Family joblessness and child wellbeing in Australia

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1   Introduction

While the Australian economy has experienced an extended period of strong economic growth since the mid-1990s and the unemployment rate is low compared to that in most other OECD countries, Australia has a relatively high proportion of jobless families; that is, families in which no adult is employed. In 2007, 14.8% of Australian children aged less than 15 years were living in a jobless family. This is compared to 8.0% of US families and an OECD average of 8.7%.[1]

One of the reasons for the high rates of joblessness in families with children in Australia is the relatively low employment rate of lone mothers and the relatively high proportion of children living in lone-mother families.[2]

Family joblessness is the most important single cause of child poverty in Australia,[3] and there are concerns about its impact on children's developmental trajectories.[4] Indeed, one of the six priority areas for the Australian Social Inclusion Agenda is "helping jobless families with children by helping the unemployed into sustainable employment and their children into a good start in life".[5] In the mid-2000s the poverty rate for households with children in Australia was 10%, which is similar to the OECD average of 11% and much lower than the rate in the US which was 18%.[6]

It has been well established that unemployment (and joblessness) typically has negative effects on economic wellbeing, as well as the mental and physical health of individuals, and that these effects can flow on to other family members.[7] Of particular concern is the potential effect of parental joblessness on children's outcomes.

Concerns over the potential harmful effects of joblessness have led to the development of policies that attempt to both reduce levels of joblessness and improve the living standards of the jobless. In Australia, with regard to the latter, the income support system provides government benefits that help jobless families meet their financial needs, while in regard to the former, various government programs and supports aim to address barriers to employment and encourage labour force participation.

There is limited empirical evidence for Australia about the direct effects of parental unemployment and joblessness on child wellbeing. Much of the existing research is based upon US data; for example,

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[1]   Data on joblessness is from the OECD Family Database, Table LMF1.1.A. 13 February 2011. (www.oecd.org/els/social/family/database).

[2]   In 2007, 5.5% of children under 15 years in two-parent family were living in jobless families and 54.5% in lone-parent families were living in jobless families. The figures in the US were 2.8% of children in two-parent families and 26.6% for children in lone-parent families.. The OECD averages were 5.0% for two-parent families and 36.1% for lone-parent families. Data is from the OECD Family Database.

[3]   Peter Whiteford, Family joblessness in Australia. (Canberra: Social Inclusion Unit, Dept. of the Prime Minister and Cabinet, 2009).

[4]   For example, Peter Dawkins, 'The Distribution of Work in Australia' (1996) 72(218) *Economic Record* pp. 272-286. and P McClure, 'Participation Support for a More Equitable Society: The Report of the Reference Group on Welfare Reform' (2000).

[5]   Australian Government, *Social inclusion priorities* (2010) Australian Government <www.socialinclusion.gov.au/SIAgenda/Priorities/Pages/default.aspx> .

[6]   There were large differences in poverty rates for two-parent and lone-parent families. In the mid-2000s, the poverty rate (the share of all children living in households with an equivalised income of less than 50% of the median), in Australia for two-parent families was 6.5% and for lone-parent families it was 38.3%, while the poverty rate in the US for two-parent families was 13.6% and for lone-parent families it was 47.5%. The OECD average poverty rate at that time was 9.0% for two-parent families and 30.9% for lone-parent families. Peter Whiteford, Family joblessness in Australia. (Canberra: Social Inclusion Unit, Dept. of the Prime Minister and Cabinet, 2009).

[7]   For a discussion of this literature, see Peter Saunders, 'Introduction: The reality and costs of unemployment' in P. Saunders and R. Taylor (ed), *The Price of Prosperity: The Economic and Social Costs of Unemployment* (2002).

it has been found that parental job loss can have a negative impact on children's school achievement.[8] Given the very different rates of poverty in the US and Australia for jobless families with children, it is important to have Australian evidence on the effect of joblessness on Australian children's developmental outcomes.

