



# *Growing up in Australia:* *The Longitudinal Study of Australian Children* *is now walking and talking*

**MATTHEW GRAY and DIANA SMART<sup>1</sup>**

## ***Introduction***

With the release of data from the second wave of *Growing up in Australia*: the Longitudinal Study of Australian Children (LSAC), Australia now has national longitudinal data on children's development. While there are questions that can be answered using cross-sectional surveys, there are many that can only be answered using longitudinal data. Longitudinal surveys provide information about the dynamics of change at an individual or family level. They can also provide insights into the effects of experiences earlier in life on outcomes later in life. For the benefits of longitudinal data to be realised, it is crucial that loss of the sample over time be kept to a minimum and that comparability of information be maintained as far as possible across waves.

The LSAC study aims to shed light on the development of the current generation of Australian children, and to investigate the contribution of the children's social, economic and cultural environments to their adjustment and wellbeing. More specifically, it seeks to improve understanding of the complex interplay of factors that foster or impede healthy early childhood development, to identify opportunities for early intervention and prevention in policy areas concerning children, and to inform the policy debate in general. The study enables an examination of the impact of early experiences on later development, and the mapping of the diverse pathways followed by children as they develop. It also helps to determine the opportune times for the provision of services and welfare support and to identify the long-term consequences of policy changes.

*Growing Up in Australia* was initiated and funded by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA). The study is being undertaken in partnership with the Australian Institute of Family

Studies, with advice being provided by a consortium of leading researchers at research institutions and universities throughout Australia. The data collection is undertaken for the Institute by the Australian Bureau of Statistics (ABS).

**The sample is broadly representative of all Australian children in each of two selected age cohorts: children born between March 2003 and February 2004 and children born between March 1999 and February 2000.**



© Double Jay Graphic Design Pty Ltd

Multiple facets of children's development, health and wellbeing are examined, including physical health, social, cognitive and emotional development. The study seeks to understand the risk and protective processes underlying children's development, looking at the interaction between children's attributes (such as their temperament) and the contexts in which they are raised, particularly their family, child care, school, neighbourhood and community experiences. The study also examines dynamics within these settings; for example, the parenting practices and the quality of co-parental relationships to which children are exposed, and the quality of care received in differing types of non-parental care.

A set of 14 key research questions guides the study, clustered around the themes of child and family functioning, health, child care, and education (see Sanson et. al. 2002, for a detailed discussion of these questions):

- What are the impacts of family relationships, composition and dynamics on child outcomes and how do these change over time?
- What can be detected of the impacts and influences of fathers on their children?
- How are child outcomes affected by the characteristics of their parents' labour force participation, their educational attainment and family economic status, and how do these change over time?
- Do beliefs and expectations of children (parental, personal and community, in particular parents' and child's expectations of the child's school success, parents' workforce participation, family formation and parenting) impact on child outcomes, and how do these change over time?
- How important are broad neighbourhood characteristics for child outcomes? Does their importance vary across childhood? How do family circumstances interact with neighbourhood characteristics to affect child outcomes?
- How important are family and child social connections to child outcomes? How do these connections change over time and according to the child's age? Does their importance vary across childhood?
- What is the impact over time of early experience on health, including conditions affecting the children's physical development?
- What is the impact on other aspects of health and other child outcomes of poor mental health, including infant mental health and early conduct disorder? How does the picture change over time?
- How do socio-economic and socio-cultural factors contribute over time to child health outcomes?
- What are the patterns of children's use of their time for activities such as outdoor activities, unstructured play, watching television, and reading; and how do these relate to child outcomes including family attachment, physical fitness level and obesity, social skills, and effectiveness over time?
- What is the impact of non-parental child care on the child's developmental outcomes over time, particularly those relating to social and cognitive competence, impulse control, control of attention and concentration, and emotional attachment between child and family?
- What early experiences support children's emerging literacy and numeracy?
- What factors over the span of the early childhood period ensure a positive "fit" between children and school, and promote a good start in learning literacy and numeracy skills in the first years of primary education?
- What are the interactions among factors in family functioning, health, non-parental care and education that affect child outcomes?

