

***The Growing Up In Australia Study Content:
What are we asking, who are we asking and why?***

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Paper Presented at

Longitudinal Study of Australian Children Symposium
(Friday 14 Feb, 9-10.30am)

8th AIFS Research Conference
February 12-14th, 2003,
Melbourne
Australia.

Acknowledgements:

AIFS Project Operations Team (Ann Sanson, Project Director).

*Department of Family & Community Services, Canberra, Strategic Policy & Analysis
Branch, LSAC Project Team (Karen Wilson, Project Officer).*

*Research Consortium Advisory Group members, especially design team leaders: Steve
Zubrick, Jan Nicholson, Melissa Wake, Donna Berthelsen, Judy Ungerer and Linda Harrison.*

1. Introduction to study content

As noted in the first paper (and published in Discussion Paper 1), the goal of the *Growing Up In Australia* study is to consider in a holistic way the influence of a myriad of social, familial, parental and child characteristics, dynamics and relationships in order to (a) explain and predict longitudinally their individual and combined effects upon key child outcomes, and (b) suggest policy strategies and interventions which might assist children and parents to improve child outcomes both in the short and long term.

The background paper also outlined the seven main research questions, but each also relies upon a number of more specific questions involving sub-component dimensions of subject or theoretical areas (*for details see Figures 1- 5 in Appendix A*). In this paper, study content will be referred to via domains and constructs, which will be operationalised by measures and instruments, where:

- **‘Domains’** are defined as an overarching subject category, within which we will be measuring specific theoretical constructs;
- **‘Constructs’** are what it is we will be measuring using single items or scales;
- **‘Measures’** are actual questions, scales/inventories, test scores or physical measurements; and
- **‘Instruments’** are face-to-face (F2F) interview schedules, self-complete modules or mail-out questionnaires, direct assessment tests, household record forms, (*and possibly Time Use diaries*).

Measurement selection principles

In selecting measures to represent constructs, the following design principles have been used as far as possible (Figure 1).

FIG 1: Design Principles

Measures must	Address the research questions
	Have both scientific strength and theoretical suitability
	Promote design parsimony and efficiency
	Allow for national or international direct comparison
	Minimise the collection of data that might be perceived as sensitive, unacceptable or irrelevant by parents
	Be suitable for longitudinal design
	Provide the best mix of methods of administration
	Consider possible interfaces with other data sources (esp. direct data linkage)

Where possible, questions/items will be based on standard questions from established surveys. For example, some key socio-demographic data items will be measured and classified in a way that accords with accepted Australian Bureau of Statistics (ABS) standards (though there are a number of instances where variation from these standards is necessary due to theoretical considerations or space constraints), and certain measures are duplicated from large comparable overseas studies such as ECLS-K/B (USA), ALSPAC (UK) and NLSCY (Canada).

It should also be noted that this study is in fact two concurrent studies - one for a birth cohort of infants between 6 and 12 months old and one a birth cohort of children aged between 4.5 and 5 years olds. Therefore, while many common neighbourhood, family, parental and child measures will be used in instruments for both birth cohorts, there will also be many differences in content, due to use of age-appropriate measures (eg. regarding breastfeeding or parenting practices) and the amount of retrospective data being collected (with more being needed for the 4 year olds).

2. Study Domains and Design teams

Since April 2002, five Consortium 'Domain' teams (totalling around 20 advisors) have been working with the AIFS Project Team to develop the content of Wave 1 survey instruments. These teams cover the 5 study domains:

1. Core domain (design team – led by Prof Steve Zubrick, WA)

(A) Socio-demographics - FAMILY & SOCIAL CONSTRUCTS

- *Household & family*
- *Parents' Paid work*
- *Parents' finances*
- *Parents' other human capital*
- *Housing*
- *Neighbourhood & Community involvement*
- *Use of services*