The impact of family joblessness on children's developmental outcomes is likely to depend, at least in part, upon how long the joblessness lasts. However, there is little Australian evidence on the persistence of family or household joblessness. We are aware of only two existing studies which provide estimates of the persistence of household joblessness using longitudinal data.[9] We are not aware of any Australian research that has explored how child wellbeing is associated with the length of time the child experiences family joblessness.[10]

The aims of this paper are to use a new source of longitudinal data on Australian children and their families, *Growing Up in Australia:* The Longitudinal Study of Australian Children (LSAC), to:
▪ document the extent to which Australian children experience persistent joblessness (that is, living in a jobless family for an extended period of time);
▪ estimate the impact of living in a jobless family on children's developmental outcomes; and
▪ estimate the extent to which these effects differ between children who are living in a persistently jobless family compared to those who have experienced relatively short periods of family joblessness.

The remainder of this paper is structured as follows. The second section provides an overview of the data used in the paper. The third section provides descriptive information on the extent and persistence of joblessness in Australian families with young children and how this varies according to family type. In the fourth section, the characteristics of jobless families are described and compared to families that do not experience joblessness. In the fifth section, the relationship between joblessness and child developmental outcomes are analysed. In the sixth section, how the financial wellbeing of families varies with the experience of joblessness is described. The final section discusses some of the implications of the material presented in the paper for the development of child and family policies in Australia.

2   The Longitudinal Study of Australian Children

The LSAC survey is a nationally representative large-scale longitudinal survey that is following two cohorts of children for 14 years (and possibly longer). When the first wave of interviews was conducted in 2004, the cohorts of children were aged 0–1 years (B cohort) and 4–5 years (K cohort).[11] In this paper, for the sake of simplicity, only data from the K cohort are used.

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[8]   Ariel Kalil and Kathleen M. Ziol-Guest, 'Parental employment circumstances and children's academic progress' (2008) 37(2) *Social Science Research* pp. 500-515; Michael B. Coelli, 'Parental income shocks and the education attendance of youth' (Unpublished manuscript Department of Economics, University of British Columbia, 2005).

[9]   Roger Wilkins, Diana Warren and Markus Hahn, 'Families, incomes and jobs: Vol. 4. A statistical report on Waves 1 to 6 of the HILDA survey' (Melbourne Institute of Applied Economic and Social Research, 2009); Trevor Breusch and Deborah Mitchell, 'Australian family income dynamics: Preliminary evidence from the NLC project, 1997 & 2000' (Negotiating the Life Course Discussion Paper Series Discussion Paper DP-014, Australian National University, 2003).

[10]   See Deborah A. Cobb-Clark and Anastasia Sartbayeva, 'The relationship between income support history characteristics and outcomes of Australian youth ' (Youth in Focus Project Discussion Paper 2, Australian National University, 2007); Deborah A. Cobb-Clark and Anastasia Sartbayeva, 'The relationship between income-support history and the characteristics and outcomes of Australian youth: Outcomes of Wave 2 of the Youth in Focus survey' (Youth in Focus Project Discussion Paper 9, Australian National University, 2010). This research examined the links between parental income support payment history and young people's wellbeing (at the ages of 18 and 20). While income support history and family joblessness are differing measures, they are closely linked. Cobb-Clark and Sartbayeva showed that there were links between persistent parental reliance on income support payments and how the children were doing at 18 and 20 years of age.

[11]   Matthew Gray and Diana Smart, 'Growing up in Australia: The Longitudinal Study of Australian Children is now walking and talking' (2008) (79) *Family Matters*, pp. 5-13.

The survey collects detailed information on a range of measures of child wellbeing and parental labour force status—which allows a measure of family joblessness to be constructed—as well as socio-economic, demographic and parenting style characteristics of the study child's parents. The children were selected from the enrolment database of Medicare (Australia's national public health insurance scheme), and the sampling unit is "the child". The sample is broadly representative of Australian children in the birth cohorts from which the sample was selected.[12]

Wave 1 collected data from 4,983 children aged 4–5 years, and their parents. The second wave was conducted in 2006, at which time these children were aged 6–7 years, and the third wave was conducted in 2008, when they were aged 8–9 years. As in all longitudinal studies, not all of the original Wave 1 sample participated in subsequent waves. The response rate for Wave 3 was 86% of the originally recruited sample, yielding a total of 4,330 participants in the K cohort. There were higher rates of non-response to Waves 2 and 3 from lone-parent and jobless families. The dataset includes sample weights that are designed to take into account the effects of non-random sample attrition.[13] The analysis in this paper is restricted to respondents who participated in all three waves and who were living in a lone- or two-parent family at the time of each interview. A small number of children living in other types of families are excluded from the analysis. The higher rate of attrition among families that were jobless at Wave 1 means that the estimates of the prevalence of jobless based on the LSAC data will under-estimate the population incidence.