LSAC was initiated and is funded by FaHCSIA, and the study is managed in partnership with the Australian Institute of Family Studies. A consortium of leading researchers and experts from universities and research agencies provides advice on design and methodology issues.<sup>2</sup> Wave 1 of the fieldwork was conducted by I-view, and the fieldwork for Waves 2–4 is being undertaken by the Australian Bureau of Statistics (ABS).

### **Study design and sample recruitment**

This section provides a brief description of the study's design and the way in which the initial sample was recruited; more detailed information can be found in discussion and technical papers on the project's website <http://www.aifs.gov.au/growingup>

The study is using an accelerated cross-sequential design in which two cohorts of children are being followed for 6 years (and possibly longer), starting from when the children were aged 0–1 years and 4–5 years. The 0–1 year old cohort is often described as the B (baby) cohort and the 4–5 year old cohort as the K (kindergarten) cohort (or alternatively they can be identified by the years of their birth: 1999–2000 birth cohort and 2003–2004 birth cohort).

Face-to-face interviews are conducted every two years, with the first wave of data collection occurring



in 2004. In addition, a between-waves mailout survey was conducted between Waves 1 and 2 (Wave 1.5) and between Waves 2 and 3 (Wave 2.5). Wave 3 is currently in the field and is scheduled for completion in November 2008.

The two-cohort design will enable information on children's development over the first 10 or 11 years of life to be collected in 6 years. The two cohorts will also be able to be compared at overlapping ages, to gauge the effect of growing up in differing social conditions and policy settings. The overlapping of cohorts will first occur in Wave 3 (at 4–5 and 6–7 years) and will then occur for each subsequent wave (shown by arrows in Table 1).

As the focus of the study is on children's development, "the child" was the sampling unit of interest. The sampling frame was the Medicare Australia (formerly the Health Insurance Commission) enrolments database. During 2004, a sample of more than 18,500 children within particular birth dates was taken from the Medicare administrative database. First, a sample of children was drawn via a random selection of 330 postcodes. Next, children and families within these postcodes were randomly selected for invitation into the study. A process of stratification was used to ensure that the numbers of children in each state/territory and within and outside each capital city were proportionate to the population of children in these areas.

A total of 10,090 children and their families participated in Wave 1; approximately half of the children were infants (aged 3–19 months) and half were 4–5 years old. The sample is broadly representative of all Australian children (citizens and permanent residents) in each of two selected age cohorts: children born between March 2003 and February 2004 (B cohort) and children born between March 1999 and February 2000 (K cohort). Children in some remote parts of Australia were excluded because of the extremely high data collection costs in these areas.

Reports from multiple informants are sought in order to obtain information about the child's behaviour across differing contexts and to reduce the effects of respondent bias. Information is being collected from the parents who live with the child (biological, adoptive or step-parents), the child (using physical measurement, cognitive testing and interview depending upon the age of the child), home-based and centre-based carers for pre-school children who are regularly in non-parental care, and teachers (for school-aged children). From Wave 2, information is also being sought from parents who live apart from the child but who have contact with them. See Table 2 for a summary.

Face-to-face interviews are conducted with the primary carer of the child (Parent 1). At Wave 1, this was the child's biological mother in 97% of families. In addition, Parent 1 is asked to complete a questionnaire and a time use diary about the child's activities. The other resident parent (biological, adoptive or step-parent) is also asked to complete a leave-behind questionnaire. Consent is sought to send a self-complete questionnaire to home-based

Table 1		Age of cohorts, Waves 1–4			
Cohort	Wave 1	Wave 2	Wave 3	Wave 4	
Year	2004	2006	2008	2010	
B cohort	0–1 years	2–3 years	4–5 years	6–7 years	
K cohort	4–5 years	6–7 years	8–9 years	10–11 years	

carers, centre-based carers and teachers. Almost all parents provided consent. In addition, the interviewer recorded some observations about the neighbourhood, family and child.