(B) Child development & functioning – CHILD PROGRESS/ OUTCOMES

- *Behavioural functioning*
- *Emotional functioning*
- *Language development*
- *Cognitive development*
- *Readiness to learn*
- *Motor/physical development*
- *Social competence*

2. Family Functioning Domain (design team led Dr. Jan Nicholson, QUT.)

- *Parenting practices (intact & separated parents)*
- *Contact & contributions from non-resident parents*
- *Parenting stress*
- *Couple relationships*
- *Parent-child relationships (both parents & step-parents)*
- *Family relationships (including extended family)*
- *Work & family balance*

- *Other social support (informal or formal)*

3. Health Domain (design team led Dr Melissa Wake, RCH, Vic.)

- *Gestation & birth (child & mother)*
- *General health – child (diet, exercise etc)*
- *Chronic conditions/ disabilities*
- *Psychological development*
- *Physical development (including speech)*
- *Parental health (resident, non-resident & step-parents)*

4. Child Care Domain (team led Judy Ungerer & Linda Harrison, NSW)

- *Use of non-parental care*
- *Quality of care*
- *Child assessment by carer*

5. Education Domain (design team led Dr Donna Berthelsen, QUT).

- *At home learning activities*
- *Preschool/kinder programs & child assessment*
- *Other out-of-home activities*
- *Transition to school*
- *Direct cognitive assessment (by interviewers)*

It should also be noted that in some instances there is a somewhat arbitrary division of subject areas between domains, resulting in some overlaps in content. Some of these are:

- overlap between family functioning & socio-demographics (eg. community involvement and informal community/social supports)
- overlap between health and child functioning (eg. physical development, speech)
- overlap between education and family functioning (eg. social functioning)

For a full list of sub-domain constructs and the specific research questions being addressed see Figures 1- 5 in Appendix A.

3. Strengths of the Design

The overarching research question asks not only how all the above aspects of the child's personal, family and social life shape his/her progress and future outcomes, but also how their effects combine or interact in explaining or predicting behavioural, socio-emotional, cognitive, physical and health outcomes. The mechanisms via which an outcome is reached are also of importance to researchers and policy-makers because some policy intervention at the right time could potentially change a less than optimum trajectory (for example, poor health in adulthood or early school leaving).

Time sequenced process analysis

The study will enable researchers to examine mediating or process factors in a longitudinal (or time sequence) framework. This will facilitate both explanatory and predictive analyses to help inform policy-makers about the nature and timing of assistance needed by families. Given the study's broad scope, with multiple research questions in each subject domain, it might be helpful to give an example of how the

study could help answer one of its specific research questions. The question for illustration is ***“How do socio-economic factors contribute over time to child outcomes?”***

For example one aspect of child behaviour is aggressive or ‘externalising’ behaviour which may affect how a child perceives or is perceived by others, and so can relate to social competence or success in relationships. Cross-sectional analysis to explain this type of behaviour was carried out for 3-5 year olds using data from the 1997 (USA) PSID Child Development Supplement (Yeung, Linver & Brooks-Gunn 2002) using a ‘family Stress’ model, which showed that lower family income led to behavioural problems via maternal emotional distress and related parenting practices.

