www.cls.ioe.ac.uk/studies.asp?section=0001000200010016>

Survey instrument data bases consulted:

Chap Instrument Scales, available: <http://www.caps.ucsf.edu/tools/surveys/>

CHIPTS_ Instrument Data Bank.
http://chipts.ucla.edu/assessment/IB/Main_Pages/category2.asp

Parental issues

Glick P, Sahn DE (2000) Schooling of girls and boys in a West African country: the effects of parental education, income, and household structure. *Econ Educ Rev* 19(1):63–87

Fuwa, Nobuhiko; Seiro Ito; Kensuke Kubo; Takashi Kurosaki; and Yasuyuki Sawada. (2006). "Introduction to a Study of Intrahousehold Resource Allocation and Gender Discrimination in Rural Andhra Pradesh, India." *Developing Economies* 44, no. 4

Quisumbing, Agnes, and John Maluccio (2000). "Intrahousehold Allocation and Gender Relations: New Empirical Evidence from Four Developing Countries." *Sachs, McArthur, Schmidt-Traub, Kruk, Bahadur, Faye, and McCord* 237 tries." FCND Discussion Paper 84. Washington: International Food Policy Research Institute

Violence

Cluver L, Orkin M. (2009) Cumulative risk and AIDS–orphanhood: Interactions of stigma, bullying and poverty on child mental health in South Africa. *Social Science and Medicine*

Mynard M, Joseph S (2000), Development of the multidimensional peer-victimization scale, *Aggressive Behavior*, pp. 169–178

Pickett W, Craig W, Harel Y, Cunningham J, Simpson K, Molco M, Mazur j, Dostaker S, Overpeck MD, candaee E (2005) Cross-national study of fighting and weapon carrying as determinats of adolescent injury. *Pediatrics* 116.

Ruchkin, V., Schwab-Stone, M., & Vermeiren, R. (2004). Social and health assessment (SAHA): Psychometric development summary. New Haven: Yale University.

WHO and UNICEF (2005) Child and adolescent injury prevention: a global call to action. Geneva:

WHO (2005) Global Estimates of Health Consequences due to Violence against Children. Background paper to the UN Secretary-General's Study on Violence against Children.

Krug E, Mercy J, Dahlberg L, Zwi (2002) The world report on violence and health *Lancet*, 360

Callahan CM, Rivara FP. Urban high school youth and handguns. *JAMA* 1992;267:3038–3042.

Saltzman LE, Mercy JA, O'Carroll PW, Rosenberg ML, Rhodes PH. Weapon involvement and injury outcomes in family and intimate assaults. *JAMA* 1992;267:3043–3047.

Smith-Khur E, Iacha R, Scheidt P, Overpeck M, Gabhainn M, Picket W, Harel Y (2004) A Cross-national Study of Violence-Related Behaviors in Adolescents ARCH PEDIATR ADOLESC MED

WHO. World Report on Violence and Health. 2002. chapter on youth violence.

Tobacco

Tailoi E, Wynder EL (1991). Effect of the age at which smoking begins on frequency of smoking in adulthood. *N Engl J Med.*;325:968–969

WHO. World No Tobacco Day, 2006 Brochure: Tobacco: deadly in any form or disguise. Geneva, Switzerland, 2006. Available on-line at:
http://www.who.int/tobacco/communications/events/wntd/2006/Report_v8_4May06.pdf

WHO. The Tobacco Atlas. Geneva, Switzerland, 2002. Available on-line at:
http://www.who.int/tobacco/resources/publications/tobacco_atlas/en/index.html

Breslau N: Daily cigarette consumption in early adulthood: age of smoking initiation and duration of smoking. *Drug Alcohol Depend* 1993, 33:287-291.

Ellickson PL, Tucker JS, Klein DJ: High-risk behaviors associated with early smoking: results from a 5-year follow-up. *J Adolesc Health* 2001, 28:465-473

Global Tobacco Surveillance System Collaborating Group. Differences in worldwide tobacco use by gender: findings from the Global Youth Tobacco Survey *J Sch Health* 2003, 73:207-215

Powell L, Tauras J, Ross H (2005) The importance of peer effects, cigarette prices and tobacco control policies for youth smoking behavior *Journal of Health Economics* 24;3

Chadda RK, Sengupta SN (2002) Tobacco use by Indian adolescents. *Tobacco Induced Diseases* Vol. 1, No. 2: 111–119

WHO (2004a). Tobacco increases the poverty of countries. Geneva

Gajalakshmi V, Asma S, Warren CW (2004) Tobacco survey among youth in South India. *Asian Pac J Cancer Prev.* 2004 Jul-Sep;5(3):273-8.

Zavaleta Martínez-Vargas A (2002) GLOBAL YOUTH TOBACCO SURVEY IN HUANCAYO, LIMA, TRUJILLO AND TARAPOTO, PERU. FINAL REPORT CEDRO, Peru

Sexual health

Macro International Inc. 2007. Trends in Demographic and Reproductive Health Indicators in Ethiopia. Calverton, Maryland, USA: Macro International Inc.

International Institute for Population Sciences (IIPS) and Macro International. 2007. National Family Health Survey (NFHS-3), 2005–06: India: Volume I. Mumbai: IIPS.

Macro International Inc. Peru: DHS, 2004-2008 - Final Report Continuous (2004-2006) Calverton, Maryland, USA: Macro International Inc.

Macro International Inc 2006. Vietnam: AIS, 2005 - Final Report. Calverton, Maryland, USA: Macro International Inc.

Champion H, Long Foley K, DuRant RH, Hensberry R, Altman D, Wolfson M (2004) Adolescent Sexual Victimization, Use of Alcohol and Other Substances, and Other Health Risk Behaviors *JOURNAL OF ADOLESCENT HEALTH* ;35:321–328

De Francisco A, Dixon-Mueller R, d'Arcangues C (2007) Research Issues in Sexual and Reproductive Health for Low- and Middle-Income Countries. Global Forum for Health Research and World Health Organization, Geneva

Cleland J, Ingham R, Stone N (2006) Asking young people about sexual and reproductive behaviours: Illustrative Core Instruments. HRP UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction

Glazier A, Gulmezoglu MA, Schmid GP, Moreno CG, van Look P. (2006). Sexual and reproductive health: a matter of life and death *Lancet* 2006; 368; 1595-607

George C Patton, Russel Viner (2007) Pubertal Transitions in health *Lancet*; 369; 1130-39

Kleinert S (2007). Adolescent Health: an opportunity not to be missed *Lancet* 2007, vol 369. Comment

Blanc AK & Way AA (1998) Sexual behaviour and contraceptive knowledge and use among adolescents in developing countries. *Studies in Family Planning* 29, 106–116.

Bleek W (1987) Lying informants: a fieldwork experience from Ghana. *Population and Development Review* 13, 314–322.

Catania JA, McDermott LJ & Pollack LM (1986) Questionnaire response bias and face-to-face interview sample bias in sexuality research. *Journal of Sex Research* 22, 52–72.

Blum, R., and K. Mmari. 2004. Risk and Protective Factors Affecting Adolescent Reproductive Health in Developing Countries. An Analysis of the World's Literature 1990–2004. Summary. Geneva: World Health Organization.

Catania JA, Gibson DR, Chitwood DD & Coates TJ (1990) Methodological problems in AIDS behavioral research: influences on measurement error and participation bias in studies of sexual behaviour. *Psychological Bulletin* 108, 339–362.

Copas AJ, Wellings K, Erens B et al. (2002) The accuracy of reported sensitive sexual behaviour in Britain: exploring the extent of change 1990–2000. *Sexually Transmitted Infections* 78, 26–30.

Couper MP & Stinson LL (1999) Completion of self-administered questionnaires in a sex survey. *Journal of Sex Research* 36, 321–330.

James NJ, Bignell CJ & Gillies PA. (1991) The reliability of self-reported sexual behavior. *AIDS* 5, 333–336.

Wolff B, Tollman S & Collinson M (2000) Improved self reporting of HIV risk behaviours through self-administered forms for rural, low literacy populations. 13th International AIDS Conference, Durban, South Africa. 9–14 September 2000..

Singh S (1998) Adolescent childbearing in developing countries: a global review. *Studies in Family Planning* 29, 117–136.

Nachman SR (1984) Lies my informant told me. *Journal of Anthropological Research* 40, 536–555.

Sophie Gbesso, Josef Decosas, Bernard Gnahoui-David (2007) Adolescent sexual Health? Lets get real! *Lancet* 2006, vol. 367

CACERES C, VANOSS M, HUDES E S (2000) Sexual Coercion Among Youth and Young Adults in Lima, Peru *Journal of Adolescent Health*; 27; 361-367

Blanc, Ann K. and Way, Ann A. 1998. Sexual behavior and contraceptive knowledge and use among adolescents in developing countries. *Studies in Family Planning* 29(2): 106–116.

WHO (2004b). Protective Factors Affecting Adolescent Reproductive Health in Developing Countries. Geneva, Switzerland, 2004. Available on-line at: <http://www.who.int/child-adolescenthealth/>

Mataure P, McFarland W, Fritz W, Kim A Woelk G, Ray S, Rutherford G (2002) Alcohol Use and High-Risk Sexual Behavior among Adolescents and Young Adults in Harare, Zimbabwe. *AIDS and Behavior*, Vol. 6, No. 3

Alcohol

Anderson P (2006) Global use of alcohol, drugs and tobacco. *Drug and Alcohol Review*, Volume 25, Number 6

WHO. World Health Report 2002. Geneva, Switzerland: WHO, 2002.

WHO (2004b) Global Status Report on Alcohol. Geneva, Switzerland: WHO, 2004.

Poikolainen K, Tuulio-Henriksson A, Aalto-Setälä T, Marttunen M, Lonnqvist J. Predictors of alcohol intake and heavy drinking in early adulthood: a 5-year follow-up of 15-19 year-old Finnish adolescents, *Alcohol and Alcoholism*. 36(1): 85-88, 2001.

Bonomo Y, Coffey C, Wolfe R, Lynskey M, Bowes G, Patton G. Adverse outcomes of alcohol use in adolescents. *Addiction* 96 (10): 1485-1496, 2001.

Mental Health

WHO. The World Health Report 2001 – Mental Health: New Understanding, New Hope. Geneva, Switzerland: WHO, 2001.

Patel, A. Flisher, S. Hetrick, P. McGorry (2007) Mental health of young people: a global public-health challenge. *The Lancet*, Volume 369, Issue 9569

WHO (2005) Child and adolescent mental health policies and plans. Geneva: World Health Organization

Goodman R (1997) The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry*, 38, 581-586.

Goodman R (2001) Psychometric properties of the Strengths and Difficulties Questionnaire (SDQ). *Journal of the American Academy of Child and Adolescent Psychiatry*, 40, 1337-1345

Strength and Difficulty questionnaire (SDQ)- S11-16 - SDQ and impact supplement for self-completion by 11-16 year olds Available: <http://www.sdqinfo.com/b2.html>

Barney DD (2007) Risk and Protective Factors for Depression and Health Outcomes in American Indian and Alaska Native Adolescents *Wicazo Sa Review*, Vol. 16, No. 1, Native American Health in the 21st Century

Prince M, Patel V, Saxena S, et al. (2007) No health without mental health. *Lancet*

Benjet C, Hernández-Guzmán L (2002) A Short-Term Longitudinal Study of Pubertal Change, Gender, and Psychological Well-Being of Mexican Early Adolescents. *Journal of Youth and Adolescence*, Vol. 31, No. 6, pp. 429-442

Young Lives

An International Study of Childhood Poverty

JUSTIFICATION OF THE CONTENT OF THE HOUSEHOLD QUESTIONNAIRES

ROUND 3 – 2009/10

Introduction

This document is to be read in conjunction with the household questionnaire. It explains each section in more detail and provides justifications and references to further literature. Many sections of the questions are repeated from Round 2, to maintain continuity in the longitudinal data collection and to enable us to measure if and how situations have changed between the rounds. The core components elicit information on household members' education, health, livelihood, consumption, income, and social capital. We also collect data on events that might have happened between the rounds such as economic, natural or health shocks. Each country-team has also included some country-specific additions to sections and in some instances entirely new sections that are specifically designed around future analysis of policies and programmes (for example, social protection schemes in Ethiopia and India, health insurances in Vietnam or conditional cash transfers schemes in Peru). The Round 3 questionnaires are much more country-specific than the previous two rounds.

Sections of household questionnaire:

0. Preliminary interview
1. Parental background
2. Household education
3. Household livelihoods and asset framework
4. Household food and non-food consumption and expenditure
5. Social capital
6. Economic changes
7. Socioeconomic status
8. Child care, education and activities (this section does not exist for the Older Cohort HH questionnaire)
9. Health and food security
10. Anthropometry
11. Caregiver perceptions and attitudes
12. Child development.

Country-specific topics in the household questionnaire

Ethiopia

Section 3F	Credit Support Programmes
Section 3G1	Access to PSNP (Public Works and Direct Support)
Section 3G2	Programme Payments – PSNP
Section 3H	Perceptions of the PSNP

India

Section 2D	Girl Child Protection Scheme
Section 2E	Welfare Programmes for Marginalized Groups
Section 2F	Child Labour Abolition
Section 3H	National Rural Employment Guarantee Scheme
Section 9	Rajiv Arogyashri health scheme

Peru

Section 5D	Access to key services and programmes
Section 9B	National Identity Document and health insurance
Section 10	Eye test
Section 12	Maternal mental health

Vietnam

Section 2C	Education Aid (Younger Cohort only)
Section 2D	Extra Schooling
Section 9	Health Insurance

For each section the document:

1. Describes the rationale of the section
2. Explains the intended use of the data, for example, for calculation of scores and indexes.

The aim of the questionnaires is to include key measures of the child outcome variables (health, nutritional status, cognitive development and educational achievement) and factors that are likely to affect these outcomes as well as outcomes measured in later rounds (such as socio-economic status, social capital, parents' attitudes and perceptions). It is important to remember that the household questionnaire is just one data collection instrument and will be used in conjunction with country-specific modules/questions, the community questionnaire and the child questionnaire for both cohorts.

Questionnaire development: The Young Lives team tried to minimise the respondent burden and possible recall errors, to ensure question clarity, and to consider order and sensitivity when designing the questionnaire. The Young Lives study aims to cover the multidimensional nature of childhood poverty rather than to investigate single issues in great depth.

Data analysis: After each round of data collection, some of the data will be analysed on a cross-sectional basis:

- (i) To provide descriptive information on the whole sample. For example, percentage of Young Lives children who are malnourished, distribution of wealth and asset scores.
- (ii) To compare subgroups at this point in time, e.g., between ethnic or gender groups.

- (iii) To compare results between sentinel sites and, to a limited extent, between Young Lives countries. However, one should keep in mind that the Young Lives samples are not nationally representative.

Using Rounds 1-3 and later rounds of the survey, longitudinal analysis of the data becomes possible:

- (iv) To link measurements from an earlier round with outcomes from a later round. For example, whether certain critical events in early childhood such as caregiver's illness or unemployment might have had a long-term impact on a child's schooling (controlling for confounding factors).
- (v) To study differential child outcomes in communities which experienced some kind of shock, such as natural disaster or in which a particular policy was implemented.

The data being collected vary greatly in their nature, and the extent to which they can be used for different types of analysis:

- (a) Some variables are transitory in nature. For example, the measures of child physical morbidity refer to a particular point/period in time. Cross-sectional analyses are possible, but their use for longitudinal analyses is limited. For example, the prevalence of diarrhoea is a useful morbidity indicator for cross-sectional analysis. However, linking whether or not a child had diarrhoea in Round 1 with any outcome indicators at later rounds is unlikely to have much validity. A less transient variable would be more useful for longitudinal analysis. For example, the height-for-age index which is often used as an indicator for long-term health and nutritional status in children.
- (b) Some measures vary within an individual and this has implications for how a variable is composed and used in analysis. An example is the measurement of behaviours. One might ask what is 'usually done' or what was 'done last time a particular event occurred'. Each has its strengths and weaknesses but frequently the resulting variable is more useful for 'population analyses' than 'individual analyses'. For example, when interviewing children directly, it might be easier to ask with reference to a specific event, e.g., 'did you take care of your younger brother yesterday?', where taking care of siblings might be something which children do on some days but not on others. We can use that information to compare the occurrence of sibling care between, for example, gender groups. If we repeated the question a week later then we might expect similar proportions of children to answer in the affirmative but they will not necessarily be the same ones as the previous week. This makes linking the occurrence of sibling to an outcome more problematic because of the internal variability of the sibling care measure.
- (c) Some variables are very culture-specific. This limits the cross-country comparative analyses, and possibly some subgroup analyses within country. Even variables which seem quite objective, such as birth weight categorised as small/average/large, can be interpreted quite differently and are more limited than knowing the actual birth weight and local standards against which to calibrate it.

- (d) Some variables are proxies for other variables that are difficult or impossible to measure. This affects their interpretation, especially when attempting to establish causation. For example, attendance at antenatal care can represent a number of different issues (childcare practices and maternal knowledge), some or all of which might be associated with an outcome variable.

Based on the variables, various composite variables including wealth index, household size, dietary diversity, and anthropometric indices were calculated and saved with the Young Lives data sets. Further details on the calculations are archived in the SPSS Syntax.