In Wave 1, for the B cohort (infants), physical measurements of the child were taken (weight and head circumference) and, for the K cohort (4–5 year olds), physical measurement and cognitive testing (the "Who am I?" measure was used to assess the general cognitive abilities needed for beginning school, and the Peabody Picture Vocabulary Test [PPVT] assessed language skills). In Waves 2 and 3, height, weight and waist measurements were taken for both cohorts. The K cohort cognitive testing in Waves 2 and 3 used an age-appropriate PPVT plus the Matrix Reasoning from the Wechsler Intelligence Scale for Children. In Wave 3, the B cohort cognitive testing repeated the Wave 1 K cohort assessments. From age 6–7 onwards, the child is interviewed.

In Wave 1, interviewers spent an average of 120 minutes in each home; in Wave 2 this time was reduced to 75 minutes. In Wave 3 it is planned to be 90 minutes.

### Areas covered by LSAC

As outlined above, LSAC collects data on a wide range of topics. A summary of the topics covered by LSAC and their scope is provided in Table 3 below.

A novel feature of LSAC is the use of time use diaries to collect data on a child's activities throughout two 24-hour periods, divided into 15-minute blocks. For each 15-minute block, options are presented in four categories. These are:

- what the child was doing;
- where the child was;
- who was in the same room, or nearby if outside; and
- whether someone was being paid for this activity to take place (in Wave 2, for the K cohort, this was replaced by whether the activity was part of the child's homework).

In addition, information is collected on the day and date the diary was completed, who completed the diary, and whether the day was atypical. In Waves 2 and 3, information on daily diet was also collected.

### Response rates and sample retention

The final Wave 1 sample represented 53% of all families who were sent a letter by Medicare Australia. Refusals were the largest source of sample loss (31% for the B cohort and 35% for the K cohort), followed

**Table 2** Sources of information, Waves 1, 2 and 3

	Source of information						
	Child	Parent 1 (primary carer)	Parent 2 (if lives with child)	Parent living elsewhere (PLE)	Home-based carer	Centre-based carer	Teacher
<b>Wave 1</b>							
<b>Cognitive and/or physical testing</b>							
B cohort (infants)	✓						
K cohort (4–5 year olds)	✓						
<b>Interviewer administered</b>							
B cohort		✓PAPI					
K cohort		✓PAPI					
<b>Self-complete form(s)</b>							
B cohort		✓SCIP & SCMB	✓SCMB		✓SCMB	✓SCMB	
K cohort		✓SCIP & SCMB	✓SCMB			✓SCMB	✓SCMB
<b>Time use diary</b>							
B cohort		✓SCMB					
K cohort		✓SCMB					
<b>Wave 2</b>							
<b>Cognitive and/or physical testing</b>							
B cohort (2–3 years old)	✓						
K cohort (6–7 years old)	✓						
<b>Interviewer administered</b>							
B cohort		✓CAI					
K cohort	✓CAI	✓CAI					
<b>Self-complete form(s)</b>							
B cohort		✓SCIP & SCMB	✓SCMB	✓SCMB	✓SCMB	✓SCMB	
K cohort		✓SCIP & SCMB	✓SCMB	✓SCMB			✓SCMB
<b>Time use diary</b>							
B cohort		✓SCMB					
K cohort		✓SCMB					
<b>Wave 3</b>							
<b>Cognitive and/or physical testing</b>							
B cohort (4–5 years old)	✓CAI						
K cohort (8–9 years old)	✓CAI						
<b>Interviewer administered</b>							
B cohort		✓CAI		✓CATI			
K cohort	✓CAI	✓CAI		✓CATI			
<b>Self-complete form(s)</b>							
B cohort		✓SCIP	✓SCMB			✓SCMB	✓SCMB
K cohort		✓SCIP	✓SCMB				✓SCMB
<b>Time use diary</b>							
B cohort		✓SCMB					
K cohort		✓SCMB					
<p><i>Notes:</i> PAPI: Face-to-face pen-and-paper interview. CAI: Face-to-face computer-assisted interview. CATI: Computer-assisted telephone interview. SCIP: Self-complete questionnaire while interviewer present. SCMB: Leave-behind or mailout self-complete questionnaire. The time use diary was not necessarily completed by Parent 1.</p>							