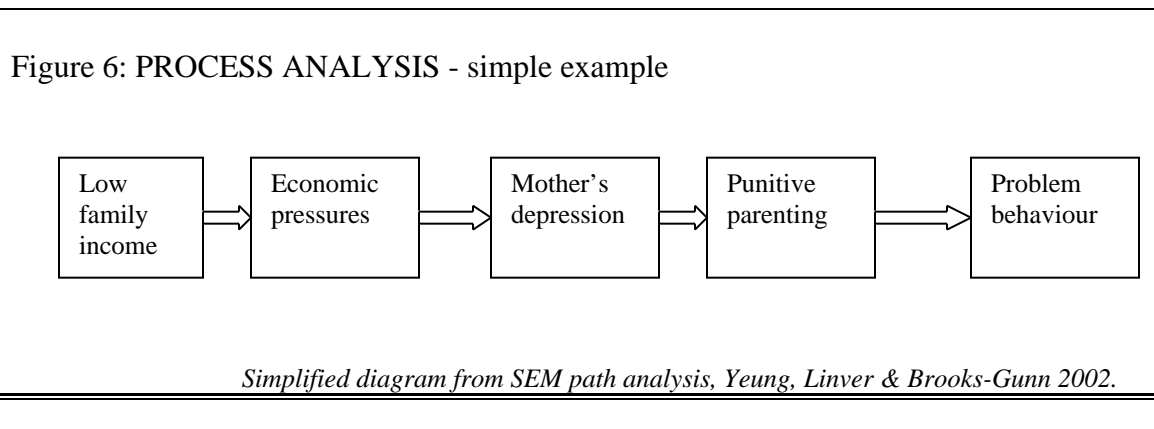
Using the Growing Up In Australia study constructs and measures, elements in a similar, fairly simple analysis would be as follows:

INDEPENDENT (input)		DEPENDENT (outcome)	
Construct	Operationalised by	Construct	Operationalised by
Economic status	Family income level Income stability Hardship Unemployment	Child behaviour	SDQ sub-scale for externalising behaviour

MEDIATORS (process or mechanism)

Construct	Operationalised by
Maternal depression	Score on mental health (K6) depression scale
Parenting practices	Score on coercive or hostile parenting scales

Schematically, this cross-sectional (one point in time) analysis would look like the diagram in Figure 6 (a simplified diagram from the SEM path analysis performed by Yeung, Linver & Brooks-Gunn, 2002.).



However, the *Growing Up In Australia* study could accomplish this sort of analysis for Australian children, with the added dimension of change across time. *An example of this more complex type of longitudinal analysis, using similar input and output variables and data from the Australian Temperament Project (Smart et al, 1999) can be found in Appendix B.*

Thus, this new study will be able to not only (1) examine the relationship between socio-economic status, mental health, parenting practices and child behaviour at each interview wave (eg. with child aged 4, 6, 8 & 10 yrs) but also explore processes such as (2) cumulative effects of low income or poverty on behaviour over time and (3) the effects of changes in any one of these elements across time. For instance, what is the effect, over time, of family income remaining low, but mother's mental health greatly improving? Similarly, what is the effect of increased income or economic security (for example after further study or re-partnering) upon parenting practices?

Multiple informants

One of the main strengths of the LSAC design is that to answer these complex research questions, we will use multiple informants to gather comprehensive information across all domains.

Study informants will include:

- the primary care-giving parent
- other resident parent or step-parent (Parent 2),
- non-resident parent (Parent 2)
- childcare providers (formal or informal)
- pre-school or school teachers
- the child her/himself (physical markers & direct assessment tasks).

The primary respondent will be the child's primary parent (Parent 1) or main caregiver. This person will typically be the child's biological mother, but is defined as follows:

'Primary caregiver': The person who knows most about the child, or spends the most time with the child (*could* be a father, guardian, grandparent, etc).

Patterns of Time Use

A "cross-domain" area for investigation is the pattern of children's use of their time (eg outdoor activities, unstructured play, watching television, reading) and how time-use patterns relate to child outcomes, including family attachment, physical fitness level and obesity and social skills. One possibility in addressing this issue is to use a Time Use diary.

A suitable "Light Time Use Diary" is being developed by the consortium for piloting during this year, which could possibly be incorporated into the overall design, depending on budget and other practical issues. A list of around 20 age-appropriate

events or activities would be listed for marking off in quarter hour blocks, with extra dimensions of who the child was with and where they were during the event or activity. If this goes ahead, three 24-hour periods would be recommended (a Saturday and Sunday, plus one designated week day).

Other possible ‘enhancements’

Also under consideration, subject to budget, pilot results and issues of respondent burden, are the following possible data enhancements for the study:

- (1) Biomarker saliva tests (to measure levels of stress in children via cortisol levels),
- (2) Data linkage to the National Child Care Accreditation Council (childcare quality),
- (3) Use of Global Positioning Systems (to more easily link to local area data).