Preliminary interview

The preliminary interview is done 1 or 2 days prior to the actual household interview. The interview establishes whether the Young Lives child is still alive and present in the household, explains purpose of the study and seeks consent for participation in Round 3. The potential respondents in the household (mother, father, primary caregiver) are given at least 24 hours to consider whether they wanted to take part in Round 3 of the study. After 24 hours, the interviewer returned to the household to complete the consent form and administer the main questionnaire.

In the preliminary interview key details from Round 2 (child's name, nickname, sex and date of birth) are confirmed to check that the household of the same child was being interviewed, information is updated and any major data errors rectified.

The mail address and, if different, the physical address are recorded. This is important information for tracking and also allows the fieldworker to easily relocate the household when they return to conduct the main interview. Where there was no formal mail or physical address a description of where the house is located was written down. Some countries also used Global Positioning Systems (GPS) to calculate the exact local position of the household. This will help them in locating the households in future rounds. GPS proved to be a very useful approach in the first tracking exercise in Peru.

The identification and location information collected in this section allows data for respondents to be linked between rounds and within sections of each round (e.g. between household and anthropometry, or household and community). This information is also useful for data quality checks and for locating individual questionnaires if there are data queries after the household interview. The region questions have country specific-categories that allow the comparison of geographical subgroups. They also allow migration to be picked up in later rounds. Households were classified as urban or rural, designated on the concept of community in Ethiopia, India and Vietnam, and on an individual household basis in Peru. This also allows urban/rural comparisons of a wide variety of exposures and child outcomes.

Tracking information was also collected in this section. For those children still living in the household, this comprises contact details of two people who would be able to help locate the Young Lives child if she or he were to move in the future. If the child was not present in the household, or if the whole household had moved, the interviewer attempted to collect details as to where they could be found, whether the move is temporary or permanent (i.e. will the child come back to this address), and whether the new location is within the same (or a different) Young Live sentinel site.

The preliminary interview was also used to update the household roster. The household roster is a standard tool used in household surveys to collect data on household composition (see Box 1 for definition of household). There are wide varieties of living arrangements experienced by children in developing countries and it is essential for the Young Lives study to record these to contextualise the children's lives and to see how they change over time. In addition, household composition has been associated with many components of child poverty. For example, studies in developing countries found that child nutrition and morbidity, household ability to cope with illness and per capita expenditure are associated with household size (Pelto et al. 1991; Sauerborn 1996); type (extended or nuclear) (Handa 1996) and sex and age composition (Evenson and Mwabu 1996; Handa 1996).

Data collected in the Young Lives household roster is limited to essential and objective data because administration can be time consuming and proxy reports unreliable, especially for non-family house members (Arnold 1991). As Young Lives focuses on the child, the relationship of each household member to the Young Lives child is recorded. A comprehensive list of relationship codes has been compiled to include local (and culturally meaningful) categories, while also ensuring consistency of interpretation and coding between Young Lives countries. Basic demographic data, such as sex and age of household members, is essential in understanding the household composition. No validity problems are anticipated in the reporting of sex, but misreporting of age is likely. Protocols and methods of estimating ages are widely used and, where necessary, should be included in fieldworker training. The requirements of data accuracy differ between key household members, such as the caregiver and their partner, and other members.

Box 1

Definition of the household: There is no correct or easy way of defining a household but a clear definition is needed to ensure consistency. The Young Lives study has adapted the World Bank (2001) definition, 'a group of the people who live together, usually pool their income and eat at least one meal together when they are at home. This does not include people who have permanently migrated or are considered visitors'.

The Young Lives definition of household includes individuals who:

1. live under the same 'roof' or within the same compound/homestead/stand; and
2. when they are together, share food from a common source at least once a day (i.e. they cook and eat together); and
3. contribute to or share in a common resource pool (i.e. they contribute to the household through wages and salaries, or other cash and in-kind income; or they benefit from this income but do not contribute to it, e.g., children and other non-economically active members of the household).

This definition is broad enough to include parents/siblings who work elsewhere and return home periodically; household members who are in prison or hospital, or away studying; and those who consider themselves members of the household but are away temporarily for another reason.

Other situations observed in Round 1 require that Young Lives specify who should NOT be included as members of the household: separated parents who have a home outside the Young Lives household (even if they see the child regularly); relatives or nannies/servants who live outside the household (even if they spend a lot of time with the Young Lives child/in the Young Lives home); and children who live in an orphanage.

Each member is given a unique identification number that links him or her to other sections of the interview and to future survey rounds. Data from the roster can be used to perform analyses for the household as a unit and for individual household members such as the household head or child caregiver. The identification numbers of the household head (see Box 2) and the person best suited to answer questions about the child are recorded separately. This allows analyses by household head/caregiver characteristics and, more immediately, of identifying suitable respondents for the household and child focused sections of the main questionnaire.

Box 2

Definition of the household head: Traditionally in surveys the headship is self-reported. It is often unclear how households define headship. It could, for example, be defined by age, decision-making power or resource control (Rosenhouse 1989). The head of household is self-reported in Young Lives.

At the end of the preliminary interview, an appointment was made for the interviewer to come back and conduct the main questionnaire with the relevant respondents. As we intended to take anthropometric measurements not just from the Young Lives child but also from his/her younger sibling we also asked for the presence of the sibling during the main interview.

Section 1: Parental background

In developed countries, paternal involvement has been associated with children having greater self-esteem, higher education achievement and more secure gender identification (Brase et al. 1997). There is a widespread belief that children benefit from maintaining contact with their fathers. Less is known about developing countries, and the Young Lives study thus collects information about contact with biological fathers. The Round 3 survey includes questions about whether the father and mother of the child are alive, whether they are the biological parents, and the frequency with which they see the child.

Some questions that were included in Round 2 have been dropped as the information is unlikely to have changed, for example child's origins; religion; first language; number of older siblings, and address when born.

1B: Migration (Younger cohort, only India and Ethiopia)

Migration was ranked by UNESCO (2010) as one of the key challenges facing the modern world, the question of migration and how to manage it has seen governments spend ever more freely on the maintenance of their borders and the careful 'selection' of entrants (Castles 2003).

Environmental changes such as the effects of climate change and growing interconnectedness of a globalised world are hypothesised to increase migration further (Myers et al 1995; Castles 2002; Black 2001).

Between survey Rounds 1 and 2, nearly 7 per cent of Young Lives households left their original Young Lives communities. The highest rates of migration are documented for the younger cohort in Peru, at nearly 14 per cent; while the older cohort is also relatively high at over 9 per cent.

Given the inevitability of climate change, the likelihood that poorer communities will be most vulnerable to its effects, and the hypothesised link to migration, it is essential that Young Lives generate relevant child-focused data. The added value of Young Lives is that it is longitudinal and has a mixed methods approach, thus having the potential to capture how the changing nature of the environment impacts on the lives of young people and their perceptions of these changes.

The household focus of Young Lives is both a strength and a limitation for researching migration, as the datasets so far fail to capture in a straightforward manner children's mobility and caregiver's migration. Once a caregiver 'leaves' (e.g., to migrate) information is no longer collected on that individual. And in some cases, even though a child might be living outside of the YL household (e.g., in a hostel or at a relatives), they may be recorded as still within the YL household. This is fine, as they may be considered part of 'the household', but their place of residence, however temporary, needs to be captured as well, especially as change in geographical location may be linked to household or child strategies for moving out of poverty.

We need to be able to document children's mobility over time (whether or not this is linked with their household unit), as well as how the migration of other household members impacts on children's lives and experiences of poverty. Strategic addition of questions aimed at recording child, household and community-level data will strengthen the potential for child-focused analysis on migration issues in the future

In Round 3 we asked if the child has left the community for more than three months since the last Young Lives visit. The time-frame of three months in this question was specified on the advice of the Peruvian team, who asked for a clear distinction between 'moving' and 'temporary migration' such as migration for seasonal work. In addition, a follow up question has been included, asking why the child left. In Vietnam regional migration is very low and is not considered as a major factor in child development, therefore the team decided not included in the hh questionnaire.

Section 2: Household Education

Education can play an important role in reducing poverty and achieving economic growth. It is essential for the empowerment of people, improve individuals' earning potential, promote a healthy population, and build a competitive economy and social development of a country (Huisman et al. 2009; Hanushek & Woßsmann, 2007; UNESCO, 2007; World Bank, 2006, Glewwe and Kremer 2006).

The effect of parental (and in particular maternal) education on children education outcomes has been researched extensively (Grantham-McGregor et al. 2007;). Less is known about the influence sibling's education can have on a child's educational outcomes.

We collected detailed information on the educational experiences of all children (aged 5 to 17) in the household. This covers the ages at which children tend to go to school, the type of school they attend or reasons why they have never attended (if applicable), as well as the respondent's perception of their performance and the quality of the school. This information is collected because the education level, especially of older siblings in the household has been shown to be important for younger siblings who learn informally from them, even if they

themselves do not attend school. Further, the reported reasons why siblings do not attend school will complement the exploration of parental attitudes to education in Section 11. Such attitudes have been shown to be strong predictors for children's future educational involvement and success. The name of each school currently attended is collected to allow for triangulation with information about this school obtained from the Young Lives community questionnaire or possible additional school surveys.

This section no longer looks at the education of adult household members, as it not expected to have changed from the previous round.

For the Younger cohort there is a sub-section on child schooling including reasons for attending a particular school, risks the child faces when travelling to school and missed school. We included the same hypothetical questions for children who did not attend school. Hypothetical survey questions are heavily discussed as they might introduce biases, depend on actual situation and might be unreliable (Iarossi 2006). However, we decided to include these questions as they will provide an insight into household's awareness of availability of school facilities. Moreover, the reliability of the hypothetical questions will be increased if the household already has one or more children in school.

India

Girl Child Protection Scheme

This scheme was launched by the Government of Andhra Pradesh in 1995-96. Parents who have opted for sterilisation, and who have no male children but one or two girls, are given incentives, scholarships for their education and a lump sum of money when the girl/s reach maturity. This scheme aims to give confidence to parents who have only female children and to help ensure education for all girls. With these questions we intend to assess household's awareness of the scheme as well as operationalisation of it.

Welfare Programmes for Marginalized groups

Scheduled Caste people and Scheduled Tribe people are considered the most socially and economically disadvantaged groups and are often excluded from services and programmes. To decrease their vulnerability, a special caste-based protection scheme was launched in Andhra Pradesh. The scheme is aimed at both Scheduled Castes and Scheduled Tribes, and provides a wide variety of services, ranging from cash and in-kind transfers to employment generation and investment projects.

Child Labour Abolition

Child labour is a major and increasing problem all over India, often depriving children of education and other activities. Andhra Pradesh has the second highest population of child labourers of all Indian states. The Government of India launched a National Child Labour Eradication Programme (NCLP) which aims to gradually eliminate child labour and rehabilitate working children through special schools and services.

Vietnam

Education Aid (YC only)

In recent years, the Vietnamese education system has come under a holistic reform launched by the government. Here, education from age 6 to 11 is free and mandatory. Poor families, especially benefit from such assistance without which they would not be able to send their children to school.

Extra Schooling

In Vietnam a typical school day and school year is short. Despite a very high primary school enrolment rate, most primary school students receive little more than half of the teaching input of the international standard (Ha and Harpham 2005). According to Dang (2007), in Vietnam, about 34% of households with children in school purchase private tutoring, and 90 % of these households spend 1-5% of their total expenditure on private tutoring.

Questions on whether the YL child is taking extra classes outside of school, the cost of such classes and whether the caregiver thinks that the child is benefitting from these classes are asked to help assess the impacts of these classes.

Subsection 2B: Educational history of Young Lives child

In Peru, Ethiopia and India we also ask the caregiver for a detailed education history of the Young Lives child (in Ethiopia older cohort only, India and Peru both cohorts).

We collected detailed information on dates during which a particular school was visited and information on each of the facilities. This information will allow triangulation with data for the school survey. It will also help us to identify whether the child repeated grades or temporarily dropped out of school.

Section 3: Livelihoods

The purpose of this section is to capture information on the asset structure of the household and the livelihood strategies their members pursue to make their living. Asset base is critical to enhance opportunities and reduce the vulnerability of poor peoples' livelihoods. (Ellis 2000; Dorward et al. 2001). The connection between asset base, livelihood strategies, and child poverty and the intergenerational transmission of poverty has been discussed by Hulme et al. (2001) and Moore (2001), among others. Further, initial evidence of these relationships for Young Lives countries can be found in White and Masset (2002), Escobal et al. (2005), Mekonen et al. (2005) and Mooij (2005).

Three strategies have been identified and organized as distinct lines of enquiry in the wider livelihoods literature. Scoones (1998) incorporates these into a framework to analyse the dynamic processes and outcomes in an investigation of livelihoods. The three livelihood strategies are agricultural intensification, livelihood diversification and migration. Agriculture intensification seeks to enhance productivity through capital-led or labour-led intensification. Livelihood diversification looks at diversification away from current activities in the face of temporary or permanent loss or failing livelihoods, or actively pursuing diversification for accumulation and reinvestment. Finally, migration may be a critical strategy to secure off-farm employment, relying typically on economic or social links between areas of origin and destination.

Devereaux (1993) made the distinction between coping, adaptive, accumulative and survival strategies. Accumulative strategies increase consumption or assets in response to opportunity. Adaptive strategies seek to spread risk of consumption collapse due to anticipated adverse shocks. Finally, coping strategies are those that absorb the impact of an adverse shock by reducing assets or consumption. In extreme circumstances, coping strategies may lead to survival strategies, where consumption may be drastically reduced and household assets eroded.

As Morris et al. (2005) have highlighted, the classification suggested by Scoones (1998) reflects the characteristics of the activities undertaken, while that offered by Devereaux (1993) is based on the perceived rationale or motivation of households and individuals together with reference to potential outcomes. Livelihood strategies can also be discussed in terms of the institutional scales of a particular strategy (Dougherty 2002). Five scales are commonly identified: intra-household, inter-household, community, market and state. Under this new lens, livelihood are not just a matter of household decision making but a more complex array of interactions, where children are key actors making possible certain livelihood strategies and being affected by them. This section captures not only relevant household data but also several indicators that seek to understand who controls those assets and who benefits from their use.

As Masset and White (2003) point out, most of the analysis of income diversification has concentrated on rural dwellers. Although there are many similarities in terms of the principles underlying the livelihood approach in rural and urban areas (Meikle et al. 2001), there are contextual differences – social, economic, governance and environmental – that affect the specifics of both the nature of poor households' wealth and how they can make a living. For example, in urban settings, households relying heavily on informal work (non-wage income sources) may be more vulnerable than those with a regular, dependable source of income, whereas in rural areas these sources of income may compensate for the typical climatic and market risks that agricultural income may face.

To reflect the connection between asset structure and livelihood strategies, Section 3 is divided into five subsections:

1. Land and crop agriculture
2. Time allocation of adults and children
3. Productive assets
4. Earnings from non-agricultural activities
5. Transfers, remittances and debts.

The Vietnamese team's feedback after Round 2 suggests that Section 3 was too long and confusing causing some respondents to struggle while recalling such detail. Further, as issues such as assets and earnings are sensitive topics, some respondents may be uncomfortable with answering in such detail. They suggested that this section be shortened and simplified. This would also make recall easier for respondents and avoid fatigue. Based on this and other in-country reports, this section has been made more concise, and income data are not collected in Vietnam.

Land and crop agriculture: The questionnaire enquires about plots owned by the household and their uses. Information is collected on the crops grown on agricultural land and the information allows us to get the total net income obtained in the plots.

Based on the data, the relationship between the scale of the household farm and the impact on welfare outcomes can be analysed. It is recognised that this intentionally limits the analysis to rural areas. Variables used are: size of land used, use of fertiliser and use of irrigation. The most simple farm-scale measure would be to calculate the size of the operational land (to include rented land) and rank households according to sentinel sites, as farm-scales will vary according to agro-ecological zones. Using this sentinel site ranking, the households would be assigned to the relevant quintiles. Another important aspect to be taken into account in the

analysis is the land property regime. Land can be owned, borrowed, sharecropped or be under alternative property arrangements. The existing land tenure system may have a strong influence on farm productivity by conditioning the levels of investment and the access to capital sources (Hoff et al. 1993).

Time allocation of adults and children: Understanding how adults and children, men and women allocate their time to income generating activities allows us not only to estimate how diversified the income portfolio of each household is but also to recover information on the relative importance of each member in income-generating activities. The Young Lives survey collects information on the most important job/occupation (in terms of time) that every member of the household has done during the 12 months prior to the day of the survey. In addition, this section collects information on other unpaid activities, allowing us to get a more complete understanding of intra-household divisions of labour.

By asking the caregiver about the activities of all household members and the time devoted to each activity, we will be able to measure the degree to which certain activities are pursued by the individual or household. This will not be restricted to just agricultural activities. In order to examine whether agricultural intensification has been in terms of capital or labour, the survey data can be used to calculate capital/labour ratios. The community question currently collects price data for fertilizer as a capital input but could be extended to other inputs. It also collects wage rates for men and women. In a context where the proportion of female-headed households may be increasing, understanding the livelihood strategies and coping mechanisms is even more important (Lokshin et al. 2000).

In addition this section explores children's use of time. Once we depart from the idea that childhood should be time free from work and centered on development, play and learning, we need to explore how children allocate their time and whether or not they are free to choose these activities (Feeny and Boyden 2004). This subsection, together with the Child Questionnaire, allows us to explore this issue.