The survey asked parents to identify which parent knew the most about the child ("primary carer"). In the vast majority of cases, the primary carer is the mother. This parent then provides the most extensive set of data about their child and about themselves, and also, on some items, about the other parent. In two-parent families, the other parent is also asked to complete a questionnaire; this collects information on a range of topics, including parenting practices and styles, and the parents' wellbeing.

The measure of family joblessness in this analysis is when none of the parents living in the same household as the child had paid employment at the time of the interview.[14] Parents who were on leave from a job at the time of the interview were classified as being jobless. It is not possible using the LSAC data to derive a measure of whether families were jobless between interviews.[15]

In this paper, the wellbeing of children is measured at Wave 3 (at age 8–9 years) using composite measures of how children are developing in three broad areas (domains): learning and cognitive development; social and emotional functioning; and physical development.[16] The outcome index for each of the domains has a mean of 100 and a standard deviation of 10. Box 1 provides information on the individual measures used to construct each of the outcome indices.

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[12] Children in some remote parts of Australia were excluded because of the extremely high data collection costs in these areas.

[13] LSAC Project Operations Team, 'The Longitudinal Study of Australian Children Data Users Guide' (Australian Institute of Family Studies, 2009).

[14] Employment status is only collected of parents in LSAC, so it is not possible to take the employment of other family members into account.

[15] While LSAC provides information on the number of months each parent was not in paid employment between waves, it does not collect information on the exact months in which the parents were not employed; therefore, for two-parent families, it is not possible to determine whether there were months in which neither parent was employed (i.e., whether the family was jobless).

[16] Ann Sanson, Sebastian Misson, Melissa Wake, S Zubrick, S Silburn, S Rothman and J Dickenson, 'Summarising children's wellbeing: The LSAC Outcome Index' (Technical paper 2, Australian Institute of Family Studies, 2005).

Box 1   Measures contributing to LSAC outcome indices for 8–9 year old children at Wave 3

The items from which each of the outcome indices are constructed are described below.[17]

Learning/cognitive outcome index incorporates measures of language and literacy:

- Peabody Picture Vocabulary Test;
- Wechsler Intelligence Scale for Children: Matrix Reasoning subscale;
- Academic Rating Scale: Language and Literacy, and Mathematical Thinking.

Social/emotional outcome index incorporates measures of internalising and externalising problems, and social competence:

- Strengths and Difficulties Questionnaire: Emotional, Conduct, Hyperactivity, Peer Problems and Prosocial Behaviour scales.

Physical outcome index incorporates measures of health and motor skills:

- Overall rating of health—a single parent-rated item that rates a child's health;
- Special Health Care Needs Indicator—a single derived yes or no item based on six component items indicating whether the child needed medication or more health care than the average child due to a condition that had lasted or was expected to last twelve months or more;
- Health Problems Index—a derived item based on the number of health problems that the child was reported to be experiencing around the time of the main interview;
- Weight status—a score reflecting deviation from normal weight status, based on the physical measurements of the child taken at the time of the interview;
- Gross Motor Coordination Scale—a three-item parent-rated scale asking how well the child can run, jump and balance on one leg compared to their peers; and
- Pediatric Quality of Life Inventory: Physical health—an eight-item parent-report measure, largely assessing motor coordination, but also containing two items about more general health.

3   The extent and persistence of joblessness in families with young children

This section provides an overview of the prevalence and persistence of family joblessness experienced by Australian children between the ages of 4–5 years and 8–9 years. The differences in the experiences of family joblessness between lone- and two-parent families are analysed. In order to simplify the analysis, family type at the time of the Wave 3 interviews is used.