4. Instruments

Gathering information across all domains and informants requires a large and complex set of instruments, as well as a mixture of methods. Figures 7 and 8 list all the instruments, informants and administration methods for Wave 1 of the study.

FIG 7: Instruments and informants pre-tested for LSAC Wave 1 – 0 yr Cohort

INSTRUMENT	RESPONDENT/INFORMANT	CHILD AGE COHORT
1. Household form	Either parent	Both
2. Family questionnaire	Either parent	Both
3. Face to face interview (for parent 1 and child)	Parent 1	Children aged 0 years
4. Self-completion module	Parent 1	Children aged 0 years
5. Self-completion module	Parent 2	Children aged 0 years
6. Self-complete questionnaire	Non-resident parent	Children aged 0 years
7. Self-complete or telephone questionnaire	Home based childcare provider	Children aged 0 years
8. Self-complete questionnaire	Centre based childcare provider	Children aged 0 years
9. Direct assessment (weight and head circumference)	Child	Children aged 0 years
<i>(10. Light time-use diary)</i>	<i>Parent 1</i>	<i>Children aged 0 years</i>

FIG 8: Instruments and informants pre-tested for LSAC Wave 1 – 4 yr Cohort

INSTRUMENT	RESPONDENT/INFORMANT	CHILD AGE COHORT
1. Household form	Either parent	Common to both
2. Family questionnaire	Either parent	Common to both
3. Face to face interview (for parent 1 and child)	Parent 1	Children aged 4 years
4. Self-completion module	Parent 1	Children aged 4 years
5. Self-completion module	Parent 2	Children aged 4 years
6. Self-complete questionnaire	Non-resident parent	Children aged 4 years
7. Self-complete or telephone questionnaire	Home based childcare provider	Children aged 4 years
8. Self-complete questionnaire	Pre-school program provider	Children aged 4 years
9. Direct assessment (weight height, waist; Who am I? PPVT)	Child	Children aged 4 years
<i>(10. Light time-use diary)</i>	<i>Parent 1</i>	<i>Children aged 4 years</i>

In addition to the face-to face information from the main caregiver, parents will be asked to complete self-complete questionnaires, to be filled in either at the time of interview or mailed back to the researchers. It should be noted here that at present it is not planned to conduct a separate personal interview with the second parent (mainly fathers) as many will not be present at the time of interview. Some physical measurements of both age cohorts of children will be taken, and school-readiness and cognitive tests will also be administered to 4 year old children. *As noted above, there is also the possibility of asking the primary parent to complete a three-day “Light Time Use Diary” for their child.*

If the target child receives 10 or more hours of non-parental care, data from both home-based and centre-based childcare providers and pre-school teachers will also be collected via mail-out/mail-back questionnaires, with some possible telephone interviews or follow-ups.

Length of instruments

The current aim is for the face-to-face home interview to average approximately 80-90 minutes, depending upon the age cohort and applicability of various sections. This timing includes the household form and family questionnaire, the primary parent face-to-face and self-complete modules, and the child direct assessment.

Self-complete modules should take around 20 minutes to complete. The primary parent self-complete questionnaire should be able to be completed while the interviewer is present, but parent 2 resident other parent self-complete may have to be collected or mailed-back, and the parent 2 non-resident parent questionnaire will be

both mailed out and mailed back, if consent and contact details are provided by the primary parent.

Development process

In developing the instruments for Wave 1, the process has so far included:

1. Formulation of domain and sub-domain content during March/April 2002.
2. Posting of the content list and other information on the AIFS/ Growing Up In Australia Study web-site.
3. Lists of measures and first draft instruments to the funder, FaCS, in May 2002
4. Draft 2 revision circulated at the end of July 2002
5. Draft 3 revisions in August/September 2002, which were then pre-tested.