Productive assets: The livelihoods approach adopted in this study allows us to quantitatively measure different types of asset. Asset inequality and extreme poverty can cause bad risk management and thus prevent efficient coping strategies. Pushed further to survival point, poor households often become more risk averse and undertake 'over-cautious' production strategies, forgoing larger future streams of income. Or, given little collateral, face a credit squeeze, which forces them to riskier activities (e.g., cultivation of floodplains or child labour) (Sinha and Lipton 1999; World Bank 2000).

Livestock is, in most rural settings, the most important household asset after land. In contrast to land, livestock can be easily given in exchange for money or other goods when necessary. Very often farmers compensate for fluctuations in income by selling and buying livestock, in order to maintain a stable level of consumption (Rosenzweig and Wolpin 1993; Dercon 1998; Fafchamps et al. 1998). Thus, the record of the animals owned and its change over time will provide additional insights into households' coping strategies and, eventually, their living conditions.

Beside land and livestock, the questionnaire collects productive assets owned, rented or accessed by household members in the last 12 months. It collects up to three of the most valuable assets for primary and secondary occupations.

Earnings from non-agricultural activities: There exists a positive relationship between non-agricultural income and household welfare indicators across most developing countries: greater non-agricultural income diversification is associated with more rapid growth in earnings and consumption. However, there is some evidence that households with little or no education, skills, financial or social capital often do not diversify their income to include non-agricultural income sources (Ellis 2000).

As has been shown by several authors (evidence is summarised by Reardon et al. 2000), the underlying reasons for income diversification and involvement in non-farm activities tends to differ between poor and rich households. For the poor households, income diversification may be a response to risk in the absence of other insurance mechanisms. Income diversification often only consists of low-paid agriculture activities. For rich households, diversification may be a strategy to develop new income generating opportunities, thanks to the larger asset base they possess. In this case, diversification strategies tend to be related to either waged or unwaged non-agricultural activities.

The questionnaire classifies occupations as waged and non-waged. The distinction is relevant in rural areas where participation in labour markets may have stabilising or destabilising effects on household income, depending on the relative importance of fluctuations in labour demand and yields or prices of agricultural products (Reardon 1997). The level of participation in the labour market also shows to what extent households are able to respond to economic changes by increasing their supply of waged work (Kochhar 1999).

The information collected in this section, together with the information collected in Section 3.4, allows us to enquire into the role of the caregiver in enhancing the income diversification strategies of the household and the child welfare implications. An initial assessment, using Young Lives data from Round 1 and 2, shows that certain policy interventions may expand the caregiver's income opportunities but may hurt the schooling opportunities of older siblings if not appropriately combined with other policies like child care facilities (Escobal et al. 2005).

Due to the high likelihood of measurement bias we do not collect income data in Vietnam.

Transfers, remittances and debts

Transfers: The connection between transfers and child well-being has been studied by different authors. For example, Blow et al. (2006) study the extent to which household expenditure patterns are affected by child specific transfer payments, while Barrientos and DeJong (2004) explore the connection between cash transfers and child poverty outcomes. During the last few years, a significant amount of research has been published on the effectiveness of conditional cash transfer programmes as a way to enable poor parents to pay children's schooling and health care (Schultz 2004; Morley and Coady 2003). More recently, De Janvry et al. (2006) have shown that cash transfer can provide an additional benefit to recipients in acting as safety nets. The information collected in this section should allow us to pursue this line of research further.

Remittances: Actual levels of remittances are difficult to measure, particularly as the majority of funds may be transferred on the return of the household member to the household. Income received from remittance has been excluded in line with the general decision of not collecting income data. The source of remittances is described as formal (government), semi-formal (non-governmental organisations) or informal (individuals). Poor households often

engage in social networks operating through gifts and loans on a reciprocity basis (Morduch 1999).

Debts: Households may cope with or ensure themselves against economic changes by obtaining loans from formal institutions as well as from traders or moneylenders (Eswaran and Kotwal 1989). Indebtedness may become a source of vulnerability. Hence, household indebtedness is assessed by the household questionnaire.

Ethiopia

Credit Support Programmes

A common perception is that poor rural households in developing countries lack adequate access to credit, which is believed to have significant negative consequences on various aggregate and household-level outcomes, including technology adoption, agricultural productivity, food security, nutrition, health, and overall household welfare. Few poor and households have access to formal sources of credit and most rely on moneylenders or family members to meet their needs. This section poses questions on whether the household has taken credit from any source as well as the amount and the ability to repay.

Productive Safety Net Programme

The Productive Safety Net Programme (PSNP) in Ethiopia is designed to reduce the vulnerability of poor people to drought. It has two components – the Public Work Programme (PWP), where households are paid for their labour, and the Direct Support Programme (DSP), where vulnerable households receive cash/food and education support without having to supply any labour. The provision of public work and agricultural extension support programmes via the promotion of labour-intensive activities, while augmenting aggregate economic development, could be detrimental to child well-being. This section collects detailed information on PSNP participation, payments received through the programme and aspects related to the households' satisfaction with the PSNP. This facilitates a deeper look into the impact of the programme on YL households and could guide further research into social protection.

India

National Rural Employment Guarantee Scheme

The NREGS is a job guarantee scheme, enacted by in 2005. The NREGS provides a legal guarantee for 100 of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage. It was introduced with an aim of improving the purchasing power of the rural people, primarily semi or un-skilled work to people living below poverty line in rural India. It attempts to bridge the gap between the rich and poor in the country. Roughly one-third of the stipulated work force must be women.

Income share (seed game)

Reporting of income or income shares is very prone to biases such as recall or interviewer bias. In round 3 we aim to test the applicability of a simple seed game as a tool to increase respondents ease with income related questions. The method was developed and piloted by the Peruvian team. The interviewee is asked to list all its income sources and to assess the relative importance of each source using 20 seeds. After identifying the largest source of monetary income we proceed to ask in detail the amount obtained from that source. Having the distribution (percentage accrued from each source) and the amount for the most important income source, the total income and the income obtained from the other sources can be easily

deducted. For example, if the respondent tells us that it has two income sources and most of the household monetary income comes from a non- agriculture wage activity, approximately 60% of their monetary income, we can continue asking details of that activity without looking to the second income source. In the pilot the approach worked especially well in urban areas where household members do not have more than 2 monetary income generating activities.

Section 4: Food and non-food consumption and expenditure

Food and non-food consumption and expenditure: This section draws heavily on Deaton and Grosh (2002) and Grosh and Glewwe (2002), who provide an extensive discussion of the merits of collecting consumption data and the advantages and disadvantages of using income and consumption as measurements. In Round 3, Young Lives collects data on consumption and income as well as the assets data that were collected in Rounds 1 and 2. The justification for collecting assets data is in Section 3. In Round 3, the aim is to facilitate more extensive analysis of economic relationships, including the measurement of poverty using consumption-based welfare measures. World Bank's Living Standard Measurement Surveys, which are the most influential household surveys providing microeconomic data, in common with many surveys in developing countries, give primary emphasis to consumption rather than income. The income focus is also standard in most surveys in Latin America, and in Peru in Round 1, income data were collected. This continues in Round 3.

There are both theoretical and practical considerations that affect the choice of income or consumption, and the balance in favour of one or the other may be different in different circumstances. Deaton and Grosh (2000) note that income and consumption are different concepts, not just two different ways of measuring the same concept. Some economists prefer income as a measure of living standards, perhaps following a 'rights' approach according to which income, together with assets, measures a person's or family's potential claims on the economy. Other economists prefer to use consumption because it measures what people actually acquire so that, if the level of living is a measure of economic input, consumption is the appropriate concept. Both can be defended as approximations to utility; the 'indirect' utility function expresses welfare in terms of resources (positively) and of prices (negatively), which in practice usually means income or resources deflated by a price index – real consumption or income, not money consumption or income. Whether consumption or income is measured, measures of prices are going to be needed whenever analysts wish to compare people who face different prices, which will be whenever they make comparisons over time or space. It is also generally thought that respondents are more reluctant to share information about their income and (to an even greater degree) their assets than about their consumption, which means that they are more likely to give deliberately inaccurate answers to questions about their income than about their consumption.

The consumption data gathered in Young Lives is extremely important for the measurement of welfare. Although Young Lives collects information on many non-economic components of living standards, such as health, access to education, and political freedom, most economists are in strong agreement that consumption is the best measure of the economic component of living standards. Formally, the real value of consumption can be thought of as an approximation to utility, or 'money-metric' utility, according to which an indifference curve is labelled by the amount of money at constant prices, that is required to reach it (see Chapter 5 of Deaton and Muellbauer 1980). Total household expenditure adjusted by a price index and divided by the number of people in the household (or by some more sophisticated count such as the number of equivalent adults) is a measure of the living standard of each

member of the household and is the measure recommended in Glewwe and Grosh for analysing poverty and inequality. See Deaton and Zaidi (1999) for a more comprehensive discussion.

Deaton and Grosh (2000) do not view nutrition as an adequate measure of welfare because people consume more items than food and clearly make tradeoffs between food and other goods, so that collecting data on calories consumed is no substitute for estimating consumption. Nevertheless, the documentation of nutrition is clearly of considerable interest in its own right. Demand analysis can also be applied to calories, to calculate the effect on caloric intake of changes in prices, generated for example, from the elimination of subsidies on basic foods (Laraki 1989).

Intra-household Allocation and Gender Bias: Deaton and Grosh (2000) note that expenditure data are an important tool for researching the allocation of resources within the household and for testing different models of how that allocation might work. They note that it is costly and time-consuming for surveys to collect complete data on the consumption of every item by each family member. Consequently, most multi-purpose surveys, including the Living Standards Measurement Study surveys, have collected household-level data on consumption and have made little effort to collect individual data. Young Lives collects information on schooling expenditure for boys and girls separately in order to analyse the differential between spending on boys and girls.

Deaton and Grosh (2000) also refer to literature that has identified *sharing rules* within the household (Bourguignon and Chiappori 1992; Bourguignon et al 1993; and Browning et al 1994). Young Lives collects information on some goods which they have identified as being consumed exclusively by one group within the household. Young Lives also collects expenditures on ‘adult goods’ (usually alcohol, tobacco and adult clothing) to enable potential analysis of gender bias in the treatment of children.

Based on feedback from the piloting the order of the questions in Peru was slightly changed as the team felt this would improve the ease of answering. Peru also included some additional questions on risk-taking behaviour of households and distinguished between foods produced in own business and foods received as payment.

Section 5: Social capital

Social capital is an important asset within the livelihoods framework and in studying childhood poverty. Most studies have looked at the social capital of communities and adults without acknowledging the social capital of children and the relationships between them (Morrow 2001). The work that has been done on children’s social capital involves its relation to children’s well-being and social exclusion and to conceptual debates (Holland et al. 2007). The Young Lives approach is unique in that it focuses on the child’s social capital within the community (qualitative studies and community questionnaire), supplemented by studying the social capital of households (household questionnaire). Studying the social capital of children is important because children develop, sustain and use social capital to negotiate important transitions and construct their identities. Moreover, measuring social capital gives insight into the effects of policies that are related to social protection, social exclusion and access.

A first important stage in measuring social capital is to define community. For Young Lives, the community represents the geographical boundary through which social and political

capital can be studied and is directly related to the sentinel sites. This includes availability of resources and information that can be accessed through individuals, institutions and organisations. Phillipson and Thompson (2008) suggest identifying community as a method of study rather than an object of study, using it as a means of studying social capital within a local setting.

In Young Lives it is not assumed that geographic ‘community’ constitutes anything meaningful in terms of shared interests, values or lives. Hence, the project has intentionally adopted a restrictive conceptualisation of community that emphasises the physical aggregation of persons in a particular site rather than any sense of social connectedness. Thus, Young Lives’ understanding of community is ‘a group of people who reside in a specific locality, share government, and often have a common cultural and historical heritage’.

The Young Lives concept of social capital uses the social justice oriented model based on Bourdieu’s (1986) work. In this model, social capital comprises two components that are located within the boundaries of wider environmental and structural factors in the community: 1) social networks and connections, which entail contacts and group memberships that provide actual and potential resources and support; and 2) sociability, or the ability to sustain and utilise one’s social network. Components of this definition include structural, cognitive and political capital in a way that frames social capital as a process.

- **Cognitive Social Capital** – includes norms, values, attitudes and beliefs (Uphoff 1999) such as trust, reciprocity and sharing. It measures perceptions about belonging, fairness and social trust.
- **Structural Social Capital** – involves various forms of social organisation, including roles, rules, precedents and procedures, as well as a variety of networks that contribute to co-operation (Uphoff 1999). It is the connectedness to the people around the child, such as peers, friends, family, neighbours, organisations, and institutions.
- **Political Capital** – Sørensen and Torfing (2005) define political capital as the individual power to act politically that is generated through participation in interactive political processes linking civil society to the political system. They go on to mention that the term political capital refers to three factors related to local political actors’ ability to engage in political decision-making: the level of access that they have to decision-making processes (endowment); their ability to make a difference in these processes (empowerment); and their perception of themselves as political actors (political identity).

Portes (1998) highlights four negative consequences of social capital: exclusion of outsiders; excess claims on group members; restrictions on individual freedom; and downward levelling norms. Young Lives addresses exclusion issues and restriction on freedoms by the family.

For Young Lives, social capital is a process that begins with accumulation of social capital and includes sustainability, access and use. Using this definition of social capital, the Young Lives household questionnaire first looks at the structural social capital of the household, or how relationships are made. This includes household members’ participation in organisations, and the formation of networks, influence and connections, such as relationships within the family, extended family, friends, neighbours and other members of the community. Questions also look at how relationships are sustained over time within the household, among friends, peers, and the wider community. This includes individual perceptions of connectivity and

relationships pertaining to cognitive social capital. Moreover, there are questions about the ability to use social capital, and these are addressed in the form of access. Questions address access to services and information, as well as whether the household members have access to resources that help them to achieve objectives or that provide help in times of need. Some questions address issues of political capital directly in the form of collective action questions. Lastly, several questions pertain to negative social capital – or its negative effects, such as exclusion – through questions that ask about why household members may not have access to resources.

After revision, the social capital section in the household survey has become shorter. The household was a source of social capital for the children when they were younger, but may become less important as the children grow older and establish networks independent of the household. It is important to find out about the household's influence on the child through the direct affects of intra-household dynamics as well as the indirect affects of the social capital of the household on the children. The social capital section in the household questionnaire focuses on use of social capital (are there people that can help in order to achieve and objective or when in need and what do people do to solve community problems), accumulation and sustainability of social capital or structural social capital (household membership in organizations and positions of authority and relatives in the community), and access to services and information. To this, we have added a section in intra-household dynamics (which may fit in another section better), how social problems are addressed (which may fit in the community or qualitative studies), and a cognitive aspect about perceptions of the community. Some of these sections may fit better in the community or qualitative study (community mapping). The following highlight specific changes:

- Intra-household relationships- these questions may be suited better for the household survey for the younger cohort, but can be added for the older cohort. It is important to find out about the relationship between the adult and child from the perspective of the adult as well as the child. This section relates to cognitive social capital as assesses the perception of the relationships between household and the child from the perspective of the caregiver.
- Community Relationships- these questions are added to develop the cognitive aspect of the questionnaire.
- Social Problems- these questions are important to find out about the use of social capital to address community problems. However, it may fit better in the community or qualitative studies.
- Collective Action and Exclusion- there was some debate about this section about the relevance to the child. Nevertheless, there are important political capital questions that can be developed further in the qualitative study. This section can be renamed political capital.
- Access – With access, it is important to find if individuals have access, who provides access, and if they do not have access why they may not (social exclusion). All these can be addressed in the household questionnaire, however, social exclusion questions received few answers suggesting that they do have access to services. Based on the experience from the pilot the access to service questions were not included in Ethiopia and Vietnam.
- Information- this section can be combined with the previous section on access in order to consolidate the questions regarding services.
- Membership in Organizations - While these questions about structural social capital – membership in groups- are important, their presence in Round 3 may be questionable.

They may be better suited in the community questionnaire or pursued through the qualitative study. If the questions are to be kept, some of the sub-questions in the column can be removed. The researchers on the ground questioned the relevance of these questions to the children.

To improve the ease for the participants and introduce some variation in the survey administration we introduced a 5 face scale for questions with ranked 5-item responses.

Information and Communication Technology (ICT) becomes increasingly important for the social and economic development of a country (Petrazzini and Kibati 1999). It was suggested that access to internet might reduce social exclusion (Chigona et al 2008) and increase empowerment of a populations. It can also play an important role in education. Access to internet increases steadily and more and more young people grow up with the internet even in low-income settings (Halewood and Kenny 2008). In Round 3 we introduced questions on the access and utilisation of the Internet in India and Peru.

We did not collect data on political capital in Vietnam as we expected huge interviewer bias and social desirability bias.

Peru

Access to Key Service and Programmes – Juntos

Instituted in 2005, Juntos aims to break the inter-generational transfer of poverty by targeting mothers of children under 14 in impoverished households, who receive a monthly cash transfer, provided they ensure that their children attend school and access other public services. It follows similar programmes in Mexico, Chile, Brazil and Honduras and reflects a growing recognition of the role cash transfers can play in tackling poverty, vulnerability and social exclusion. Juntos is particularly innovative in its targeting of communities that were most affected by the political violence in Peru in 1980-2000. It has also sought to overcome some of the problems that have plagued previous social programmes, such as paternalism, corruption and politicisation. Particular emphasis has been placed on inter-sectoral coordination; both at a local level through Multi-sectoral Technical Committees, and through centralized management by a cross-ministerial directorate, under the Presidential Council of Ministers (PCM). In Round 3 we asked detailed questions about participation in Juntos and which benefits a household received. This information will help us in evaluating the benefits of the programme for poor households. We also introduced questions on family and other counselling services in Round 3.