Overall, 84% of the LSAC study children were not living in a jobless family at any of the first three waves of interviews and 16% were living in a jobless family at the time of at least one interview (Table 1). Overall, 7% of families were jobless at the time of one interview, 4% were jobless at the time of two of the interviews and 4% were jobless at the time of all three interviews.

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[17] A detailed description of the derivation of these indexes is provided by Sebastian Misson, Ann Sanson, Donna Berthelsen, Helen Rogers, Sheldon Rothman, Mark Sipthorp, Melissa Wake and the LSAC Research Consortium, 'Tracking children's development over time: The Longitudinal Study of Australian Children Outcome Indices, Waves 2 and 3' (AIFS Research Paper 48, Australian Institute of Family Studies, in press).

Table 1   Persistence of joblessness, 2004–08

Wave 3 family type	Number of waves jobless				Total	Sample size
	Never jobless	One wave	Two waves	Three waves		
	%				%	
Lone-parent family	44.4	22.0	17.1	16.5	100.0	3,487
Two-parent family	92.2	4.6	1.8	1.4	100.0	568
Total	**84.3**	**7.4**	**4.3**	**3.9**	**100.0**	**4,055**
Proportion that are lone-parent families	8.6	48.6	65.2	69.5	16.4	

Notes: Family type was measured at the time of the Wave 3 interviews (2008). Percentages may not total 100% due to rounding.

Source: LSAC W1–W3, K cohort

Children in lone-parent families were much more likely to have experienced parental joblessness than those living in two-parent families (58% cf. 8%). Furthermore, lone-parent families that experienced joblessness were more likely to be persistently jobless (that is, jobless at two or three of the waves) than was the case for two-parent families (61% cf. 41%). Children living in lone-parent families were more likely to spend time living in a jobless family than those living in a two-parent family and, if they did experience parental joblessness, then it was much more likely to be for two or three of the three waves.

The link between family type and joblessness can be clearly illustrated by examining the proportion of families that were lone-parent families according to their experience of joblessness. Overall, 16% of 8–9 year old children were living in a lone-parent family, but of families that were never jobless, just 9% were lone-parent families; of families that were jobless at one wave, 49% were lone-parent families; of those jobless at two waves, 65% were lone-parent families; and of those jobless at three waves, 70% were lone-parent families.

As discussed above, while the LSAC study does not allow the joblessness status of the families between interviews to be identified, it does provide information on whether either parent living in the household at the time of the interview had been employed at all since the previous interview. This allows identification of families that were jobless for the entire four-year period (2004–08) between the Wave 1 and Wave 3 interviews. In total, 3% of children were living in families in which no parent had been in paid employment at all between Waves 1 and 3. Of the families reported to be jobless at all three waves of LSAC, 70% also reported that no parent had been employed between waves. Among the persistently jobless families, even if employment between waves was reported, it was for relatively short durations, at an average of less than two months per year for mothers employed at some time, and less than seven months per year for fathers employed at some time.

4   What are the characteristics of jobless families?

This section provides an overview of how human capital, demographic characteristics, parenting and financial wellbeing vary according to family joblessness. The purpose of this is two-fold. It highlights those characteristics that are likely to contribute to the family being jobless (e.g., when parents have relatively low levels of education). Also, it identifies possible pathways between joblessness and children's outcomes (e.g., children's outcomes may be worse when parents have low levels of mental health).

There were 3,567 families from the K cohort that were never jobless across the three waves of LSAC. Another 257 were jobless at one wave, 126 at two waves and 105 at three waves. When the numbers are disaggregated into lone- and two-parent families, there were 72 lone-parent and 33 two-parent families jobless at three waves. These sample sizes are too small to provide statistically reliable estimates, so for the descriptive analyses, two and three waves of joblessness are combined into a single category of being jobless at two or three waves (termed "persistently jobless"). This results in sample sizes as shown in Table 2.