During this development period, there has been ongoing feedback from the FaCS project team and consultation with the Steering Committee, Consortium Advisory Group and various other advisors and stakeholders, such as State and Territory government departments and the ABS. We also held two-day workshops with the Consortium and FaCS team in July and November 2002, to discuss issues around content, length of instruments and possible enhancements to the core design.

Pre-Test 1

Full drafts of all instruments were pre-tested during September and October 2002, to test each questionnaire and each target respondent for both age cohorts. Pre-tests were conducted in metropolitan and rural Victoria by the Project Team at AIFS. A total of 50 in-scope volunteers were recruited via snow-ball methodology using personal contacts, charitable organisations, and some child care or pre-school centres already involved with other AIFS projects. Physical measures and cognitive assessment tasks for 4 year olds took place either at the end of the focus groups or in the home, with the child's mother present, but not directly involved.

The first pre-tests covered the following aspects :

- appropriateness for respondents - mothers, fathers, teachers, care providers
- timing issues - to estimate overall length of F2F & Self-Complete instruments
- clarity of questions for respondents, particularly SC modules
- preferences for, and relative timings of, alternative measures suggested
- clarity of interviewer instructions/ sequencing instructions
- acceptability of sensitive material (eg. concerning conflict etc)
- lay-out of questions, particularly for proposed self-complete sections
- acceptability of approaches for contact details of NR parents/ carers/teachers
- process for collecting data from NRP, carers/teachers
- consent procedures - especially for data linkage or biomarkers
- alternative methods of administration - re. timing, wording, process
- feasibility, acceptability, time needed for time use diary approach.

These pre-tests were conducted using the following three methods:

- small focus groups of mothers to test modules, consent forms etc.
- in-home, full interviews (and self-completes) with mothers and fathers
- face-to-face, phone and mail-out/mail-back testing of self-complete questionnaires for child care providers, teachers and non-resident fathers.

Pre-test Findings

The pre-testing found that most parents thought the content of the survey was interesting and acceptable, although too long. Most had no difficulty answering the majority of questions, but some questions or sections were difficult to understand, repetitive or thought inappropriate. Very few questions were considered too sensitive to ask. There were mixed reactions to consent for data linkage and mail-outs to carers or teachers, but most parents would agree to the direct assessment of children.

The main finding was that, in order to meet budget and targets, and minimise respondent burden (as respondents will not be paid), the length of most instruments needed reducing by a factor of around 25 per cent. However, the task of reducing the overall amount of content is very challenging, due to the very broad scope of the study and the numerous factors which impact upon child outcomes, as well as the nature of many of the measures required for LSAC, particularly established scales with multiple items (typically between 5 to 30 items) which are needed to adequately tap complex concepts.

5. Forward Process

(i) Pre-test 2

During March/April 2003, more pre-testing will be conducted to test the revised instruments. AIFS and the contracted fieldwork agency will use an informal, snowball sample of up to 50 interviews per cohort, as well as mail-outs to teachers, child carers and non-resident parents. Results from this second phase will then allow the survey instruments to be further refined to reduce the number of changes required between the Dress Rehearsal and Wave 1 data collection phases.

(ii) Dress Rehearsal

The Dress Rehearsal will be the formal pilot test, to be conducted in August-October 2003. As such, it will mimic the full process for the Wave 1 main stage data collection. The Fieldwork agency will have final carriage for the formatting and sequencing of the questions to allow for efficient data scanning and overall interviewing efficiency. Training processes, interviewer instructions and manuals will be developed at this more formal stage. The sample will involve around 400-500 families drawn from the Medicare records sampling process (as discussed in Paper 3 by Carol Soloff, the *Growing Up In Australia* Survey Manager).

These next steps and their timing can be summarised as follows:

Pre-Test 2	March-April 2003	Up to 100 families
Dress Rehearsal	August-October 2003	400-500 families
Main Wave 1	March-August 2004	10,000 families

FIG 1: Core Measures design team – led by Prof Steve Zubrick, WA.