Section 6: Economic Changes

The household questionnaire collects data on changes of economic circumstances (recent life history module) and shocks that may affect household welfare negatively. The information will enable longitudinal and cross-section analyses of relationships between economic status and the affects of shocks on child welfare outcomes such as school enrolment, child labour, health and nutrition.

Recent life history module: The recent life history module allows collection of information about the current economic status of the Young Lives household, and that of three to four and five to six years ago. Moreover, the model assesses reasons for changes in economic status. This data will allow identification of factors and determinants of further impoverishment as well as of improvements in the economic status of households (Jalan and Ravallion 2002;

Dercon 2004). Based on the analysis, social protection policies may be suggested in order to help households to escape poverty.

Feedback from the Vietnamese team in Round 2 indicated that respondents were unlikely to describe themselves as rich/very rich without an object for comparison. As a result, respondents in Round 3 will only be asked to rate their household wealth in relation to others in their community. In Round 2, respondents tended to offer one reason for their change in status (rather than the suggested two). Thus, in Round 3 only one reason will be sought.

Shocks or event module: The household questionnaire captures a range of economic, physical and social events or shocks that may have affected household members over the past four years. Information on covariate or community-wide shocks, and idiosyncratic or individual shocks that affected the Young Lives household alone is collected. The module will provide both longitudinal and cross-sectional data for the investigation of relationships between shocks and child outcomes (nutritional status, cognitive development and others). Longitudinal data will allow us to control for the heterogeneity of the population and avoid bias due to unobserved characteristics in cross-sectional analysis (Dercon 2001).

The data will allow us to assess the effects of covariate shocks at the household level. The community questionnaire will provide further information on major events that affected the whole community. Covariate shocks often worsen the functioning of the asset market, as people are less able to sell their assets in order to cope with the shock. Therefore, asset values should not be used as proxies for vulnerability (Dercon 2001).

The module also captures the coping strategies employed by the households to deal with different shocks. Some strategies could have a direct impact on the children's well-being, such as taking children out of school or reducing meals. The module identifies households that use assets or savings in response to shocks. This, combined with data on asset holdings, helps us to examine the role of assets in coping with vulnerability.

When considering the events/shocks that have affected the household, this round will not explicitly ask how widespread the impact was. This is because the response will be based on the respondent's perception and may not be an accurate representation of the reality. Since it is also only an approximation, it may not give the most accurate research outcomes.

In Round 2, we found that respondents' answers to the question on (1) actions taken in response to the event and (2) the impact on the YL child were not specific enough to help assess risk coping strategies. Thus, Round 3 will not include these questions, with the exception of Ethiopia as the country team feels that they may still be able to use some of this information.

To avoid presenting irrelevant options to respondents, the events/shocks checklist has been tailored to each country, with reference to the responses from Round 2. Where less than 5% of respondents reported this event in Round 2 it will not be included in Round 3. Exceptions to this approach were made with some events, where their occurrence rate fell close to the cut-off or they were considered significant for research. These included divorce/separation; loss of job/source of income; death of YL child's father and death of YL child's mother.

Additionally, the Peruvian team introduced questions on positive shocks such as winning the lottery or receiving an inheritance.

Young Lives data will enable us to link information on shocks with data on time allocation and work hours. Recent evidence suggests that crop income uncertainty often affects household decision-making regarding participation in farm and non-farm labour (Kochar 1999).

The policy implications are wide and varied. Economic reforms often take place within the context of rising vulnerability to shocks, mediating their effects and altering their outcomes. Poverty reduction strategies devised to counter permanent poverty may need to be supplemented by policies to manage risk or to intervene in imperfect markets, such as insurance and credit. Integral to this is the degree to which formal schemes reinforce or replace informal mechanisms to cope with risk.

Section 7: Socioeconomic status

This section has been kept the same as in Round 1 to ensure longitudinal consistency. It is used to construct a set of composite indices for analytical purposes.

Wealth index: The main instrument used in Young Lives to measure the socioeconomic status of the household.

Questions used in wealth index

Variable	Source
Number of people per room	Filmer and Pritchett (1999)
Consumer durables (radio, fridge, bike, TV, motorbike, motor vehicle, mobile phone, land phone)	Filmer and Pritchett (1999)
Dwelling has: electricity, cement wall, sturdy roof	Filmer and Pritchett (1999)
Material of dwelling floor	Filmer and Pritchett (1999)
Main source of drinking water	Filmer and Pritchett (1999)
Toilet facility	Filmer and Pritchett (1999)
Fuel used for cooking	UNICEF

The above index draws on work undertaken by the World Bank and Macro International used to develop the wealth index cited in the UNICEF Multiple Indicator Cluster Surveys. 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 DHS surveys and can be used to discriminate between households in areas without electricity that do not have TVs and fridges.

The index is constructed from (1) the number of people per room as a continuous variable; (2) a set of nine consumer durable dummy variables, each equal to one if a household member owns a radio, fridge, bike, TV, motorbike, motor vehicle, mobile phone, land phone or jewellery/watch (country partners have the option to add two additional consumer durable indicators specific to the country context); (3) a set of three dummy variables equal to one if the house has electricity, brick or plastered walls, or a sturdy roof (such as corrugated iron, tiles or concrete); (4) a dummy variable equal to one if the dwelling floor is made of a finished material (such as cement, tile or a laminated material); (5) a dummy variable equal to one if the household's source of drinking water is piped into dwelling or yard; (6) a dummy

variable equal to one if the household has a flushed toilet or pit latrine; (7) a dummy variable equal to one if the household uses electricity, gas or kerosene.

The composite index will be used in place of the individual components to estimate the total effect of 'wealth'. Individual components may also be associated with outcomes in their own right, but inferences on the 'wealth' effect should not be made from analyses that use only one or some of the components. For example, the drinking water source dummy could be constructed as being equal to one on the basis of having a clean water supply (i.e. piped, standpipe or tube well), or the toilet facility dummy based upon communal versus private facilities. The reduction in illnesses in the household as the result of improved sanitation should not be regarded as the direct effect of socioeconomic status (as measured by the wealth index).

There are four possible approaches to constructing the index (Filmer and Pritchett 1998). Firstly, the dummy variables can be summed, thereby giving equal weight to each (but see below). A second method would be to construct a set of weights based upon the prices of various assets. This is feasible but requires the collection of asset price information, which is not currently included in the survey. It could potentially be based upon average national or regional relative prices. The third solution would be to input all asset variables as unconstrained variables in multivariate analysis. This clearly does not allow for bivariate analysis and it is not possible to separate the direct wealth effects from other indirect effects associated with the individual component variables (Filmer and Pritchett 1998). The fourth method is the statistical procedure of principal components to establish the scoring weights for the assets included in the index, the method adopted by Filmer and Pritchett (1998; 1999).

A further issue to be dealt with is that of scale equivalence. Weight is given to a variable both by the explicit weight attached to it and by the range it covers. For example, if we add literacy (which ranges from about 20 to 100) to mean years of schooling (which ranges from around two to ten) then the bulk of the resulting composite index is accounted for by the literacy variable.¹ The implicit weights given by different ranges are removed by scaling the variable. The following formula will scale the variable over the range 0 to 1:

$$X_i^* = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

The minimum and maximum may be those taken from the data themselves. However, this procedure limits comparability across time and space. It is preferable to set the minima (usually 0) and the maxima (which is variable-specific). In the data set given here, there are two variables for which scaling is required: rooms per person and consumer durables. For reasons explained below, we propose that consumer durables be summed into a single variable. This variable will range from 0-9 or 0-11 depending on the number of items covered. In this case, comparability is ensured by scaling by the country-specific maximum (i.e. dividing the total by 9, 10 or 11).

Economic arguments may be advanced for using either prices or principal components analysis. However, two counter-arguments may be made. First is the practical one that such indices are fairly insensitive to the weights used, so it is not worth devoting too many

¹ The example given here is from the UNDP's educational attainment variable from the HDI. In the first year of this variable being used, the UNDP failed to adjust to ensure scale equivalence.

resources to fancy procedures. Second is the theoretical point that these economic arguments have less weight when choices are constrained (e.g. access to drinking water will be partly a function of geographic location). An econometric case may be made for not imposing any weights at all on the variables by entering them all in a regression. However, aside from the fact that cross-tabulations of wealth are then not possible, the high degree of correlation between the various measures is almost certain to introduce multi-collinearity, and so misleadingly undermine the significance of wealth.

The considerations in the last paragraph point to devising a simple arbitrary weighting system. However, there is good reason to not simply add up the scaled (0-1) values of the 17 variables. There are between nine and 11 consumer durables. Using each one separately would give a large weight to consumer durables against other aspects of welfare. It is also likely that there will be a bunching of scores at the low end (say 0-3 and the high end, say, 8-11) possibly resulting in a positively skewed and/or bimodal distribution for the wealth index. The wealth index used in Round 1 of Young Lives (and to be re-used in Round 2) is therefore a simple average of the following three components:

- Housing quality index, which is the simple average of floor, roof, wall and scaled rooms per person
- Consumer durables index, which is the scaled sum of the consumer durable dummies
- Services index, which is the simple average of drinking water, electricity, toilet and fuel (all of which are 0-1 variables).

Section 8: Child activities (this section does not exist for the Older Cohort)

This section was designed to acknowledge the changing nature of a child's care and activities as they mature between rounds. This section exists only for the Younger Cohort of Young Lives children, as 15-year olds can answer for themselves. For 8-year-old children, there may not always be clear boundaries between childcare and education, or between daily activities and work. Questions on the various themes included in this section are therefore somewhat interspersed with each other, and a single question may address issues relevant to more than one theme. This section justification will deal with each theme separately, highlighting how Young Lives addresses them.

This section seeks to build a more detailed picture of how the children spend their time and give some indication of the distribution of their time across different activities. It therefore builds on the information collected about the household and economic contributions made by all children within the household, included in Section 3. It will also provide a reliability check for this information. In Round 3 we also asked directly for the Young Lives child's work activity as we assume that the age of the children of both the younger and the older cohort make engagement in economic activities likely.

Asking people about a 'typical' or 'average' occurrence, day or time period yields different information and is often harder to answer than asking about 'yesterday', and various research has emphasised the importance of clearly defining the memory period for respondents (Moser 1969; Gray 1955). However, if the previous day was not a working day, children are asked about their activities on the previous working day, which should be named. For example, if

conducted on a Monday in a country where Saturday and Sunday are not working (school) days, parents will be asked what the Young Lives child did on Friday. This section is designed to answer the following research questions:

- 1) Do children have leisure time which they spend playing? How do leisure activities vary with age, gender and poverty status?
- 2) What roles within the household do different children perform? How does this vary with gender, level of poverty and age of the child?²

This section also asks for information about who was with the child during various activities. In recognition of the fact that children may spend more time with peers and siblings than with parents by age 8, this section attempts to ascertain with whom the child spends his/her time on a daily basis. While the norms and attitudes of the most powerful people in the household will affect the child's roles and responsibilities (See Feelings and Attitudes section), other skills and capacities, including the benefits of education will be passed on to Young Lives children by those who spend most time with them.

Finally, this section asks whether the child has any choice in doing a particular activity. This is asked of the children themselves at age 12 and is an attempt to ascertain the degree of control that children have over their lives and how they spend their time.

Child work: Child labour is a complex issue relevant to the study of poverty in many developing countries because of its magnitude, its impact on health and on children's access to education and social capital formation. It is also becoming increasingly clear through qualitative work with children (for example, Woodhead 1998, Punch 2004) that children frequently enjoy working and develop self-esteem key life skills through paid and unpaid work. The factors that make work beneficial or detrimental are complex and dependent on many contextual factors (Woodhead 2004). Some of these will be explored more in the 12-year-old child questionnaire.

The 1989 Convention on the Rights of the Child states that children should be free from economic exploitation and any work that is hazardous interferes with schooling, or harmful to their health or development. The International Labour organisation's (ILO) Minimum Age Convention prohibits employment of children under the age of 15 and provides that the minimum employment age should be consistent with the full physical and mental development of young persons. However, the convention also recognises a distinction in the various forms of child labour.

Household surveys such as the Young Lives study are a good medium for investigating child labour, as the conditions that force children to work are, to a large extent, related to the circumstances of the household. In order to bridge the gap in policy relevant quantitative data, the ILO created the Statistical Information and Monitoring Programme on Child Labour (SIMPOC) in 1998. It developed a standardised survey methodology, which has been used in

² We are also interested in the distribution of children's time between work, education and leisure and whether this changes at different levels of poverty. Therefore, we are asking parents to allocate 12 pebbles to different types of activity for the different members of the household in Section 3. It was thought to be too complicated to ask parents to give a detailed plan of children's days, since understandings and categorisations of time vary significantly between countries. This problem is likely to be exaggerated for children, and it was felt that the same method should be used with the 12 year olds to allow for comparisons. Further, Boyden and Ennew (1997) report that recall data collected from children and adults often has unreliable timings and gaps in the sequencing.

11 countries, with plans for an additional 40 countries. Jensen (2001) describes the SIMPOC instrument and states that to create indicators of child labour and to present a portrait of child labour for particular country (including the patterns, causes and consequences) information must be collected on:

- 1) Children's economic activity, including activity around the home
- 2) Schooling
- 3) Other activities or idleness (discussed above)
- 4) Information on children living away from home (not relevant as the Young Lives study follows the children as they move)
- 5) Compensation for work (covered in this section)
- 6) Workplace conditions and potential hazards for children
- 7) Impacts of work on children (including injury and schooling)
- 8) Parental attitudes, perceptions and aspirations, and
- 9) Household socioeconomic status.

The areas and questions relevant to the Young Lives household survey are outlined below with the rationale for their inclusion.

Table 2: Overview of child labour and daily activity questions and rationale

Area	Questions	Rationale
Economic activity	<ul style="list-style-type: none"> • Engaged in any economic activity in the last 12 months? (This section) • # Weeks worked per month. Months per year (Section 3) • Housework during past week? • # Hours housework? (Section 3) 	<ul style="list-style-type: none"> • Core questions related to child economic activity. Valuable because it also includes housework. • Type, sector and location of work are important factors when exploring exploitation and in understanding the employment circumstances. • Data on quantity and age started. Important measure of burden and compatibility with school.
Schooling	<ul style="list-style-type: none"> • Currently attending school? If not, why not? • Child attends school while engaged in economic activity? • How much school missed and for what reasons? 	<ul style="list-style-type: none"> • Child labour and schooling are intimately intertwined. Need to know if they are doing both, or neither. • To explore their compatibility, we need to know whether the child is enrolled, attends and achieves at school.
Other activities	<ul style="list-style-type: none"> • Captured in Section 3 and this section 	<ul style="list-style-type: none"> • It is important to establish the realities of how children are spending their time, beyond school and work. These activities may include leisure and religious or social events.
Compensation for work	<ul style="list-style-type: none"> • Give earnings to parents, other relatives or keep? (This section) • Why is the child working? 	<ul style="list-style-type: none"> • These questions allow us to determine how dependent the household is on child labour.
Impacts of work on children	<ul style="list-style-type: none"> • Work ever caused injury/made ill? (Covered in Section 9, under injuries) 	<ul style="list-style-type: none"> • More direct way of distinguishing more dangerous forms (see above). • Addresses adverse consequences of child

	<ul style="list-style-type: none"> • Nature of the injury? 	labour in terms of injury.
Migration	<ul style="list-style-type: none"> • Captured because longitudinal study 	<ul style="list-style-type: none"> • Children often change residence related to their employment. Recording migration allows us to trace that phenomenon.
Attitudes of parents to work	<ul style="list-style-type: none"> • See Section 12 	<ul style="list-style-type: none"> • Children's time use and opportunities are shaped largely by parental aspirations for the child, attitudes towards children and child labour, and perceptions of the value of schooling.
Household Socioeconomic Status	<ul style="list-style-type: none"> • Captured in Section 3 	<ul style="list-style-type: none"> • It is often argued that poverty is the cause of child labour. These questions allow us to explore the relationship between child labour and household socioeconomic status.

Section 9: Child health and development

Perceived health status: In order to get a composite measure of health status that does not focus solely on severe illness episodes, the caregiver is asked to rate the overall health status of the child in comparison to other children of the same age. (In the anthropometric section they are asked to rate the child's growth in the same way.) A subjective account of general health is one of the most frequently used health status measures. Substantial research evidence from studies of the elderly in developed countries suggests self-rated health is meaningful, provides valid and reliable data (Lundberg and Manderbacka 1996) and is not affected by acute transitory illness (Manderbacka et al. 1998). A review of 27 adult studies found global self-rated health to be strongly associated with more objective measures of morbidity and mortality (Idler and Benyami 1997). It must be noted that studies have found the interpretation of good or bad health to vary by age, sex and other individual attributes (Krause and Jay 1994; Chandola and Jenkinson 2000).