Table 2   Sample sizes by experience of family joblessness and family type

	Number of waves jobless			Total
	Never jobless	One wave	Two or three waves	
Lone-parent family	287	125	156	568
Two-parent family	3,280	132	75	3,487
Total	**3,567**	**257**	**231**	**4,055**

Notes: These sample sizes are for the entire sample with cross-wave data on joblessness. For some of the family and parent characteristics, there are missing data, so for these measures the actual sample sizes are smaller.

Source: LSAC W1–W3, K cohort

There is a clear link between joblessness and having a low level of parental educational attainment (Table 3). The proportion of lone parents with an incomplete secondary education increases from 20% for those who were never jobless to 29% for those who were jobless at one wave, and 42% for those who were persistently jobless. For mothers in two-parent families, the proportion with a low level of educational attainment was 20% for those who are never jobless, 41% for those who were jobless for one wave, and 57% for those who were persistently jobless. The proportion of never-jobless lone parents who had a low level of educational attainment was very similar to that for mothers in two-parent families; however, lone mothers who were jobless for one wave or two or three waves were less likely to have a low level of educational attainment than jobless mothers in two-parent families. For fathers in two-parent families, those who were in a jobless family had a lower level of educational attainment than those who were in a never-jobless family (34% cf. 16%).

Table 3   Human capital and demographic characteristics of parents, by persistence of joblessness and family type

	Number of waves jobless			Total
	Never jobless	One wave	Two or three waves	
Low level of educational attainment (incomplete secondary), %				
Lone parents	20.2	28.9*	41.9***	29.4
Two-parent mothers	19.6	41.1***	57.0***	21.8
Two-parent fathers	15.8	33.8***	33.7***	17.2
Fair or poor self-reported physical health, %				
Lone parents	15.4	18.6	22.7.	18.4
Two-parent mothers	7.4	17.6***	13.9	8.0
Two-parent fathers	8.3	17.5 ***	29.8***	9.2
Mental health (1 to 7, higher = better), mean				
Lone parents	4.22	3.98.	4.01	4.09
Two-parent mothers	4.46	4.19***.	4.21***	4.44
Two-parent fathers	4.48	4.32 **	4.42***	4.48
Main language spoken at home is not English, %				
Lone parents	10.7	13.0	19.4	14.3
Two-parent mothers	16.0	15.1	28.4**	16.4
Two-parent fathers	15.4	13.1	22.1	15.5
Number of resident children, mean				
Lone-parent families	2.26	2.52.	2.72***	2.48
Two-parent families	2.67	3.17	3.49***	2.72

Notes: Main language refers to language spoken by each parent at home (so can be different for mothers and fathers). Characteristics are measured at Wave 3. Significance tests indicate differences from the never-jobless group. Distributions were tested using chi-square and means using t-tests. * $p < 10\%$, ** $p < 5\%$, *** $p < 1\%$.

Turning to physical health, lone mothers are about twice as likely to assess their health as being fair or poor than are mothers and fathers in two-parent families. For fathers in two-parent families, the proportion with fair or poor health increases from 8% of those who were in a never-jobless family to 30% of those who were in a persistently jobless family. Similarly, parents in jobless families had lower levels of mental health than those who lived in never-jobless families.

Parents who experienced persistent family joblessness were somewhat more likely to have a main language spoken at home other than English than those who were in a never-jobless family or in a family that was jobless for only one wave.

The average number of children in jobless families was higher than for families that were never jobless.

Two aspects of parenting that are important influences on children's developmental outcomes are consistency and hostility of parenting, here measured on a scale of angry parenting.[18] More consistency and less angry parenting in parenting styles are associated with better developmental outcomes. Table 4 shows that parents in jobless families displayed less consistent parenting than those who were never jobless. Differences in angry parenting, however, were not statistically significant.