(A) SOCIO-DEMOGRAPHICS DOMAIN		GROWING UP IN AUSTRALIA STUDY Research Question
HOUSEHOLD & FAMILY	Household/ Family structure All members sex, age, COB, relationships with each other, etc Family transitions – nature, timing, number	Q 1: What are the impacts of family composition and dynamics on child outcomes, and how do these change over time? <i>-size and make up of family, e.g. step, non-resident parents</i> <i>- impact of family break-up and reformation</i>
PARENTS' PAID WORK	Work status Occupation Work history Work conditions including family-friendly practices Job search Pre/post natal work, Maternity leave	<i>Q3: How do workforce status and conditions of work affect family functioning and child outcomes?</i>
PARENTS' FINANCES	Earnings Income support Income bracket Financial stress Hardship Child support/ maintenance	<i>Q3: What are the impacts of the family's experience of poverty or perceived income inequality?</i> <i>Q 9: How do socio-economic factors contribute over time to child health outcomes?</i>
PARENTS' OTHER HUMAN CAPITAL	Parental Education Ethnic Background Country of birth Ethnic identity Language Religious identity	<i>Q9: How do socio-cultural factors contribute over time to child health outcomes?</i> <i>Q12: What factors (child, family, community) impact on early learning?</i>
HOUSING	Location Type/ condition of dwelling Tenure & Costs Overcrowding / Mobility	<i>Q 9: How do socio-economic factors contribute over time to child health outcomes?</i>
NEIGH'HOOD & COMMUNITY INVOLVEMENT	Involvement in local groups Perception of community safety Neighbourhood characteristics Sense of belonging, trust & support	<i>Q 5: How important are broad neighbourhood characteristics for child outcomes?</i> <i>Q6: How are neighbourhood perceptions related to engagement and connectedness, and to child outcomes?</i>

USE OF SERVICES	Availability of parks, other amenities Access, Use, Efficacy of – Community services Medical services Family supports Pre-schools/ Child care Etc. Barriers to access/use	<i>Q5: Availability, access to, and use of broad level resources and amenities (including health and parental support services).</i> <i>Q6: What factors determine the family's use of the range of services available</i>
(B) CHILD FUNCTIONING DOMAIN		GROWING UP IN AUSTRALIA STUDY Research Question
CHILD DEVELOPMENT & FUNCTIONING	Parent, carer and teacher assessment of: Social, Emotional, Behavioural, Physical, Cognitive functioning. (including language and speech development) Direct assessment of physical & cognitive functioning ## tests ## measurements.	<i>Q 7: impact over time of character of child's emotional attachment to other humans.</i> <i>Q1: impact of child's temperament</i> <i>Q8: What is the impact early conduct disorder?</i> <i>Q 11: What is the impact of non-parental childcare on the child's development?</i> <i>Q14. What are the interactions among factors in family functioning, health, non-parental care and education that affect the child's:</i> <ul style="list-style-type: none"> - Behavioural adjustment - Emotional adjustment - Language development - Cognitive development - Readiness to learn - Overall health - Motor/physical development - Social competence

FIG 2: Family Functioning design team – led by Dr Jan Nicholson, QUT.

FAMILY FUNCTIONING DOMAIN		GROWING UP IN AUSTRALIA STUDY Research Question
PARENTING PRACTICES - INTACT & SEPARATED PARENTS	Parenting style: <ul style="list-style-type: none"> - Discipline practices, - Consistency, monitoring, - Warmth, overprotection Involvement of both parents in parenting responsibilities Agreement/conflict between parents about parenting	<i>Q1 What are the impacts of family relationships and dynamics on child outcomes, and how do these change over time?</i> <i>- parenting practices, values and skills,</i> <i>- roles of family members in relation to child;</i>