Injuries: Injuries are a major public health problem for adolescents in developed and developing countries. Injuries from accidents are more likely at this age than at any other age (WHO 2005) and they are a major cause of death and disability among young children (WHO 2005). Globally, injuries are among the ten leading causes of death and disease burden at ages 0–4, 5–14, and 15–29 years (Peden et al. 2002, Hyder et al. 2000). Each year, about 875,000 children under the age of 18 die from injuries and 10 to 30 million have their lives affected by injury. Road traffic accidents are a leading cause of death among boys in many countries and account for 5% of all Disability Adjusted Life Years lost among adolescents (WHO 1998). Many unintentional injuries lead to permanent disability and brain damage, depression, substance abuse, suicide attempts, and the adoption of health risk behaviours. Poor adolescents are more prone to injuries and are less likely to recover completely.

In the recently launched UNICEF/WHO World Report on child injury prevention, large global inequities in the frequency of injuries were identified. Children in Africa have the highest unintentional injury rates in the world at 53.1 per 100,000, followed by Southeast Asia where the rate is 49.0 per 100,000, compared with an average global rate of 38.8 per 100 000 children. Countries such as Australia, Sweden, the UK, and Canada have the lowest rates of child at around five per 100 000 children (Peden et al. 2008, Hyder and Peden 2008).

As injuries are a major health risk for adolescents, a new, more comprehensive module on injuries was introduced in Round 3 compared to Round 2 of Young Lives. The model was adapted from the violence and injury model developed by the WHO Global School-based Student Health Survey (GSHS) (WHO 2004) (<http://www.who.int/chp/gshs/en/index.html>).

The data will allow us to identify risk factors and determinants for injuries. This information will be helpful for the development of country-specific policies and programmes aimed at injury prevention

Long-term health problems and disability: These questions ask about physical functioning and common long-term health problems, which can affect children's education and work potential in short and long term. Some of the questions are based on child utility measurements (Mark III health status classification system). Questions on hearing, vision and speech are set into the environmental context of the child, which make them less abstract and will help caregivers/children to answer. There are no questions on ambulation or dexterity anymore, because these issues are included in physical disabilities. The focus is on long-term illnesses and health problems which could affect adolescents' abilities to work or attend school.

Health service quality and barriers to utilisation

The importance of good quality of health care services in developing countries became a more and more important issue in the last years as a result of the realisation that poor health care service quality can reduce utilisation, compliance and effects of treatments and benefits from services.

Quality is multidimensional and information on different aspects is collected to capture the multidimensionality as much as possible.

Young Lives aims to assess the quality of health service from clients/users view. Literature review identified the following dimensions of quality care for users and in developing countries (World Bank 2008, Glick 2008, De Gupta et al 2003):

- effective service that reliefs symptoms and prevent illness (effectiveness)
- accessibility (geographic, economic (service charge, other under-table payments), social/cultural)
- interpersonal relationship (respect and politeness, interruption during consultation for example by other health care staff, privacy)
- amenities (physical appearance, personnel and materials, cleanliness, essential equipment, range of services, treatment preference and trust in treatment for example private versus government)
- continuity (complete range of health service without interruption, unnecessary repletion of services or treatment)

The model in the Young Lives questionnaire Round 3 allows adolescents to rate their satisfaction which each of the different dimensions of health service quality.

Evidence suggests that socio-economic, financial and cultural barriers may prevent many adolescents from searching medical treatment or advice. These barriers are likely to be more important for the poor and other vulnerable groups, where the costs of access, lack of information and cultural barriers impede them from benefiting from health services (Ensor and Cooper 2004, WHO 2005). The main aim of the model is and was to assess the importance of different common barriers to health service utilisation for poor adolescents.

Meal frequency: The number of daily eating occasions is often used as a proxy indicator for gauging the adequacy of child's macronutrient (calories and protein) intake. Meal frequency is a very culture-specific concept. In some cultures it is common to eat three main meals per day; while in other cultures one primary meal is consumed. To account for these cultural differences, Young Lives asks about 'food eaten' at different times of the day and not about breakfast, lunch and dinner. Due to cultural differences, meal frequencies from the four Young Lives countries should not be compared with each other. A model with seven pre-defined eating occasions developed by Food and Nutrition Technical Assistance was used in the household questionnaires and the child questionnaire for the Older Cohort to measure meal frequency (Swindale and Ohri-Vachaspati 1999).

Individual dietary diversity: Dietary diversity can be used as a proxy for the nutrient adequacy of the child, including probability of adequate micronutrient intake (FAO 2007). It is measured by the number of different food groups consumed over the last 24 hours. The following set of 11 food groups was used: cereals, fish and seafood, root and tubers, pulses/legumes/nuts, vegetables, milk and milk products, fruits, oil/fats, meat/poultry/offal, sugar/honey and eggs. The different food groups are based on a model developed by the FAO for the measurement of dietary diversity (FAO 2007). Based on the measurements an individual dietary diversity score can be calculated.

To get a more complete picture of the quality and quantity of the nutrition of the Young Lives child, individual dietary diversity and meal frequency should always be used in combination.

Fast food consumption

Obesity rates are rising globally at an alarming rate. For several decades, it has been assumed that obesity in low-income countries might be a disease only of the higher socio-economic groups of the population. More recent studies, however, found an inverse or at least curvilinear association between socio-economic status and adult obesity in several low and middle-income countries. One of the main causes for rising obesity in developing countries is the shift from a traditional plant based diet to a modern, westernised diet with high amounts of sugar, fat and processed food. This phenomenon is often described as the nutritional transition (Popkin 2004). Obesity has long been recognised as a risk factor for a number of non-communicable diseases including cardiovascular disorder, dyslipidemia, non-insulin dependent diabetes mellitus and some cancers. Obesity and its associated diseases threaten to overwhelm health-care systems of many low-income countries that are already strained by the burden of infectious diseases and HIV/AIDS. Obesity could also present a tremendous economic burden that includes costs for lost work productivity due to morbidity and preliminary mortality. Early prevention of the development of obesity in children and adolescents is important to keep the long-term health of a population. There is evidence that India, Vietnam and Peru have entered and are in different stages of the nutritional transition (Nguyen et al. 2007, Griffith et al. 2001, Uagy 2001). The questions assess the current habitual intake of fast foods by adolescents in low-income groups in the Young Lives country setting. This information will help to develop health-promotion strategies that could help to redirect the impacts of the nutritional transition in the country-specific settings (Popkin et al 2000, 2001, 2006, Doak, Monterio)

Physical activity

Participating in adequate physical activity throughout the life span and maintaining normal weight are the most effective ways of preventing many chronic diseases, including

cardiovascular disease, hypertension and diabetes. Participating in adequate physical activity also helps build and maintain healthy bones and muscles, control weight, reduce blood pressure, ensure a healthy blood profile, reduce fat, and promote psychological well-being. Roughly, 60% of the world's population is estimated not to get enough physical activity. Patterns of physical activity acquired during childhood and adolescence are more likely to be maintained throughout the life span, thus sedentary behaviour adopted at a young age is likely to persist. The suggested questions are based on International Physical Activity Questionnaire and WHO GSSH, both are extensively validated in developing country context.

Tobacco use of family members

Tobacco use is a leading cause for morbidity and mortality worldwide. With regards to poverty, tobacco not only impoverishes those who use it, it puts an enormous financial burden on countries. The costs of tobacco use at the national level encompass increased health-care costs, lost productivity due to illness and early death, foreign exchange losses, and environmental damage (WHO 2004). For the poor, daily spending on tobacco represents a drain on family resources. Yet in many countries it is precisely the poor who use tobacco the most (see study by Efraymson and Saifuddin 2000). Tobacco use, even when considering the employment that it generates and which is highly overestimated according to WHO, contributes to widening the gap even further between rich and poor. Children whose family members smoke are much more likely to become smoker themselves (Rosendahl et al. 2003). We introduced questions on tobacco use of all family members in Round 3 and also included a more comprehensive model on tobacco in the older cohort child questionnaire (SAQ).

Birth weight of older cohort YL child

Low-birth weight due to intra-uterine growth restriction has been shown to have long-term consequences on cognitive development, behavioural development and health outcomes (Walker et al. 2007). It is known to be a powerful predictor (and confounder) of infant growth, morbidity and mental development (Aylward et al 1989) and infants born with low birth weight (less than 2500g) begin life immediately disadvantaged. R3 is now behind us and we managed to collect birthweight info for very few OC children.

The most reliable sources of birth weight data are hospital, clinic or maternity home documents and, where possible, these will be used as the data source in the YLS. It is likely that in many sites caretakers will not have these records or they may not exist; in such cases recalled data will have to be substituted. Studies have found that mothers in developing countries whose babies were born in hospital, can recall birth weights accurately but that these need to be obtained at as early an age as possible (Gofin et al. 2000). It should be noted that there is often clustering in recalled weights and in data from health centres; which increases the potential for misclassification of low birth weight babies (Boerma et al 1996, Robles and Goldman 1999).

Food security model

In Round 2 a generic food security section to identify food shortage was used in all four countries. The generic section started with the question 'Has the hh had food shortage in last 12 months? Yes/No. If the answer was yes, more detailed questions were asked. Most households reported that they did not experience any food shortage (>90-95%). This was surprising as the Young Lives sample is a pro-poor sample and many households were identified as prone to food insecurity. We speculated that the results might not reflect the actual situation but could be the result of measurement and interviewer biases and the result of the question design. Reporting of food shortage is a sensitive issue for primary caregiver

and straightforward questions might not be valid (personal communication with Dr E Dolwer, University of Warwick,).

We introduced a new more comprehensive food security model in Round 3 based on the Household Food Insecurity Access Scale (HFIAS) (Coates et al. 2007, Bickle et al. 2000). The model consists of 9 questions plus frequency-of-occurrence question each. The approach will enable us to calculate the overall household food security status as well as subcategories of food insecurity:

1. different categories of food security (food secure, mildly food insecure, moderately food insecure and severely food insecure)
2. different domains of food insecurity (Anxiety, perceptions that household food was inadequate in quality or quantity, reported instances of reduced food intake, coping actions)

We chose a recall period of 12 months which enables us to capture seasonal differences and annual variability in the experience of food insecurity in Young Lives households. However, long recall period are less valid for the assessment of feeling of distress (anxiety and worry) in periods of acute food insecurity and coping behaviours.

India

Rajiv Arogyashri Health Insurance Scheme

This program aims to ensure health care of the poor, through insurance. The scheme also aims at providing health care to 90% of the state population, ultimately. Run by all state governments, the poor who have white ration cards are eligible for benefits under the scheme. Under the scheme, hospital bills of the insured persons would be paid by the insurance companies. The premium for the insurance policy would be paid by the government. The state government also helps children of the poor, who were born with congenital heart problems to undergo medical or surgical treatment. The entire expenditure incurred for the treatment in expensive corporate hospitals is borne by the government.

Vietnam

Health insurance

Viet Nam introduced user fees for health care as part of the *doi moi* economic reform program in 1986 (Witter 1996). As a result private health expenditures as a proportion of total health expenditures grew from 59% in 1989 (World Bank, 1993) to 84% in 1998 (Gertler & Litvack 1998). This increase is particularly dramatic for poor households as high costs for health care can push already impoverished households further into poverty or might restrict access and utilisation of health services. The Government of Vietnam has tried different strategies to improve the access to health care for poor households and protect them from the associated financial risks.

In 1992 the government initiated a compulsory health insurance system (CHI) that first consisted only of a Social Health Insurance (SHI) for formal employees. In 2003, the Health Care Fund for the Poor (HCFC) and in 2005 the Programme for free health care for children below 6 years of age complemented the Compulsory health insurance. A voluntary health insurance (VHI) that was introduced in 1994 aims to cover dependents of those covered by the CHI, students, self-employed and informal sector workers (Ekeman et al. 2008). The government of Vietnam aims to reach health insurance coverage of 70-80% of the population by 2010. We ask whether the child has any kind of health insurance and whether the insurance was used.

Section 10: Anthropometry

Child malnutrition remains a common problem in the developing world. In children under five years of age, undernutrition is an underlying cause of 53 per cent of all deaths (Bryce et al. 2005). Malnutrition is an important indicator of child welfare and an essential part of any multi-dimensional child specific poverty measure (see conceptual framework document). It is thus one of the Young Lives study principal outcome variables and is also associated with several of the other outcome variables such as morbidity and cognitive development (Pollitt et al. 1994; Lasky et al. 1981; Sigman et al. 1989). It is clear that genetic factors (which vary both within and between populations) affect growth. However, it is widely accepted that anthropometry is the most practical and useful tool for assessing the nutritional status of children (WHO 1986). The interpretation of anthropometric measures as indicators of nutritional status requires that values from the study population be compared to a healthy, well-nourished reference population. New growth charts have recently been developed (WHO 2000). In the Young Lives study, only height and weight will be measured. These measures are quick, simple, require only limited training and are more precisely measured than, for example, skin folds and circumferences (Ulijaszek and Kerr 1999). Measurement error varies from one survey to another, but minimal bias is reported when training is adequate (see training manual) and measurements are taken more than once (Martorell et al. 1976; Pelletier et al. 1991).

In Round 3, we will also be collecting anthropometric data for some siblings of Young Lives children. A shortcoming of current Young Lives data is that we cannot map out or control for factors *within the household*. It is hard to control for household fixed effects such as how interested parents are in their children's education. This makes it difficult to work out whether programmes or other factors have a causal impact on child outcomes: e.g. if some parents care more than others about whether their children do well in school, they will buy their children more books but will also give their children other forms of support and encouragement. We cannot tell whether it is the books that matter for determining the child's achievement or the encouragement. If we have two children in the same household, we can control for this. Collecting more data about siblings will give us another way to get around the difficulty of seeing whether there is a causal relationship.

Section 11: Caregiver feelings, attitudes and perceptions

Young Lives conceptualises the human capacity of the child, the parents, caregivers and others around the child, to be important in mediating and moderating the effects of poverty on children. Bronfenbrenner (1979) argues that children's lives and development are inseparable from the nested structures within which they grow up. The innermost structure in this conceptualisation comprises those people with whom the child spends time, while less proximal contexts include the culture and society within which the child develops. Within this understanding, the Young Lives conceptual framework identifies the human capacity of children's households and social networks as important factors mediating and moderating the multi-dimensional effects of poverty on the Young Lives children. According to the conceptual framework, 'Human capacity relates to the education levels, social and life skills, roles, attitudes, values and practices of individuals and communities'.

The personal endowments of households and social networks are important moderating factors to consider when using the human capital of individual children to measure the effects of poverty. Elsewhere in the questionnaire, the education levels and economic contributions

of all members of the household is collected, as well as information about the person with whom the child spends his or her time on a daily basis. This section focuses on the attitudes, values and practises of the caregiver.

To measure caregivers' attitude, feelings and perceptions a Likert-type scale was used (Likert 1932). Likert scales have become one of the dominant methods of measuring social and political attitudes and feelings (Taylor and Heath 1996). Young Lives employed a four point scale without a 'neutral-middle' to avoid frequent responding with the safe middle option that was very common in Round 1. Respondents specify their degree of agreement with various statements on a scale from 'sounds a lot like something I would say, think or feel' to 'sounds very unlike something I would say, think or feel'. Each item may be analysed separately using the number besides each response. Where factor analysis has been carried out, item responses can be summed to create a score for a group of items.

Psychosocial capacities: The questions in the first subsection address the issues of stigma and discrimination, pride and shame, self-efficacy, trust, and perceptions of services. The items are adapted from those included in the 12-year-old child questionnaire, which have been developed in close cooperation with Martin Woodhead and are based on statements made by people living in poverty gathered through qualitative work (for example, Woodhead 1998; Narayan et al. 2000; Feeny and Boyden 2003; Ridge 2003). They are included to see whether the feelings and perspectives of caregivers influence those of the 12 year olds they care for.³

Stigma, discrimination, pride and shame: A major finding in research with adults and children living in poverty in contexts all over the world is that the experience of poverty is mediated through and moderated by people's social worlds (Narayan et al. 2000; Feeny and Boyden 2003; Ridge 2003). Many people report that they are discriminated against in many contexts because of their poverty, or because of other factors such as caste or ethnicity, which often lead to persistent poverty among certain groups.

We have attempted to separate out the issue of perceived discrimination (i.e. 'how others treat me') from the issues of reduced self-esteem, or shame (i.e. 'how that makes me feel'). These two dimensions are hypothesised to be highly correlated.

Self-efficacy: Self-efficacy can be understood as one's 'sense of agency or mastery' or their sense of competence (Brewer 2003: 93) and corresponds to other psychological concepts in psychology: an internal locus of control; the opposite of helplessness. Self-efficacy, or perceived behavioural control, is hypothesised to mediate the relationship between behaviour and attitude (Ajzen 1988). Therefore, it is important to measure this alongside caregivers' attitudes towards and aspirations for their children, as it will influence their behaviour. For example, if a caregiver thinks education is very important but perceives that they have little control over their child's educational outcomes (length of schooling, success at school); they are less likely to prioritise their child's education over other uses of time.

Trust and perceptions of service quality: There are several types of trust: within established relationships and social networks; trust extended to strangers (often based on expectations of behaviour or a sense of shared norms); trust in the institutions of governance (including fairness of rules, official procedures, and dispute resolution and resource allocation). Young

³ For a discussion of the use of Likert-Response scales, please see the document, Justification of the Content of the 12-year-old Child Questionnaire.