**Table 3** Topics covered by LSAC, Waves 1, 2 and 3

Topic	Scope
Family demographics	Demographic information relating to the family, such as education, ethnicity and religion.
Finances	Financial information, such as income and receipt of government benefits.
Health behaviour and risk factors	Behaviours and risk factors that potentially impinge upon or promote the health of the study child or his/her family. Includes behaviours such as parental smoking and drinking, child physical activity and diet, as well as risk factors such as a parent experiencing diabetes during pregnancy
Health status	Information about the physical and mental health status of the study child or his/her family such as body mass index, diagnosis with conditions and number of hospital stays.
Home education environment	Information on factors likely to promote or hinder the child's learning while at home, such as parental support for education, number of books in the home and TV use. Also contains information on parent interaction with teachers, such as parent-teacher interviews, with parents' and teachers' perspectives being obtained.
Housing	Information on housing, such as number of bedrooms, tenure type and payments.
Learning and cognition outcomes	Information on the child's development in the areas of learning and cognition, including language, literacy and numeracy.
Learning environment	Characteristics of child care or school environment, such as practices employed by teachers and childcare workers in their work, such as time use, use of resources and general philosophies.
Paid work	Information on work status, such as employment type, occupation and work/family interactions.
Parent living elsewhere	Details of the child's other parent, such as the relationship to study child, interactions with resident parents and child support.
Parenting	Information on parenting styles and other aspects of parenting, such as self-efficacy
Program characteristics	Characteristics of the school, preschool or childcare program, such as type of program, number of days or hours the child attends and staff satisfaction.
Relationships	Information on the quality of relationships, primarily focused on the relationship between Parent 1 and Parent 2, but also on broader family harmony.
Social and emotional development	Information relevant to the social and emotional development of the child, such as temperament, behaviour peer interactions and emotional states.
Social capital	Information on social capital, such as interactions with neighbours, neighbourhood characteristics and use of services.

*Source: AIFS (2007)*

by “non-contact”. Non-contact occurred when the address details were out-of-date or if only a post office box address was available. The rates of non-contact were 10% for the B cohort and 14% for the K cohort. The response rates achieved if non-contactable families are excluded is 64% for the B cohort and 57% for the K cohort.<sup>3</sup>

The Wave 2 data collection took place in 2006, with 9,070 families completing an interview, yielding a response rate of 90% of the originally recruited sample. Similar numbers of families from each cohort participated (4,606 in the B cohort and 4,464 in the K cohort). Between Waves 1 and 2, 210 families permanently withdrew from the study. A further 204 families elected not to participate in the 2nd wave but to remain members of the study. Sixty-one families were away for the entire fieldwork period and five children had died. The largest cause of non-response, however, was an inability to locate families. A total of 540 families were not able to be contacted. These families are still considered to be study members.

This retention rate compares favourably with those achieved by comparable international studies. For example, the Millennium Cohort Study, a United Kingdom longitudinal study of approximately 19,000 families and babies, had a sample retention rate of 79% between Wave 1 and Wave 2 (sweep 1 and 2 in the terminology used by the Millennium Cohort Study) (Hansen & Joshi, 2007). It should be



**The Wave 2 data collection took place in 2006, with 9,070 families completing an interview, yielding a response rate of 90% of the originally recruited sample ... This retention rate compares favourably with those achieved by comparable international studies.**

noted that this was about a two-and-a-half year period, compared to the two years between LSAC main waves. The Household, Income and Labour Dynamics in Australia (HILDA) survey, a general population household survey that commenced in 2001, had a sample retention rate between Wave 1 and 2 (a one-year period, in contrast to the two years between waves for LSAC) of 86%, and between Waves 1 and 3 of 80%.