Table 4   Parenting styles, by persistence of joblessness and family type

	Number of waves jobless			Total
	Never jobless	One wave	Two or three waves	
Consistent parenting (1 to 5, 5 = more consistent)				
Lone parents	4.10	4.07	3.80 ***	3.99
Two-parent mothers	4.19	4.08 *	3.80 ***	4.17
Two-parent fathers	4.09	3.96 *	3.83 ***	4.08
Angry parenting (1 to 5, higher = more angry)				
Lone parents	2.16	2.17	2.28	2.20
Two-parent mothers	2.14	2.23	2.14	2.14
Two-parent fathers	2.16	2.34	2.21	2.17

Notes: Characteristics are measured at Wave 3. Significance tests indicate differences from the never-jobless group. Distributions were tested using chi-square and means using t-tests. * $p < 10\%$, ** $p < 5\%$, *** $p < 1\%$.

The nature of the neigbourhood in which children grow up can affect how children develop.[19] One measure of a neighbourhood socio-economic status is the proportion of the working age population that is employed. For both lone- and two-parent families there are only relatively small differences in the average employment rates, with neighbourhoods (postcodes) in which jobless families live having slightly lower employment rates than compared to those in which never jobless families live (Table 5). Nevertheless, the differences are statistically significantly different and the employment in the local area is lowest for persistently jobless two-parent families.

Another aspect of nature of the neighbourhood in which families live is parents' reports of whether their neighbourhood is parent's perception of its safety. The parent-reported data on whether their neighbourhood is safe also show that persistently jobless families, whether lone- or two-parent, were

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[18]   See, for example, Diana Smart, Ann Sanson, Jennifer A. Baxter, Ben Edwards and Alan Hayes, 'Home-to-school transitions for financially disadvantaged children' (The Smith Family, 2008). These items are derived from a series of questions asking each parent about how often they exhibit certain parenting styles while interacting with their child. Each item is scored on a five-point scale. Parental consistency is the mean of five related items and angry parenting the mean of four related items.

[19]   Ben Edwards and Leah M. Bromfield, 'Neighborhood influences on young children's conduct problems and pro-social behavior: Evidence from an Australian national sample' (2009) 31(3) *Children and Youth Services Review*, pp. 317-324.

the least likely to report their neighbourhood is safe, and jobless lone parents in particular reported less agreement with this.

Table 5   Neighbourhood employment and safety of surroundings, by persistence of joblessness and family type

	Number of waves jobless			Total
	Never jobless	One wave	Two or three waves	
		%		%
Percentage of postcode employed (according to Australian Census), mean				
Lone-parent family	62.0	60.5 *	60.2 **	61.1
Two-parent family	63.1	60.1 ***	58.9 ***	62.8
Neighbourhood is safe (agree, strongly agree), %				
Lone-parent family	91.6	84.1	77.4 ***	85.2
Two-parent family	95.7	91.4	83.5 ***	95.1

Notes: Characteristics are measured at Wave 3. Significance tests indicate differences from the never-jobless group. Distributions were tested using chi-square and means using *t*-tests. * p < 10%, ** p < 5%, *** p < 1%.
Source: LSAC W1–W3, K cohort

A very important factor is that, for many families, joblessness may be accompanied by financial hardship. The measures of financial wellbeing used to examine this are the objective measures of equivalent parental income and having experienced one or more financial hardships in the previous year.[20]

Equivalised parental income varies considerably according to the family's persistence of joblessness. Further, differences between two-parent and lone-parent families are apparent, although less so for the persistently jobless families. Given the differences in income, not surprisingly, lone-parent families are much more likely than two-parent families to report having experienced one or more financial hardship in the previous year (20.6% cf. 3.4%) (Table 6).

For both lone- and two-parent families, the proportion experiencing financial hardships is higher for families that experienced joblessness than those who were never jobless. However, even among families that were persistently jobless, a majority had not experienced any financial hardships in the previous year (about three-quarters of lone-parent families and four in five two-parent families).