Lives tries to assess different dimensions of trust using Likert-like scales. Questions were mainly taken from the World Bank social capital assessment tool (Grootaert et al. 2004).

Trust and perceptions of service quality might shape confidence and subsequent behaviour with regards to choice and usage of the available services.

Life satisfaction: Happiness, or satisfaction, is important to consider in poverty research because the poorest are not necessarily the unhappiest and there is growing recognition that people's own perceptions of their situation should be taken into account when seeking to develop or improve their living conditions (Camfield and McGregor 2005). Consequently, a simple measure using the Life Satisfaction Ladder has been included. This item was originally developed in a medical context to test the perceived life satisfaction of patients (Cantril 1965). However, it has recently been used all over the world in happiness studies (Veenhoven *undated*) and in studies of poverty and development in a number of countries, including Ethiopia (Addis Ababa University et al. 2004) and India (Bourai et al. 1997).

The limitations with this type of general question about 'global' life satisfaction must be recognised: they are vulnerable to biases with mood, timing and social desirability (Camfield and McGregor). In an attempt to measure feelings of powerlessness and to concretise the concept of satisfaction, several follow-up questions have been added. After asking caregivers to indicate their position between their best and worst possible lives, fieldworkers then ask them to indicate whether they expect they will be able to increase their life satisfaction in the next four years. This time span was chosen to coincide with the next round of data collection. A further question on what they perceive would increase their chances of moving up the ladder illuminates their perceived limits on agency and self-efficacy.

Attitudes to education and work: The relationship between attitudes and behaviour is complicated and subject to much discussion in social psychology. A review of the dominant theories (Leone et al. 1999) demonstrates that key variables mediating the relationship between attitudes and behaviour include perceived behavioural control (self-efficacy, see above), past behaviour and intentions. These variables, with respect to caregivers' attitudes to education and work, are all measured throughout the questionnaire.

The nature of familial aspirations for children, the norms that shape the obligations among genders and attitudes towards children's employment and education will all contribute to shaping the opportunities and constraints faced by the Young Lives children as they grow up. This subsection draws on various instruments to assess caregiver's attitudes to education and to children in general, and then their aspirations and expectations for the future of the index child.

Attitudes to children: A question on the qualities that children should be encouraged to learn at home is included because these ideas about the goals of child development and upbringing will influence the ways in which children develop and grow, including their approach to life and their skills (Levine et al. 1994). Do these, in turn, influence the strategies children employ for moving out of poverty? How do these vary between different Young Lives sites? The first ten items have been taken from the World Values Survey (2000). However, as we cannot assume that respondents are able to read, we have changed the format of the question from choosing the five most important qualities from a written list to rating each individual item as it is read out. The final three items were added following consultation with country teams.

Other measures are drawn from the Value of Children project, conducted in many countries since the 1970s. This project aimed to determine the motivations behind childbearing and the perceived costs and benefits of children for parents. Asking caregivers to indicate the importance of various factors in having children is a tool developed to assess the different ways in which children are valued and their relative importance. The items included are all taken from VOC studies. The first 11 are taken from Mayer et al. (2006) who found that they loaded on two clearly separable factors, being emotional/psychological and normative/economic. The further three were added from Kagitcibasi and Ataca (2005) and were included after consultation with the country teams.

Expectations and aspirations for children's futures: A further question about the kinds of help expected from grown up children is also taken directly from the Value of Children project (Schwarz et al. 2001) and will give further indications of caregivers' expectations about the futures of Young Lives children. Further questions about caregivers' expectations regarding children's lives are included to allow for comparison with the children's own expectations about their future careers and life.

Based on the experience of Round 2 we removed some questions which were very sensitive and caused discomfort for the participants.

Section 12: Maternal Health (Only Peru)

Women in developing countries have high rates of common mental disorders (CMD). Recent evidence from South Asia suggests that poor maternal mental health is associated with poor child growth (Raham et al. 2004). This finding has potentially important policy implications for improving child nutrition in developing countries, but we were unsure whether the findings would be consistent in that region and whether the same pattern would be found in other developing countries. To assess mental health, a self-reporting questionnaire containing 20 items (SRQ20) in the form of yes/no questions with a reference period of the previous 30 days was used. The screening tool was recommended by the World Health Organisation (WHO 1994). It has acceptable levels of reliability and validity in developing countries. The SRQ20 is not diagnostic and cannot separate anxiety from depression. Cut off scores to determine how many yes-answers constitute a case have been validated against clinical assessments in each of the study countries. As the validation usually suggested a cut off of 7/8 to separate probable non-cases/cases of CMD, this was what was used in this study.

Section 13: Child development

Getting estimates of the cognitive abilities and achievement over time of children that are participating in the Young Lives project is important as these variables may be considered both as outcomes (proxy for the child's skills) and predictors of later outcomes. For instance, a recent paper established the association of cognitive abilities in early life with later outcomes in education, health and income (Grantham-McGregor et al. 2007). With regard to achievement, administering and reporting results of standardised tests for students has become a common practice in recent years in many developing countries, as these are widely regarded as indicators of success in schooling and/or acquisition of basic skills or knowledge for adult life. However, measuring accurately the cognitive development and achievement of the children in each cohort and getting meaningful scores may prove to be a complex endeavour.

In 2006, pilot tests of several cognitive development and achievement tests were carried out in each country prior to Round 2 of Young Lives. As a result of these, it was decided to administer the following tests to the Young Lives children: the Peabody Picture Vocabulary Test (PPVT) and the Cognitive Developmental Assessment (CDA) to assess children's verbal and quantitative ability respectively in the Younger Cohort (aged between 4.5 and 5.5 years old at the time of Round 2); and the PPVT, plus two reading and writing items from Round 1, and a Mathematics Achievement Test to assess children's verbal and quantitative abilities respectively in the Older Cohort (aged between 11.5 and 12.5 years old at the time of Round 2).

Peabody Picture Vocabulary Test (PPVT): The PPVT is a widely-used test of receptive vocabulary. Its main objective is to measure vocabulary acquisition in persons from 2.5 years old to adulthood. The test is individually administered, untimed, norm-referenced and orally delivered. The task of the test taker is to select the picture that best represents the meaning of a stimulus word presented orally by the examiner.

The PPVT was originally developed in 1959 by Dunn and Dunn. Since then, it has been updated and improved several times (PPVT-R 1981; PPVT-III 1997; and PPVT-IV 2007). PPVT validity and possible cultural bias have been studied repeatedly during the past decades. Several studies have found that both the PPVT-R and the PPVT-III show a positive strong correlation with some commonly-used intelligence measures, such as the Wechsler and the McCarthy Scales (Campbell et al. 2001; Gray et al. 1999; Campbell 1998). Regarding the existence of a cultural bias, evidence is not conclusive since mixed results have been reported in the literature. On the one hand, Williams and Wang (1997) and Washington and Craig (1999) found no item bias in the PPVT using a sample of African-American pre-school children. Similar results were found by Restrepo et al. (2006). On the other hand, studies developed by Ukrainetz (2000 and 2002), Stockman (2000) and Champion et al. (2003), also with African American pre-school children, found there was item bias. Although the test was originally developed for English speakers, a Spanish version has been developed and normed.

In Round 2 of the Young Lives study, the PPVT-III (Dunn and Dunn 1997) is used to evaluate both cohorts in India, Ethiopia and Vietnams. However, in Peru, the Spanish version of the PPVT-R (Dunn et. al. 1986) is used to evaluate both cohorts. In order to use the PPVT, all the necessary copies for each country were bought directly from the publisher.

Even though both versions used to evaluate the children participating in Young Lives measure the same construct and follow the same principles, there are some differences between them, especially in relation to the number of items and the arrangement of them. The PPVT-R (Spanish version) consists of a single form containing 125 items. The PPVT-III is available in two parallel forms designated as Form III-A and Form III-B. Each form contains 204 items grouped into 17 sets of 12 items each. Young Lives uses Form III-A.

In both versions of the PPVT, the items are arranged in order of increasing difficulty. Not all the items in the test will be administered to a child but only those within his or her critical range. The examiner must select the appropriate start item according to the child's chronological age and continue administering the test until the child reaches a ceiling, i.e., those items extremely easy or extremely hard for the child are not administered. This requires that the examiner correctly establish the Basal Item Set and then the Ceiling Item Set for the individual. In the case of the PPVT-R, the basal is formed by the highest eight consecutive correct responses and the ceiling is formed by the lowest eight consecutive responses

containing six errors. In the case of the PPVT-III, the basal set rule is one or no errors in a set of 12 items and the ceiling set rule is eight or more errors in a set.

The PPVT offers raw scores as well as standard scores. Raw scores are calculated by subtracting the total number of errors from the ceiling item. In the case of the PPVT-R, the examiner must only count the errors between the highest basal and the lowest ceiling. In the case of the PPVT-III, the examiner must count the total number of errors made by the examinee from the basal set through the ceiling set. The test manual includes tables to convert the raw scores into standard scores. However, we will not use standard scores for Ethiopia, India or Vietnam because the standardisation samples of both PPVTs used in Young Lives have different characteristics from the project's sample.

The PPVT will be administered to both cohorts of children. The test was translated into each country main languages by the local team and verified by a local expert before the pilot study conducted prior to Round 2 of data collection. The test pictures remained the same.

Cognitive Developmental Assessment (CDA): The CDA was developed by the International Association for the Evaluation of Educational Achievement (IEA) during the second phase of the pre-primary project in order to assess the effect of attending a pre-school centre on the cognitive development of 4-year-old children. IEA granted Young Lives authorisation for the use of this instrument.⁴

The test has several subtests:

- **Spatial relations:** This area consists of two sections. The first one requires the child to perform an action as a response to the test item. Spatial notions such as *on, under, behind, in front* or *beside* are assessed through responses to instructions like, '*put the toy on the chair*'. The second section requires the child to indicate which of a set of pictures fits the description provided. Concepts like *through, around, between, up, toward*, etc. are evaluated. An example of this type of question is, '*point to the jar that is between the spoons*'.
- **Quantity:** This subscale requires children to indicate which of a set of pictures fits the description provided by the examiner. Notions such as *a few, most, half, many, equal, a pair*, etc. are assessed with directions such as, '*point to the plate that has a few cupcakes*'. This subscale has fifteen items and all must be administered to the child. Each correct answer was scored 1 point, 0 points for wrong or no responses, for a maximum total score of 15 on the CDA quantity subscale.
- **Time:** This subscale requires the child to point out which picture of a set best represents the concept provided by the examiner. Measures in this area involve knowledge of what *day of the week* it is, if it is *night* or *morning*, and concepts such as *before, starting*, etc. Similar indications to those presented above are used in this subtest, for example, '*show me which child has finished drinking*'.

⁴ Further information on the Pre-Primary project and the CDA is available in: International Association for the Evaluation of Educational Achievement (IEA) (2005) *Preprimary Project - Draft III. Sampling, Instrumentation and Data Collection*, Amsterdam: IEA.

However, for Round 2 of Young Lives it was decided that only the quantitative subscale of the CDA should be administered, since the pilot studies showed that the reliability of the time subscale was low and the spatial relations subscale took too long to administer.

The CDA was administered only to the Younger Cohort. The test was translated into the main languages of each country by the local team and verified by a local expert before the pilot study conducted prior to Round 2 of data collection.

Achievement Test

- **Verbal:** The reading and writing items from Round 1 were administered in Round 2 of Young Lives to the children from the Older Cohort.
- **Mathematics:** The maths test which will be used for Round 2 of Young Lives has ten items, scored one for correct and zero for blank or incorrect. Most of the items included in the test were selected from the publicly released items of the Trends in International Mathematics and Science Study developed by the IEA in 2003. The items were originally developed to assess fourth and eighth graders. Items with different difficulty levels were selected in order to discriminate between higher and lower achievers. In addition to these items, the numeracy item from Round 1 (solving a basic multiplication) was also included.

The items were selected to assess knowledge of numbers and number sense only. This was due to the fact that other topics (i.e. geometry, measurement, data and algebra) might not be covered in depth by students in school, or might be an unfair means of evaluating non-schooled children or those who have dropped out. Number items, however, are directly related to basic skills necessary in any modern society. The format of the items was either multiple choice or short answer.

The Mathematics Achievement Test will be administered only to the Older Cohort. The test was translated into each country's main languages by the local team and verified by a local expert before the pilot study conducted prior to Round 2 of data collection.

It is important to notice that the Mathematics Achievement Test used for the pilot studies has 27 items: the single item from Round 1; four additional items with no text, just numbers, requesting children to add, subtract and divide figures up to three digits; and 22 items taken from TIMSS (Third International Mathematics and Science Study). The items were arranged in two booklets for the pilot study. They each included the same items but presented them in a different order, to test for the effect of this (the difficulty of the items was established using the international results from TIMSS). The first booklet had the items randomly organised while the second booklet had the items organised according to their level of difficulty. The pilot results showed the second booklet had higher reliability and took less time for the children to complete. The number of items to be included in the test was then reduced to ten, retaining variance within item difficulty and type of exercise.

References (cited and consulted):

- Addis Ababa University (Economics Department and Institute of Development Research) and Oxford University (1995) 'Ethiopian Rural Household Survey, Questionnaire: Round 3', <http://www.csae.ox.ac.uk/datasets/Ethiopia-ERHS/erhs/questionnaires/quest95.pdf> (accessed 03 March 2009)
- Addis Ababa University, International Food Policy Research Institute and Oxford University (2004) 'Ethiopian Rural Household Survey, Questionnaire: Round 6', Addis Ababa, Ethiopia
- Ajzen, I. (1988) *Attitudes, Personality and Behaviour*, Chicago, IL: Dorsey Press
- Alam, N., F.J. Henry and M.M. Rahaman (1989) 'Reporting Errors in One-Week Diarrhoea Recall Surveys: Experience from a Prospective Study in Rural Bangladesh', *International Journal of Epidemiology* 18.3: 697-700
- Alonso, P.L., A. Bowman, K. Marsh and B.M. Greenwood (1987) 'The Accuracy of the Clinical Histories Given by Mothers of Seriously Ill African Children', *Annals of Tropical Paediatrics* 7.3: 187-9
- Aylward GP, Pfeiffer SI, Wright A, Verhulst SJ. Outcome studies of low birth weight infants published in the last decade: a meta-analysis. *Pediatrics*. 1989;115:515-520
- Barnett, S.W. (1995) 'Long Term Effects of Early Childhood Programs on Cognitive School Outcomes', *The Future of Children* 5: 25-30
- Barrientos, A. and J. DeJong (2004) *Child Poverty and Cash Transfers*, CHIP Report No. 4, London: Childhood Poverty Research and Policy Centre
- Behrman, R.E., M. Robert, R.M. Kliegman and H.B. Jenson (2000) *Nelson Textbook of Paediatrics*, 16th edition, Philadelphia: WB Saunders
- Bender, D.E. and M.F. McCann (1993) 'Validation of Self-Report of Literacy among Peri-Urban Women in Bolivia', *International Journal of Epidemiology* 22.4: 747-8
- Bicego, G.T. and O.C. Ahmad (1996) *Infant and Child Mortality. Demographic and Health Surveys Comparative Studies No. 20.*, Calverton, MD: Macro International Inc.
- Bishai, D. (1996) 'Quality Time: How Parents' Schooling Affects Child Health through Its Interaction with Childcare Time in Bangladesh', *Health Economics* 5.5: 383-407
- Black R., (2001). Environmental refugees: myth or reality?' New Issues in Refugee Research: Working Paper No. 34. United Nations High Commissioner for Refugees
- Blow, L., I. Walker and Y. Zhu (2006) *Who Benefits from Child Benefit?*, Warwick Economic Research Papers No 749, Warwick: Department of Economics. University of Warwick
- Boerma, J.T., R.E. Black, A.E. Sommerfelt, S.O. Rutstein and G.T. Bicego (1991) 'Accuracy and Completeness of Mothers' Recall of Diarrhoea Occurrence in Pre-School Children in Demographic and Health Surveys', *International Journal of Epidemiology* 20.4: 1073-80
- Bourai, V.A., S.R. Bahadur, K.M. Panwa and K.M. Mishra (1997) 'Props for Research', *PLA Notes* 28: 91-2
- Bourguignon, F. and P.A. Chiappori (1992) 'Collective Models of Household Behavior: An Introduction', *European Economic Review* 36: 355-64
- Bourguignon, F., M. Browning, P.A. Chiappori and V. Lechene (1993) 'Intra Household Allocation of Consumption: A Model and Some Evidence from French Data', *Annales d'Economie et de Statistique* 29: 137-56