In Wave 2 of LSAC, there was some variation in the participation rates of selected sub-groups. Of single-parent families, 81% took part, as did 80% of

**Table 4** Response to forms by cohort, Waves 1 and 2 (%)

	B cohort (2003–04 birth cohort)		K cohort (1999–2000 birth cohort)	
	% of Wave 1 eligible interview sample	Response rate of those eligible	% of Wave 1 eligible interview sample	Response rate of those eligible
<b>Wave 1</b>				
Parent 1 leave-behind questionnaire	100.0	85.0	100.0	84.9
Parent 2 self-complete questionnaire	90.7	79.8	86.0	79.0
Teacher self-complete questionnaire	–	–	95.5	68.8
Home-based carer self-complete questionnaire	15.4	43.4	–	–
Centre-based carer self-complete questionnaire	8.5	53.4	–	–
Time use diary	100.0	78.9	100.0	77.6
	% of Wave 2 eligible interview sample	Response rate of those eligible	% of Wave 2 eligible interview sample	Response rate of those eligible
<b>Wave 2</b>				
Parent 1 during-interview questionnaire	100.0	97.8	100.0	97.6
Parent 1 leave-behind questionnaire	100.0	76.8	100.0	78.3
Parent 2 self-complete questionnaire	89.0	76.3	85.2	77.5
Parent living elsewhere self-complete questionnaire	8.7	24.0	13.7	32.5
Teacher self-complete questionnaire	–	–	99.6	81.7
Home-based carer self-complete questionnaire	17.2	67.3	–	–
Centre-based carer self-complete questionnaire	36.3	68.4	–	–
Time use diary	100.0	74.3	100.0	77.6
Interview (% of Wave 1 sample)	90.2	100.0	89.6	100.0

*Notes:* Response rate columns are the percentage of those eligible to complete the form.  
*Source:* Misson & Siphthorp (2007)

**The LSAC sample is broadly representative of the population, with no large differences from ABS Census data on most characteristics.**



Aboriginal and Torres Strait Islander families, 85% of families in which the mother spoke English as a second language, and 87% of families in which mothers had not completed Year 12. The higher non-participation rate of these sub-groups was primarily due to difficulties in making contact with the families, rather than their refusal to participate.

Families can respond to all or only part of the study (with the exception of the face-to-face interview with the Parent 1, which all families must complete in order to participate in the wave).

Table 4 shows the response rates in Waves 1 and 2 for the differing data collection components.

Given the importance of retaining the sample, considerable effort is put into finding families with whom contact has been lost. An 1800 telephone number is provided for families to use to notify the study of any changes to their contact details. If a

family cannot be located, a variety of tracking methods are used. These include:

- phone calls to alternative contacts (families were asked to provide two contacts who are likely to know where they are if they move);
- visits to the provided address and leaving call-back cards (in Waves 1 and 2);
- search of the electronic White Pages;
- search of the electronic electoral roll; and
- use of address updates from Medicare Australia.

**Sample representativeness**

The LSAC sample is broadly representative of the population, with no large differences from ABS Census data on most characteristics. Table 5 benchmarks the characteristics of the LSAC sample at Waves 1 and 2 with ABS population estimates.

Variables with a close match to Census figures include mother's and father's country of birth, and study child gender. Children with mothers or fathers who have completed Year 12 are a little over-represented in the sample. Infants with no siblings are under-represented (by 3 percentage points), while 4–5 year olds in couple families are over-represented and those in sole-parent families are under-represented (each by 4 percentage points). Weights are provided with the data to reduce the impact of biases in the sample selection process and survey non-response. The clustered stratified nature of the sampling, in principle, needs to be taken into account when using the data. These