<p>CONTACT & CONTRIBUTIONS</p> <p>- NON-RESIDENT PARENTS</p>	<p>Resident parent report on - contact, support, involvement of non-resident parents</p> <p>Non-resident (fathers) report - contact, support, involvement</p> <p>Agreement/conflict between parents about parenting</p>	<p><i>Q1: Character of parental relationships (including non-resident parents), including level of conflict</i></p> <p><i>Q1: impact of family break-up and reformation</i></p> <p><i>Q2: What can be detected of the impacts and influences of fathers on their children?</i></p>
<p>PARENTING STRESS</p>	<p>Self-efficacy, stress, coping Stressful life events</p>	<p><i>Q1: parents' confidence in applying practices, skills</i> <i>Q1: family coping strategies, particularly in times of stress</i></p>
<p>COUPLE RELATIONSHIP</p>	<p>Marital status; Relationship & parenting history Marital satisfaction, conflict Areas of disagreement Conflict styles (incl. violence)</p>	<p><i>Q1: character of parental relationships (including non-resident parents), including level of conflict</i></p> <p><i>Q1: family coping strategies, particularly in times of conflict</i></p>
<p>PARENT-CHILD RELATIONSHIP</p> <p>(BOTH PARENTS & STEP-PARENTS)</p>	<p>Interactions with child Assessment of child's personality</p> <p>Level of involvement in child related activities</p>	<p><i>Q1: roles of family members in relation to child</i></p>
<p>FAMILY RELATIONSHIPS</p>	<p>Family cohesion Wider family support – nature, availability</p>	<p><i>Q6: How important are family and child social connections to child outcomes?</i></p> <p><i>Q1: involvement of extended family or other family members</i> <i>Q1: family coping strategies</i></p>
<p>WORK & FAMILY BALANCE</p>	<p>Work (role) stress - perceived control/ autonomy & job security / Preferences - family friendly practices</p> <p>Work- family life interference or 'spill-over'.</p>	<p><i>Q3: How do workforce status and conditions of work affect family functioning and child outcomes?</i></p>
<p>OTHER SOCIAL SUPPORT</p>	<p>Parenting programs Community/ Neighbourhood - see CORE domain above</p>	<p><i>Q6: How connected are families to wider social networks and community level resources?</i></p>

FIG 3: Health design team – led by Dr. Melissa Wake, RCH, Vic.

HEALTH DOMAIN		GROWING UP IN AUSTRALIA STUDY Research Question
GESTATION & BIRTH	Gestation and post-natal development Birth weight, length, complications Full-term/ premature Mother’s pregnancy (includes smoking, alcohol, depression) Early feeding (breast?)	Q 7: What is the impact over time of early experience on health, including conditions affecting the child’s physical development? <i>- exposures in utero; - low birth weight or other indicator of poor intra-uterine development;</i>
GENERAL HEALTH - CHILD	Diet, Breastfeeding, Physical exercise, Immunisation, Impact of chronic conditions Asthma & other illnesses or Disabilities, Sleep, sun exposure, dental, Hospital use, etc. Biological measures <i>- Height, Weight - Girth , Head circumference</i>	<i>Q7: Nutrition (including breastfeeding); Q7: immunisation & chronic illness or injury Q10: What are the patterns of children’s use of their time and how do these relate to child outcomes including physical fitness, obesity? Q14. Physical development</i>
PSYCHOLOGICAL & PHYSICAL DEVELOPMENT	Child mental health Parental concerns about child’s progress Parental assessment of child’s physical & mental development	<i>Q.8 What is the impact of poor mental health, including infant mental health and early conduct disorder?</i>
PARENTAL HEALTH	Physical – diet, lifestyle substance use – smoking, alcohol etc. Mental - depression / coping	<i>Q7: Parental mental disorders, especially maternal depression</i>