- Bourdieu, P. (1986) 'Forms of Capital' in J. C. Richards (ed.) *Handbook of Theory and Research for the Sociology of Education*, New York: Greenwood Press
- Boyden, J. and J. Ennew (1997) *Children in Focus: A Manual on Child-Centred Participatory Research*, Stockholm: Radda Barnen
- Brase, M., R. Dinglasan, M. Ho, N. Kail, R. Katz, V. Lopez and T.G. Ton (1997) *UNICEF - Yale School of Public Health Research Project: The Role of Men in Families*, New Haven, CT: Yale University School of Medicine, International Health Department
- Brewer, S.E. (2003) *Instrument for Assessing the Psychological Effects of Child Domestic Work*, London: Anti-Slavery International
- Brockerhoff, M. (1995) 'Child Survival in Big Cities: The Disadvantages of Migrants', *Social Science and Medicine* 40.10: 1371-83
- Brockerhoff, M. and P. Hewett (1998) *Ethnicity and Child Mortality in Sub-Saharan Africa*, Policy Research Division Working Papers No. 107, New York: Population Council
- Brockerhoff, M. and P. Hewett (2000) 'Inequality of Child Mortality among Ethnic Groups in Sub-Saharan Africa', *Bulletin of the World Health Organization* 78.1: 30-41
- Bronfenbrenner, U. (1979) *The Ecology of Human Development*, Cambridge, MA: Harvard University Press
- Browning, M., F. Bourguignon and P.A. Chiappori (1994) 'Identifying Intra-household Decision Processes', unpublished manuscript, Hamilton, Ontario: McMaster University
- Bryce, J., C. Boschi-Pinto, K. Shibuya and R.E. Black (2005) 'WHO Estimates of the Causes of Death in Children', *The Lancet* 365: 1147-52
- Caldwell, J.C. (1990) 'Cultural and Social Factors Influencing Mortality Levels in Developing Countries', *Annals of the American Academy of Political and Social Science* 510.1: 44-59
- Camfield, L. and A. McGregor (2005) 'Resilience and Well-Being in Developing Countries' in Michael Ungar (ed.) *Handbook for Working with Children and Youth: Pathways to Resilience across Cultures and Contexts*, Thousand Oaks, CA: Sage Publications
- Campbell, J.M. (1998) 'Review of the Peabody Picture Vocabulary Test, Third Edition', *Journal of Psychoeducational Assessment* 16.4: 334-8
- Campbell, J.M., S.K. Bell and L.K. Keith (2001) 'Concurrent Validity of the Peabody Picture Vocabulary Test Third Edition as an Intelligence and Achievement Screener for Low SES African American Children', *Assessment* 8.1: 85-94
- Cantril, H. (1965) *The Pattern of Human Concern*, New Brunswick, NJ: Rutgers University Press
- Carlson, S.J., M.S. Andrews and G.W. Bickel (1999) 'Measuring Food Insecurity and Hunger in the United States: Development of a National Benchmark Measure and Prevalence Estimates', *Journal of Nutrition* 129: 510S-16S
- Cash, W.S. and A.J. Moss (1972) 'Optimum Recall Period for Reporting Persons Injured in Motor Vehicle Accidents', *Data Evaluation Methods Research* 2.50: 1-33
- Castles, S. (2002). Environmental change and forced migration: making sense of the debate. New Issues in Refugee Research: Working Paper No. 70. United Nations High Commissioner for Refugees

- Castles, S. (2003). *The age of migration*, Guilford Press, New York
- Chamie, M. (1994) 'Can Childhood Disability be Ascertained Simply in Surveys?', *Epidemiology* 5.3: 273-5
- Champion, T.B., Y.D. Hyter, A. McCabe and L.M. Bland-Stewart (2003) 'A Matter of Vocabulary: Performances of Low-Income African American Head Start Children on the Peabody Picture Vocabulary Test-III', *Communication Disorders Quarterly* 24: 121-7
- Choudhury, K.K., M.A. Hanifi, S. Rasheed and A. Bhuiya (2000) 'Gender Inequality and Severe Malnutrition among Children in a Remote Rural Area of Bangladesh', *Journal of Health, Population and Nutrition* 18.3: 123-30
- Cleland, J. and J. van Ginneken (1989) 'Maternal Schooling and Childhood Mortality', *Journal of Biosocial Science, Supplement* 10: 13-34
- Coldham, C., D. Ross, M. Quigley, Z. Segura and D. Chandramohan (2000) 'Prospective Validation of a Standardized Questionnaire for Estimating Childhood Mortality and Morbidity due to Pneumonia and Diarrhoea', *Tropical Medicine & International Health* 5.2: 134-44
- Dang, Hai-Ahn (2007) 'The Determinants and Impacts of Private Tutoring Classes in Vietnam', *Economics of Education Review* 26.6: 683-98
- Davies, P.T. and E.M. Cummings (1994) 'Marital Conflict and Child Adjustment: An Emotional Security Hypothesis', *Bulletin of the World Health Organization* 116.3: 387-41
- De Haan, A. with Karen Brock, Grace Carswell, Ngolo Coulibaly, Haileyesus Seba and Kazi Ali Toufique (2000) *Migration and Livelihoods: Case Studies in Bangladesh, Ethiopia and Mali*, IDS Research Report 46, Brighton: Institute of Development Studies
- De Janvry, A., F. Finan, E. Sadoulet and R. Vakis (2006) 'Can Conditional Cash Transfer Programs Serve as Safety Nets in Keeping Children at School and from Working when Exposed to Shocks?', *Journal of Development Economics* 79.1: 349
- Deaton, D. and J. Muellbauer (1980) *Economics and Consumer Behavior*. Cambridge University Press, Cambridge
- Deaton, D. and S. Zaidi (1999) *Guidelines for Constructing Consumption Aggregates For Welfare Analysis*, Working Papers 217, Princeton NJ: Princeton University, Woodrow Wilson School of Public and International Affairs, Research Program in Development Studies
- Deaton, D. and A. Grosh (2000) *Designing Household Survey Questionnaires for Developing Countries: Lessons from Ten Years of LSMS Experience: Chapter 17: Consumption*, Working Papers 218, Princeton, NJ: Princeton University, Woodrow Wilson School of Public and International Affairs, Research Program in Development Studies
- Dercon, S., J. Hoddinott and T. Woldehanna (2005) 'Shocks and Consumption in 15 Ethiopian Villages, 1999-2004', *Journal of African Economies* 14.4: 559-85
- Dercon, S. (1998) 'Wealth, Risk and Activity Choice: Cattle in Western Tanzania', *Journal of Development Economics* 55: 1-42
- Dercon, S. (2001) 'Assessing Vulnerability', memo, CSAE, Department of Economics, Oxford University
- Dercon, S. (2004) 'Growth and Shocks: Evidence from Rural Ethiopia', memo, University of Oxford, January 19, 2004

- Desai, S. and S. Alva (1998) 'Maternal Education and Child Health: Is there a Strong Causal Relationship?', *Demography* 35.1: 71-8
- Devereaux, S. (1993) 'Goats before Ploughs: Dilemmas of Household Response Sequencing During Food Shortages', *IDS Bulletin* 24.4: 52-9
- Dorward, Andrew, Simon Anderson, Susanne Clark, Bernadette Keane and Julieta Moguel (2001) 'Asset Functions and Livelihood Strategies: A Framework for Pro-Poor Analysis, Policy and Practice', <http://ageconsearch.umn.edu/bitstream/10918/1/adwp0101.pdf>. (accessed 24 February 2009)
- Dougherty, M. (2002) 'Gendered Scripts and Declining Soil Fertility in Southern Ethiopia', <http://web.africa.ufl.edu/asq/v6/V6i1a5.htm> (accessed 24 February 2009)
- Dunn, L. and L. Dunn (1997) *Examiner's Manual for the PPVT-III. Form IIIA and IIIB*, Minnesota: AGS
- Dunn, L., E. Padilla, D. Lugo and L. Dunn (1986) *Manual del Examinador para el Test de Vocabulario en Imágenes Peabody (Peabody Picture Vocabulary Test) – Adaptación Hispanoamericana (Hispanic-American Adaptation)*, Minnesota: AGS
- Durkin, M.S. (1994) 'Validity of the Ten Questions Screen for Childhood Disability: Results from Population-Based Studies in Bangladesh, Jamaica and Pakistan', *Epidemiology* 5: 283-9
- Ellis, F. (2000) 'The Determinants of Rural Livelihood Diversification in Developing Countries', *Journal of Agricultural Economics* 51.2: 289-302
- Ekman, B., Liem, N. T., Duc, H. A. and Axelson, H. (2008). Health insurance reform in Vietnam: a review of recent developments and future challenges. *Health Policy Plan* 23, 252-63
- Escobal, J., P. Suárez, S. Huttly, C.F. Lanata, M.E. Penny and E. Villar (2005) *Does Having a Newborn Child Affect Income Diversification Opportunities? Evidence from the Peruvian Young Lives Study*, Young Lives Working Paper 24, Oxford: Young Lives
- Eswaran, M. and A. Kotwal (1989) 'Credit as Insurance in Agrarian Economies', *Journal of Development Economics* 31.1: 37-53
- Evenson, R.E. and G. Mwabu (1996) 'Household Composition and Expenditures on Human Capital Formation in Kenya', *Research in Population Economics* 8: 205-32
- Fafchamps, M., C. Udry and K. Czukas (1998) 'Drought and Saving in West Africa: Are Livestock a Buffer Stock?', *Journal of Development Economics* 55: 273-305
- FAO (1996) *World Food Summit: Rome Declaration and Plan of Action*, Rome: FAO
- FAO (2007) *Guidelines for Measuring Household and Individual Dietary Diversity-version 3*, <http://www.foodsec.org/tr/nut/guidelines.pdf> (accessed 24 February 2009)
- Feeny, T. and J. Boyden (2003) *Children and Poverty: A Review of Contemporary Literature and Thought on Children and Poverty*, Virginia: Christian Children's Fund
- Feeny, T. and J. Boyden (2004) *Acting in Adversity – Rethinking the Causes, Experiences and Effects of Child Poverty in Contemporary Literature*, QEH Working Paper 116, Oxford: Refugee Studies Centre
- Filmer, D. and L. Pritchett (1999) 'The Effect of Household Wealth on Educational Attainment: Evidence from 35 Countries', *Population and Development Review* 25.1: 85-120

- Filmer, D. and L. Pritchett (1998) *Estimating Wealth Effects without Expenditure Data – or Tears: An Application to Educational Enrolments in States of India*, World Bank Working Paper 1994, Washington, DC: World Bank
- Forsberg, B.C., J.K. van Ginneken and N.J. Nagelkerke (1993) 'Cross-Sectional Household Surveys of Diarrhoeal Diseases – A Comparison of Data from the Control of Diarrhoeal Diseases and Demographic and Health Surveys Programmes', *International Journal of Epidemiology* 22.6: 1137-45
- Frongillo, E.A. (1999) 'Validation of Measures of Food Insecurity and Hunger', *Journal of Nutrition* 129: 506-9
- Gareaballah, E.T. and B.P. Loevinsohn (1989) 'The Accuracy of Mother's Reports about their Children's Vaccination Status', *Bulletin of the World Health Organization* 67.6: 669-74
- Glewwe, P. (2000) 'Education' in M. Grosh and P. Glewwe (eds.) *Designing Household Survey Questionnaires for Developing Countries: Lessons from 15 Years of the Living Standards Measurement Study*, Volume 1, Washington DC: World Bank
- Glick, P. and D.E. Sahn (2000) 'Schooling of Girls and Boys in a West African Country: The Effects of Parental Education, Income, and Household Structure', *Economics of Education Review* 19.1: 63-87
- Goldman, N. and A.R. Pebley (1994) 'Health Cards, Maternal Reports and the Measurement of Immunization Coverage: The Example of Guatemala', *Social Science & Medicine* 38.8: 1075-89
- Gofin R, Neumark YD, Adler B (2000). Birthweight recall by mothers of Israeli children. *Public Health* 2000; 114:161–163
- Grantham-McGregor, S., Y.B. Cheung, S. Cueto, P. Glewwe, L. Richter, B. Strupp and the International Child Development Steering Group (2007) 'Developmental Potential in the First 5 Years for Children in Developing Countries', *Lancet* 369: 60-70
- Gray, P.G. (1955) 'The Memory Factor in Social Surveys', *The Journal of the American Statistical Association* 50.270: 344-63
- Gray, S., E. Plante, R. Vance and M. Henrichsen (1999) 'The Diagnostic Accuracy of Four Vocabulary Tests Administered to Preschool-Age Children', *Language, Speech, and Hearing Services in Schools* 30: 196-206
- Grootaret, C., D. Narayan, V.N. Jones and M. Woolcock (2004) *Measuring Social Capital*, Washington, DC: World Bank
- Grosh, M. and P. Glewwe (2002) *Designing Household Survey Questionnaires for Developing Countries: Lessons from 15 Years of the Living Standards Measurement Study*, Washington, DC: World Bank
- Guerrant, D.I., S.R. Moore, A.A. Lima, P.D. Patrick, J.B. Schorling and R.L. Guerrant (1999) 'Association of Early Childhood Diarrhoea and Cryptosporidiosis with Impaired Physical Fitness and Cognitive Function Four-Seven Years Later in a Poor Urban Community in Northeast Brazil', *American Journal of Tropical Medicine and Hygiene* 61.5: 707-13
- Gulliford, M.C., D. Mahabir and B. Rocke (2003) 'Food Insecurity, Food Choices, and Body Mass Index in Adults: Nutrition Transition in Trinidad and Tobago', *International Journal of Epidemiology* 32: 508-16
- Ha, Tran Tru and Trudy Harpham (2005) 'Primary Education in Vietnam: Extra Classes and Outcomes', *International Education Journal* 65.5: 626-34

- Handa, S. (1996) 'Expenditure Behaviour and Children's Welfare: An Analysis of Female-Headed Households in Jamaica', *Journal of Development Economics* 50.1: 165-87
- Harel, Y., M.D. Overpeck, D.H. Jones, P.C. Scheidt, P.E. Bijur, A.C. Trumble and J. Anderson (1994) 'The Effects of Recall on Estimating Annual Nonfatal Injury Rates for Children and Adolescents', *American Journal of Public Health* 84.4: 599-605
- Hoff, K., A. Braverman and J.E. Stiglitz (1993) *The Economics of Rural Organization: Theory, Practice and Politics*, Washington, DC: World Bank
- Holland, Janet, Tracey Reynolds and Susie Weller (2007) 'Transitions, Networks, and Communities: The Significance of Social Capital in the Lives of Children and Young People', *Journal of Youth Studies* 10.1: 97-116
- Hulme, D., K. Moore and A. Shepherd (2001) *Chronic Poverty: Meanings and Analytical Frameworks*, Chronic Poverty Research Centre. CPRC Working Paper 2, Manchester: IDPM/Chronic Poverty Research Centre
- Idler, E.L. and Y. Benyamini (1997) 'Self-Rated Health and Mortality: A Review of Twenty-Seven Community Studies', *Journal of Health and Social Behavior* 38.1: 21-37
- International Association for the Evaluation of Educational Achievement (IEA) (2005) *Preprimary Project - Draft III. Sampling, Instrumentation and Data Collection*, Amsterdam: IEA
- Islam, N. (1995) 'Growth Empirics: A Panel Data Approach', *The Quarterly Journal of Economics* 110.4: 1127-70
- Jalan, J. and M. Ravallion (2002) 'Geographic Poverty Trap? A Micro Model of Consumption Growth in Rural China', *Journal of Applied Econometrics* 17: 329-46
- Jensen, Robert T. (2001) *Development of Indicators on Child Labour*, ILO Working Paper, Geneva: ILO
- Jouriles, E.N., L.J. Pffiffer and S.G. O'Leary (1988) 'Marital Conflict, Parenting, and Toddler Conduct Problems', *Journal of Abnormal Child Psychology* 16.2: 197-206
- Kagitcibasi, C. and B. Ataca (2005) 'Value of Children and Family Change: A Three-Decade Portrait from Turkey', *Applied Psychology: An International Review* 54.3: 317-37
- Kalter, H.D., R.H. Gray, R.E. Black and S.A. Gultiano (1991) 'Validation of the Diagnosis of Childhood Morbidity Using Maternal Health Interviews', *International Journal of Epidemiology* 20.1: 193-8
- Kalter, H.D., M. Hossain, G. Burnham, N.Z. Khan, S.K. Saha, M.A. Ali and R.E. Black (1999) 'Validation of Caregiver Interviews to Diagnose Common Causes of Severe Neonatal Illness', *Paediatric and Perinatal Epidemiology* 13.1: 99-113
- Kitzmann, K.M. (2000) 'Effects of Marital Conflict on Subsequent Triadic Family Interactions and Parenting', *Developmental Psychology* 36.1: 3-13.
- Kochar, A. (1999) 'Smoothing Consumption by Smoothing Income: Hours-of-work Responses to Idiosyncratic Agricultural Shocks in Rural India', *The Review of Economics and Statistics* 81.1: 50-61
- Kossmann, J., P. Nestel, M.G. Herrera, A. El-Amin and W.W. Fawzi (2000) 'Undernutrition and Childhood Infections: A Prospective Study of Childhood Infections in Relation to Growth in the Sudan', *Acta Paediatrica* 89.9: 1122-8