**Table 5** Sample characteristics

	B cohort				K cohort			
	Wave 1		Wave 2		Wave 1		Wave 2	
	LSAC %	ABS %	LSAC %	ABS %	LSAC %	ABS %	LSAC %	ABS %
<b>Gender*</b>								
Male	51.2	51.3	51.1	51.3	50.9	51.3	51.0	51.3
Female	48.8	48.7	48.9	48.7	49.1	48.7	49.0	48.7
<b>Family type</b>								
Two resident parents/guardians:	90.7	88.1	89.0	84.0	86.0	82.0	85.2	80.5
Both biological	90.1	n.a.	88.0	n.a.	82.9	n.a.	81.3	n.a.
Step- or blended family	0.2	n.a.	0.8	n.a.	2.2	n.a.	3.5	n.a.
Other	0.4	n.a.	0.2	n.a.	1.0	n.a.	0.4	n.a.
One resident parent/guardian:	9.3	11.9	11.0	16.0	14.0	18.0	14.8	19.5
Biological	9.3	n.a.	10.9	n.a.	13.9	n.a.	14.7	n.a.
Other	0.1	n.a.	0.1	n.a.	0.1	n.a.	0.1	n.a.
<b>Siblings</b>								
Only child	39.5	36.2	19.3	22.9	11.5	12.1	9.1	9.6
One sibling	36.8	35.6	49.1	43.6	48.4	45.9	45.2	42.4
Two or more siblings	23.7	28.2	31.6	33.5	40.1	42.0	45.7	48.0
<b>Ethnicity</b>								
Aboriginal or Torres Strait Islander	4.5	3.5	3.9	4.4	3.8	3.5	3.4	4.4
Mother speaks a language other than English at home	14.5	16.8	13.4	17.5	15.7	17.6	14.7	17.1
<b>Work status</b>								
Both parents or lone parent work	47.9	n.c.	56.9	n.c.	55.5	n.c.	65.4	n.c.
One parent works (in couple family)	40.8	n.c.	33.8	n.c.	32.8	n.c.	26.1	n.c.
No parent works	11.3	n.c.	9.3	n.c.	11.6	n.c.	8.6	n.c.
<b>Educational status</b>								
Mother completed Year 12	66.9	56.6	69.0	52.0	58.6	48.3	60.1	45.0
Father completed Year 12	58.5	50.2	59.7	47.4	52.7	45.3	53.2	43.1
<b>State*</b>								
New South Wales	31.6	34.1	31.1	33.4	31.6	33.7	31.1	33.6
Victoria	24.5	24.6	24.3	24.5	25.0	23.8	24.3	23.9
Queensland	20.6	19.3	21.4	19.8	19.8	19.7	21.4	20.1
South Australia	6.8	6.8	6.7	7.1	6.8	7.2	6.7	7.1
Western Australia	10.4	9.9	10.6	9.8	10.2	10.1	10.6	10.0
Tasmania	2.2	2.3	2.3	2.4	2.7	2.5	2.3	2.4
Northern Territory	1.7	1.4	1.4	1.4	1.7	1.6	1.4	1.3
Australian Capital Territory	2.1	1.7	2.2	1.6	2.3	1.3	2.2	1.6
<b>Region</b>								
Capital City Statistical Division	62.5	63.7	61.9	62.7	62.1	62.1	61.6	61.4
Balance of state	37.5	26.3	38.1	37.3	37.9	37.9	38.4	38.6
<b>Total</b>	<b>5,107</b>		<b>4,606</b>		<b>4,983</b>		<b>4,464</b>	
<p><i>Note:</i> The benchmark estimates (ABS column) are derived from the 2001 Census of Population and Housing for families for 0-, 2-, 4- and 6-year-olds, except where marked *, which are based on September 2004 Estimated Resident Population for families of 0-, 2-, 4- and 6-year-olds. n.a. = Not available. n.c. = Comparable data not available from the Census. Percentages may not total 100% due to rounding.  <i>Source:</i> LSAC (2006)</p>								

issues are discussed in detail in LSAC Technical Report 3, *Wave 1 Weighting and Non-Response* (Soloff, Lawrence, Misson, & Johnstone, 2006). As noted previously, Table 5 shows there were some differences in response rates at Wave 2 for particular subgroups (e.g. single-parent families, ATSI families, children with a mother with less than Year 12 education).

### **Between-wave surveys**

As well as the main data collection waves, two between-wave mail surveys have been conducted. The aim of these surveys is to gain an update of the child's progress in specific areas and to maintain the engagement of study families. The first between-wave survey took place in 2005 and included a brief update on the children's health and development, as well as their family, educational and care experiences. Information for the B cohort was also sought on families' service utilisation, parental employment history, maternity and other leave arrangements. In 2007, a second between-wave survey was undertaken that examined work and child care, parental return to work patterns, the child support arrangements of separated or divorced families, and children's media and technology use.