FIG 4: Child care design team – led by Prof Judy Ungerer, NSW

.CHILD CARE DOMAIN		GROWING UP IN AUSTRALIA STUDY Research Question
USE OF NON-PARENTAL CARE	Use, Cost, Age at entry, Type (includes multiple) Changes/ Adjustment to transitions	Q 11 What is the impact of non-parental childcare on the child’s developmental outcomes over time? <i>How important are:</i> - multiple care arrangements & changes in care arrangements; - age of child on entry to care;
QUALITY OF CARE	Family-centre involvement, teacher & centre quality and characteristics.	<i>Q11:How important is:</i> <i>Type of care, including centre-based care, family day care, after school care, and informal care.</i> Q6: Importance of family and child social connections.
CHILD ASSESSMENT	Carer assessment of child cognitively, socially & behaviourally.	<i>Q14 – Child behavioural, social, emotional and cognitive outcomes..</i>

FIG 5: Early education design team – led by Dr. Donna Berthelson, QUT.

EDUCATION DOMAIN - at 4 years		GROWING UP IN AUSTRALIA STUDY Research Question
AT HOME LEARNING ACTIVITIES	Parental assessment of language & cognitive development Readiness to learn Pre-literacy activities Learning environment - - books & Reading, - TV, Videos, Computers Parenting interaction/practices (as above)	Q 12. What early experiences support children’s emerging literacy and numeracy? - <i>how much and what type of communication occurs between children and their parents?</i> - <i>what is the impact of the child’s exposure to books, storytelling and other literacy-related experiences at home?</i> <i>Q10 What are the patterns of children’s use of their time?</i>
PRESCHOOL/ KINDER PROGRAMS & CHILD ASSESSMENT	Parent report & Teacher report on - use, activities, assessment of child cognitively, socially & behaviourally.	<i>Q12: How much and what type of communication occurs between children and their teachers?</i> <i>Q12: What is the impact of the child’s exposure to books, storytelling and other literacy-</i>

	Family-centre involvement, teacher & centre quality, characteristics.	<i>related experiences in pre-school or other children's service?</i> <i>Q14 – Child behavioural, social, emotional and cognitive outcomes.</i>
OTHER OUT-OF-HOME ACTIVITIES	Libraries, museums, other cultural experiences Participation in organised classes, groups, sports etc	<i>Q6: How engaged are children in non-family social structures and institutions such as sports or church groups?</i> <i>Q12: What factors (child, family, community) impact on early learning</i>
TRANSITION TO SCHOOL	Parents' expectations & choice of school Information, orientation (What most assists this transition? – Wave 2, 6 yr data collection too)	Q 13. What factors over the span of the early childhood period ensure a positive 'fit' between child and school and promote a good start in learning literacy and numeracy skills in the first years of primary education?
DIRECT ASSESSMENT	Cognitive tests - IQ or Achievement scores from direct literacy/numeracy /vocabulary tests	<i>Q14 – Child cognitive functioning (school readiness).</i>

CROSS-DISCIPLINE	GROWING UP IN AUSTRALIA STUDY Research Questions
CHILD'S OUTCOMES ACROSS DOMAINS & OVER TIME	<i>Q14: What are the interactions among factors in family functioning, health, non-parental care and education that affect child outcomes of:</i> <i>Behavioural adjustment</i> <i>Emotional adjustment</i> <i>Language development</i> <i>Cognitive development</i> <i>Readiness to learn</i> <i>Overall health</i> <i>Motor/physical development</i> <i>Social competence</i>
CHILD'S TIME USE	<i>Q10 What are the patterns of children's use of their time?</i>

References

Yeung, W. J., Linver, M. R. & Brooks-Gunn, J. (2002) *Child Development*, November/December 2002, Volume 73, Number 6, pages1861-1879.

Smart, D. et al (1999) Australian Temperament Project data.

Sanson et al (2002) *Introducing the Longitudinal Study of Australian Children, LSAC Discussion Paper No. 1*, AIFS, Melbourne.

APPENDIX B - COMPLEX LONGITUDINAL ANALYSIS EXAMPLE