- Krause, N.M. and G.M. Jay (1994) 'What do Global Self-Rated Health Items Measure?', *Medical Care* 32.9: 930-42
- Krishnaraj, M., R.M. Sudarshan and A. Shariff (1998) *Gender, Population and Development*, New Delhi, India: Oxford University Press
- Kroeger, A. (1983) 'Health Interview Surveys in Developing Countries: A Review of the Methods and Results', *International Journal of Epidemiology* 12.4: 465-81
- Langsten, R. and K. Hill (1998) 'The Accuracy of Mothers' Reports of Child Vaccination: Evidence from Rural Egypt', *Social Science and Medicine* 46.9: 1205-12
- Laraki, K. (1989) 'Ending Food Subsidies: Nutritional, Welfare, and Budgetary Effect', *World Bank Economic Review* 3.3: 395-408
- Lasky, R.E., R.E. Klein, C. Yarbrough, P.L. Engle, A. Lechtig and R. Martorell (1981) 'The Relationship between Physical Growth and Infant Behavioural Development in Rural Guatemala', *Child Development* 52.1: 219-26
- Lee, J. (1994) 'Validation of Self-Report of Literacy among Peri-Urban Women in Bolivia', *International Journal of Epidemiology* 23.3: 646-7
- Leone, L., M. Perugini and A.P. Ercolani (1999) 'A Comparison of Three Models of Attitude-Behaviour Relationships in the Studying Behaviour Domain', *European Journal of Social Psychology* 29: 161-189
- LeVine, R.A., S. Dixon, S. LeVine, A. Richman, P.H. Leiderman, C.H. Keefer and T.B. Brazelton (1994) *Childcare and Culture: Lessons from Africa*, New York: Cambridge University Press
- Likert, R. (1932) 'A Technique for the Measurement of Attitudes', *Archives of Psychology* 22.140: 1-55
- Lokshin, M., K.M. Harris and B.M. Popkin (2000) *Single Mothers in Russia: Household Strategies for Coping with Poverty*, World Bank Policy Research Working Paper No. 2300, Washington, DC: World Bank
- Lundberg, O. and K. Manderbacka (1996) 'Assessing Reliability of a Measure of Self-Rated Health', *Scandinavian Journal of Social Medicine* 24.3: 218-24
- Manderbacka, K., E. Lahelma and P. Martikainen (1998) 'Examining the Continuity of Self-Rated Health', *International Journal of Epidemiology* 27.2: 208-13
- Martorell, R., C. Yarbrough, A. Lechtig, H. Delgado and R.E. Klein (1976) 'Upper Arm Anthropometric Indicators of Nutritional Status', *American Journal of Clinical Nutrition* 29.1: 46-53
- Masset, E. and H. White (2003) *Measuring the Asset Base and Diversification of Households*, Young Lives Livelihoods Analysis Technical Notes 1 and 2, Oxford: Young Lives
- Mathers, C.D., C. Stein and D. Ma Fat (2002) *The Global Burden of Disease 2000 Study (version 2): Methods and Results*, GPE discussion paper No. 50, Geneva: Global Program on Evidence for Health Policy, World Health Organization
- Mayer, B., A. Agache, I. Albert and G. Trommsdorff (2006) 'Value of Children and Intergenerational Relations. Cross-Cultural Equivalence of Instruments', unpublished manuscript, University of Konstanz, Konstanz, Germany

- Meikle, S., T. Ramasut and J. Walker (2001) *Sustainable Urban Livelihoods: Concepts and Implications for Policy*, Working Paper No. 112, University College London: Development Planning Unit
- Mekonen, A., B. Tefera, T. Woldehanna, N. Jones, J. Seager, T. Alemu and G. Asgedom (2005) *Child Nutritional Status in Poor Ethiopian Households: The Role of Gender, Assets and Location*, Young Lives Working Paper 26, Oxford: Young Lives
- Melgar-Quinonez, H.R., A.C. Zubieta, B. Mknelly, A. Nteziyaremye M.F. Gerardo and C. Dunford (2006) 'Household Food Insecurity and Food Expenditure in Bolivia, Burkina Faso, and the Philippines', *Journal of Nutrition* 136: 1431-7
- Melgar-Quinonez, H., A.C. Zubieta, E. Valdez, B. Whitelaw and L. Kaiser (2005) 'Desarrollo de un instrumento para monitorear inseguridad alimentaria en la Sierra de Manantlán, Jalisco', *Salud Publica Mex* 47.6: 413-22
- Mock, C., F. Acheampong, S. Adjei and T. Koepsell (1999) 'The Effect of Recall on Estimation of Incidence Rates for Injury in Ghana', *International Journal of Epidemiology* 28.4: 750-5
- Mooij, J. (2005) *Reforms and Children: Issues and Hypotheses Regarding the Impacts of Reform Policies on the Welfare of Children in India, with Special Emphasis on Andhra Pradesh*, Young Lives Working Paper 16, Oxford: Young Lives
- Moore, K. (2001) *Frameworks for Understanding the Intergenerational Transmission of Poverty and Well-Being in Developing Countries*, Chronic Poverty Research Centre Working Paper No.6, International Development Department, University of Birmingham: Chronic Poverty Research Centre
- Morduch, J. (1999) 'Between the Market and the State: Can Informal Insurance Patch the Safety Net?', *World Bank Research Observer* 14.2: 187-207
- Morley, S. and D. Coady (2003) *From Social Assistance to Social Development: Targeted Education Subsidies in Developing Countries*, Washington, DC: International Food Policy Research Institute
- Morris, M., J. Butterworth, R. Lamboll, E. Lazaro, F. Maganga and N. Marsland (2005) 'Household Livelihood Strategies in Semi-Arid Tanzania: Synthesis of Findings. Annex 1' in *Understanding Household Coping Strategies in Semi-Arid Tanzania*, Natural Resources Systems Programme Final Technical Report R7805 to DFID, London: Department for International Development
- Morrow, V. (2001) 'Young People's Explanations and Experiences of Social Exclusion: Retrieving Bourdieu's Concept of Social Capital', *International Journal of Sociology and Social Policy* 21.4/5/6: 37-63
- Moser, C.A. (1969) *Survey Methods in Social Investigation*, London: Heinemann Educational Books
- Murray, C.J.L. and A.D. Lopez (1996) *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries and Risk Factors in 1990 and Projected to 2020*, Cambridge, MA: Harvard University Press on behalf of the World Health Organization and the World Bank
- Myers N., Kent J.(1995). Environmental exodus: An emergent crisis in the global arena. Washington D.C.: Climate Institute

- Narayan, D., R. Patel, K. Schafft, A. Rademacher and S. Koch-Schulte (2000) *Voices of the Poor: Can Anyone Hear Us?*, New York: Oxford University Press
- Newell, C. (1995) *Methods and Models in Demography*, Chichester: John Wiley and Sons
- Olenick, I. (2000) 'Women's Exposure to Mass Media is Linked to Attitudes toward Contraception in Pakistan, India and Bangladesh', *International Family Planning Perspective* 26.1: 48-50
- Paxons, C.H. (1992) 'Using Weather Variability to Estimate the Response of Savings to Transitory Income in Thailand', *American Economic Review* 82: 15-33
- Pelletier, D.L. and L.A. Msukwa (1991) 'The Use of National Sample Surveys for Nutritional Surveillance: Lessons from Malawi's National Sample Survey of Agriculture', *Social Science & Medicine* 32.8: 887-98
- Pelto, G.H., J. Urgello, L.H. Allen, A. Chavez, H. Martinez, L. Meneses, C. Capacchione and J. Backstrand (1991) 'Household Size, Food Intake and Anthropometric Status of School-Age Children in a Highland Mexican Area', *Social Science & Medicine* 33.10: 1135-40
- Perez-Escamilla, R., Ana Maria Segall-Corrêa, Lucia Kurdian Maranhã, Maria de Fátima Archanjo Sampaio, Leticia Marín-León and Giseli Panigassi (2004) 'An Adapted Version of the US Department of Agriculture Food Insecurity Module Is a Valid Tool for Assessing Household Food Insecurity in Campinas, Brazil', *Journal of Nutrition* 134.8: 1923-8
- Phillipson, Chris and Paul Thompson (2008) 'Whither Community Studies? A Special Issue on Researching Community Studies, Past and Present', *Social Research Methodology* 11.2: 87-91
- Pollitt, E., W.E. Watkins and M.A. Husaini (1997) 'Three-month Nutritional Supplementation in Indonesian Infants and Toddlers Benefits Memory Function 8 Y Later', *American Journal of Clinical Nutrition* 66.6: 1357-63
- Portes, A. (1998) 'Social Capital: Its Origins and Applications in Modern Sociology', *Annual Review of Sociology* 24: 1-24
- Punch, S. (2004) 'Negotiating Autonomy: Children's Use of Time and Space in Rural Bolivia' in V. Lewis, M. Kellett, C. Robinson, S. Fraser and S. Ding (eds) *The Reality of Research with Children and Young People*, London: Sage
- Rahman A, Bunn IZ, Lovel H , *et al.* Impact of maternal depression on infant nutritional status and illnesses: a cohort study. *Arch Gen Psychiatry* 2004;61:946-52
- Ramakrishnan, R., T.V. Rao, L. Sundaramoorthy and V. Joshua (1999) 'Magnitude of Recall Bias in the Estimation of Immunization Coverage and its Determinants', *Indian Pediatrics* 36.9: 881-5
- Ramakrishnan, R., T. Venkatarao, P.K. Koya and P. Kamaraj (1999) 'Influence of Recall Period on Estimates of Diarrhoea Morbidity in Infants in Rural Tamilnadu', *Indian Journal of Public Health* 43.4: 136-9
- Reardon, T., J.E. Taylor, K. Stamoulis, P. Lanjouw and A. Balisacan (2000) 'Effects of Non-farm Employment on Rural Income Inequality in Developing Countries: An Investment Perspective', *Journal of Agricultural Economics* 51.2: 266-88
- Reardon, T. (1997) 'Using Evidence of Household income Diversification to Inform Study of the Rural Non-farm Labor Market in Africa', *World Development* 25.5: 735-47

- Restrepo, María Adelaida, Paula J. Schwanenflugel, Jamilia Blake, Stacey Neuharth-Pritchett, Stephen E. Cramer and Hilary P. Ruston (2006) 'Performance on the PPVT-III and the EVT: Applicability of the Measures with African American and European American Preschool Children', *Language, Speech, and Hearing Services in Schools* 37.1: 17-27
- Ridge, T. (2003) 'Listening to Children. Developing a Child-Centred Approach to Childhood Poverty in the UK', *Family Matters* 65: 4-9
- Rose, D., P.P. Basiotis and B.W. Klein (1995) 'Improving Federal Efforts to Assess Hunger and Food Insecurity', *Food Review* 18: 18-23
- Rosenhouse, S. (1989) *Identifying the Poor: Is Headship a Useful Concept?* Living Standards Measurement Survey Working Paper 58, Washington, DC: World Bank
- Rosenzweig, M.R. and K.I. Wolpin (1993) 'Credit Market Constraints, Consumption Smoothing, and the Accumulation of Durable Production Assets in Low-Income Countries: Investment in Bullocks in India', *Journal of Political Economy* 101.2: 223-44
- Ross, D.A., S.R. Huttly, N. Dollimore and F.N. Binka (1994) 'Measurement of the Frequency and Severity of Childhood Acute Respiratory Infections through Household Surveys in Northern Ghana', *International Journal of Epidemiology* 23.3: 608-16
- Ross, D.A. and J.P. Vaughan (1986) 'Health Interview Surveys In Developing Countries: A Methodological Review', *Studies in Family Planning* 17.2: 78-94
- Sauerborn, R., A. Adams and M. Hien (1996) 'Household Strategies to Cope with the Economic Costs of Illness', *Social Science & Medicine* 43.3: 291-301
- Schultz, T.P. (2004) 'School Subsidies for the Poor: Evaluating the Mexican Progresá Poverty Program', *Journal of Development Economics* 74.1: 199-250
- Schwarz, B., P. Chakkarath, G. Trommsdorff, O. Schwenk and B. Nauck (2001) 'Report on Selected Instruments of the Value of Children (Main study)', unpublished manuscript, University of Konstanz, Konstanz, Germany
- Scoones, Ian (1998) *Sustainable Rural Livelihoods: A Framework for Analysis*, IDS Working Paper 72, Brighton: Institute of Development Studies
- Sigman, M., C. Neumann, M. Baksh, N. Bwibo and M.A. McDonald (1989) 'Relationship Between Nutrition and Development in Kenyan Toddlers', *Journal of Pediatrics* 115.3: 357-64
- Sinha, Saurabh and Michael Lipton (1999) *Damaging Fluctuations, Risks and Poverty: A Review*, background paper for the World Development Report 2000/2001, University of Sussex, Brighton: Poverty Research Unit at Sussex
- Sørensen, E. and J. Torfing (2003) 'Network Politics, Political Capital and Democracy', *International Journal of Public Administration* 26: 609-34
- Swindale, A. and P. Ohri-Vachaspati (1999) *Measuring Household Food Consumption: A Technical Guide*, Washington, DC: FANTA
- Taylor, B. and A. Heath, (1996) *The Use of Double-sided Items in Scale Construction*, CREST Working Paper 37, London: Centre for Research into Elections and Social Trends
- Thomas, Duncan (1994) 'Like Father, Like Son; Like Mother, Like Daughter. Parental Resources and Child Height', *Journal of Human Resources* 29.4: 950-88
- Ukrainetz, T.A. and C. Bloomquist (2002) 'The Criterion Validity of Four Vocabulary Tests Compared with a Language Sample', *Child Language Teaching and Therapy* 18: 59-79

- Ukrainetz, T.A. and D.S. Duncan (2000) 'From Old to New: Examining Score Increases on the Peabody Picture Vocabulary Test-III', *Language, Speech, and Hearing Services in Schools* 31: 336-9
- Ulijaszek, S.J. and D.A. Kerr (1999) 'Anthropometric Measurement Error and the Assessment of Nutritional Status', *British Journal of Nutrition* 82.3: 165-77
- UNESCO (2005) 'Education for All: Global Monitoring Report', http://portal.unesco.org/education/en/ev.php-URL_ID=35939&URL_DO=DO_TOPIC&URL_SECTION=201.html (accessed 25 February 2009)
- UNESCO (2010). Migration website. http://portal.unesco.org/shs/en/ev.php-URL_ID=4493&URL_DO=DO_TOPIC&URL_SECTION=201.html://www.unesco.org/new/index.php?id=19165&L=0 (accessed 01.10.2010)
- UNICEF (2000) 'End of Decade Assessment: Multiple Indicator Cluster Surveys', <http://www.childinfo.org/mics2.html> (accessed 25 February 2009)
- Uphoff, M. (1999) 'Understanding Social Capital: Learning from the Analysis and Experiences of Participation' in Partha Dasgupta and Ismail Serageldin (eds.) *Social Capital: A Multifaceted Perspective*, Washington, DC: World Bank
- Valadez, J.J. and L.H. Weld (1992) 'Maternal Recall Error of Child Vaccination Status in a Developing Nation', *American Journal of Public Health* 82.1: 120-2
- Veenhoven, R. (undated) 'World Database of Happiness, Item bank', <http://www.worlddatabaseofhappiness.eur.nl> (accessed 25 February 2009)
- Ware, H. (1984) 'Effects of Maternal Education, Women's Roles and Child Care on Child Mortality' in W.H. Mosley and Lincoln C. Chen (eds.) *Child Survival: Strategies for Research*, New York: Population Council
- Washington, J.A. and H.K. Craig (1999) 'Performance of At-Risk, African American Preschoolers on the Peabody Picture Vocabulary Test-III', *Language, Speech, and Hearing Services in Schools* 30: 75-82
- White, Howard and Edoardo Masset (2002) *Child Poverty in Vietnam: Using Adult Equivalence Scales to Estimate Income-Poverty for Different Age Groups*, Young Lives Working Paper 6, Oxford: Young Lives
- Williams, K.T. and J. Wang (1997) *Technical References to the Peabody Picture Vocabulary Test -Third Edition*, Circle Pines, MN: American Guidance Service
- Witter, S. (1996). 'Doi moi' and health: the effect of economic reforms on the health system in Vietnam. *Int J Health Plann Manage* 11, 159-72.
- Woodhead, Martin (2004) 'Psychosocial Impacts of Children's Work: A Framework for Research, Monitoring and Intervention', http://www.ucw-project.org/pdf/publications/psychosocial_impacts_cw.pdf (accessed 25 February 2009)
- Woodhead, Martin (1998) *Children's Perspectives on Their Working Lives: A Participatory Study in Bangladesh, Ethiopia, the Philippines, Guatemala, El Salvador and Nicaragua*, Stockholm: Raedda Barnen
- World Bank (2000) *World Development Report 2000/2001. Attacking Poverty*, New York: Oxford University Press

World Bank (2001) *Standardized Welfare Indicators*, Washington, DC: World Bank

World Bank (2004) *World Development Report 2004. Making Services Work for Poor People*, Washington, DC: World Bank

World Health Organisation (1994) *A user's guide to self-reporting questionnaires*. Geneva: Division of mental health, WHO

World Health Organisation (1986) 'Use and Interpretation of Anthropometric Indicators of Nutritional Status', *Bulletin of the World Health Organization* 64.6: 929-41

World Health Organisation (2000) *The World Health Report 2000*, Geneva: World Health Organisation

World Values Survey (2000) <http://www.worldvaluessurvey.org/happinesstrends/> (accessed 25 February 2009)

Zaman, S.S. (1990) 'Validity of the 'Ten Questions' for Screening Serious Childhood Disability: Results from Urban Bangladesh', *International Journal of Epidemiology* 19: 613-20

Young Lives data archive

We are committed to the widest possible dissemination of our research including public archiving of our data to enable policymakers and other researchers to benefit from this unique longitudinal survey.

The anonymised data from Round 1 and Round 2 of the quantitative survey are archived in the UK with the Economic and Social Data Service (project ref: SN 5307, <http://www.data-archive.ac.uk/findingData/snDescription.asp?sn=5307>). Both datasets are also available on CD-ROM for users within developing countries. We plan to archive anonymised data from our qualitative research (partial transcripts of interviews and activities with children) with ESDS in early 2010.