### **Administrative data supplementation**

The study has been able to link to administrative databases, thereby adding valuable information to supplement the data collected during fieldwork. To date, three data sources have been accessed: a) the Medicare Australia database to obtain information about the child's medical service use and immunisation history; b) the National Childcare Accreditation Council (NCAC) data to obtain information on the child care centres attended by children; and c) the ABS Census of Population and Housing data, to obtain socio-demographic profiles of the neighbourhoods and communities in which children live. As the study proceeds, it is hoped that further data sources will be linked to LSAC; for example, the new national literacy and numeracy benchmark results and geospatial data sources.

### **Data availability**

Data from Waves 1, 1.5, 2 and 2.5 have been released. The LSAC data set is publicly available, subject to an application process and the granting of a deed of licence. At the time of writing, there were more than 220 registered data users. Data user training workshops are regularly held to assist users gain familiarity with the complex data set.

### **Overview of articles in this edition of Family Matters**

A diverse set of papers reporting findings from LSAC are presented in this edition of *Family Matters*. These demonstrate the breadth of issues and variety of questions that can be addressed by the study. Some papers highlight the influence of children's salient environmental contexts (family, child care, school), while others focus on child wellbeing and adjustment.

**The effect of child care on children's development** is a widely debated issue. Regulatory environments differ across countries, making it difficult to evaluate the relevance of findings from international studies for Australia. The paper by Harrison addresses this issue, using Wave 2 data for the B cohort, when the children were aged 2–3 years. Harrison looks at the impact of hours and quality of care, differing types of child care (formal and informal), and caregiver practices. Higher quality care was associated with more positive socio-emotional outcomes for children. The impact of longer hours of care was mixed: on the one hand, children were reported to display higher levels of social competence, while on the other, higher rates of behaviour problems were evident. Informal care, which was generally provided by grandparents, was associated with more optimal ratings on social competence and behaviour problems. The time that caregivers were able to spend on active engagement with the children in their care was also important.

**The wellbeing of children and families following parental separation** has attracted much research and policy attention. Recent reforms to Australia's



**Recent reforms to Australia's family law system and Child Support Scheme acknowledge the important role played by both parents in children's lives, and emphasise shared decision-making, joint financial responsibility for children after separation, and support for family relationships at all stages.**



family law system and Child Support Scheme acknowledge the important role played by both parents in children's lives, and emphasise shared decision-making, joint financial responsibility for children after separation, and support for family relationships at all stages. Using K cohort data from the first two waves of LSAC, the paper by Losoncz describes the parenting arrangements formed by separated parents, the amount of contact between the study child and the parent living elsewhere, the degree of shared decision-making between separated parents, and the levels of conflict experienced by parents. The extent to which these aspects changed over a two-year period is also examined. In general, child support compliance was found to be relatively low, as was shared decision-making. The paper provides an example of the utility of LSAC data for addressing policy-related issues and information on family outcomes.

Children's school progress is a key interest of the LSAC study, with **parental contributions to children's educational outcomes** forming a central element. The article by Berthelsen and Walker describes the nature of parental involvement in children's education in the early years of school, as well as the relationships between parental involvement and children's learning competence. The analyses use Wave 2 data for children in the K cohort. The issues examined are parental expectations for the child's school completion and higher education; the responsiveness of schools to family needs; parental engagement in activities within their child's school; and connections between parental involvement and children's learning competence, after controlling for a range of child and family characteristics. Parental involvement is shown to be an important contributor to children's academic progress.

The paper by Gray, Baxter and Alexander uses Wave 1 data for the infant cohort to look at the **factors that support or hinder dual-employed couple families' capacity to provide child care for their infants themselves**. In a climate of concern about the impact of centre-based, non-parental child care on very young children (e.g., Biddulph, 2006), this is very timely. A second issue examined is whether parent-only care is facilitated by fathers taking on greater child care responsibilities. A range of factors, such as the age of the infant, the maintenance of breast feeding, and maternal employment conditions/characteristics, were associated with parent-only care. However, similar rates of regular father care were evident across dual-employment families undertaking parent-only care and those using other care arrangements, suggesting that child care by fathers was not a major influence on the capacity of working couple families to provide parent-only care.

Concern has been expressed about the **wellbeing of today's generation of Australian children**, with several trends suggesting that they may not be faring as well as previous generations of children. The existence of parallel data on children's temperament

and behaviour problems in the Australian Temperament Project (ATP) and the Longitudinal Study of Australian Children provided a rare opportunity for Smart and Sanson to compare children growing up in the 1980s with children of the 2000s, making use of the LSAC Wave 2 data from parents and teachers. Parent reports suggested that LSAC children were progressing as well as ATP children, and on some aspects were faring a little better. However, teacher reports suggested LSAC children were more likely to display conduct and hyperactive behaviour problems than their ATP counterparts. Reasons for these differing trends are discussed.

The articles in this issue of *Family Matters* illustrate the value of the first two waves of LSAC, the wide range of information contained in the data set, and the many interesting issues that can be investigated. Already, work on longitudinal connections has commenced, but the release of the Wave 3 data in 2009 will provide the first exciting opportunity to explore complex developmental pathways, using data covering a four-year period of children's lives.

#### Endnotes

- 1 This overview draws upon Gray and Sanson (2005).
- 2 The members of the Consortium Advisory Group are Professor Ann Sanson (Principal Scientific Advisor), University of Melbourne; Professor Stephen Zubrick (Chair), Telethon Institute for Child Health Research; Dr John Ainley, Australian Council for Educational Research; Associate Professor Donna Berthelsen, Queensland University of Technology; Dr Michael Bittman, University of New England; Professor Bruce Bradbury, University of New South Wales; Dr Linda Harrison, Charles Sturt University; Associate Professor Jan Nicholson, Murdoch Childrens Research Institute; Professor Bryan Rogers, Australian National University; Professor Michael Sawyer, University of Adelaide; Professor Sven Silburn, Telethon Institute for Child Health Research; Dr Lyndall Strazdins, Australian National University; Professor Graham Vimpani, University of Newcastle; and Associate Professor Melissa Wake, Murdoch Childrens Research Institute. Associate Professor Judy Ungerer, Macquarie University, was a member until 2007.
- 3 This response rate calculation assumes that the "non-contacts" would have responded at the same rate as those who could be contacted by an interviewer and is probably a reasonable assumption. Nonetheless, the fact that more geographically mobile families are more likely to be non-contacts may introduce some biases into the sample.

#### Reference

- Australian Institute of Family Studies. (2007). *Longitudinal Study of Australian Children data user guide: Version 3.0*. Melbourne: Author.
- Biddulph, S. (2006). *Raising babies: Should under 3s go to nursery?* London: HarperThorsons.
- Gray, M., & Sanson, A. (2005). *Growing Up in Australia: The Longitudinal Study of Australian Children. Family Matters, 72*, 4-9.
- Hansen, K., & Joshi, H. (2007). *Millennium Cohort Study second survey: User's guide to initial findings*. London: Centre for Longitudinal Studies, Bedford Group for Lifecourse and Statistical Studies, University of London.
- Longitudinal Study of Australian Children. (2006). *2005-06 annual report*. Melbourne: Australian Institute of Family Studies.
- Misson, S. & Siphthorp, M. (2007). *Wave 2 weighting and non-response* (LSAC Technical Paper No. 5). Melbourne: Australian Institute of Family Studies.
- Sanson, A., Nicholson, J., Ungerer, J., Zubrick, S., Wilson, K., Ainley, J. et al. (2002). *Introducing the Longitudinal Study of Australian Children* (LSAC Discussion Paper No.1). Melbourne: Australian Institute of Family Studies.
- Soloff, C., Lawrence, D., Misson, S., & Johnstone, R. (2006). *Wave 1 weighting and non-response* (LSAC Technical Paper No. 3). Melbourne: Australian Institute of Family Studies.

**Dr Matthew Gray** is Deputy Director (Research) and Executive Project Manager of the Longitudinal Study of Australian Children, and **Diana Smart** is General Manager (Research), both at the Australian Institute of Family Studies.