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[20]   The primary carer was asked whether any of the following things had occurred in the previous twelve months due to shortage of money: (a) not been able to pay gas, electricity or telephone bills on time; (b) could not pay the mortgage or rent on time; (c) adults or children have gone without meals; (d) been unable to heat or cool your home; (e) have pawned or sold something; and (f) have sought assistance from a welfare or community organization. Following Bray (2001), the first two of these were said to constitute cash flow problems, and the other four were said to constitute financial hardships. Families were said to have experienced either one of these if they reported to have experienced at least one of the underlying events. Here we use the data on financial hardship only. J. Rob Bray, 'Hardship in Australia: An analysis of financial stress indicators in the 1998-99 Australian Bureau of Statistics Household Expenditure Survey' (Occasional Paper 4, Department of Family and Community Services, 2001). Equivalised parental income was calculated from each parents' income and the number of people in the family aged up to 15 years old. The modified OECD equivalence scales were used. This equivalence scale gives a weight of one to the first adult, 0.5 to the second and subsequent adults, and 0.3 to all dependent children.

Table 6   Equivalised income and experience of financial hardships by family joblessness and family type

	Number of waves jobless			Total
	Never jobless	One wave	Two or three waves	
Equivalised parental income, mean $A per week				
Lone-parent family	473	298***	241***	353
Two-parent family	820	488***	283***	788
Experienced one or more financial hardships in previous 12-months, %				
Lone-parent family	11.9	27.7***	27.5***	20.6
Two-parent family	2.4	13.9***	18.0***	3.4

Notes: Characteristics are measured at Wave 3. Significance tests indicate differences from the never-jobless group. Distributions were tested using chi-square and means using t-tests. * $p < 10\%$, ** $p < 5\%$, *** $p < 1\%$.
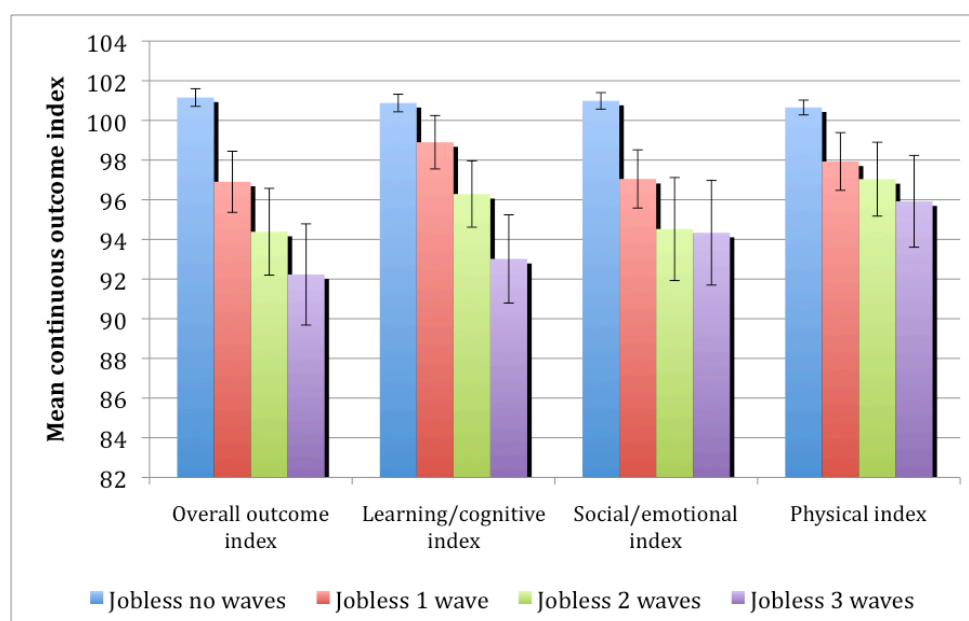
Source: LSAC W1–W3, K cohort

5   Joblessness and children's developmental outcomes

5.1   Association between joblessness and children's developmental outcomes

In this section, the associations between family joblessness and children's developmental outcomes at age 8–9 years are analysed. Figure 1 clearly shows that on all developmental outcome measures, longer exposure to family joblessness was associated with poorer outcomes.

While there is a clear and strong association between joblessness and developmental outcomes for all three domains, the association is strongest for the learning/cognitive domain, followed by the social/emotional domain and weakest for the physical domain. For the learning/cognitive index, the difference between children who were not in a jobless family at the time of any of the three waves and those in a jobless family at all waves is about one standard deviation (10 points). This is a substantial difference, and is equivalent to going from the average to being in the bottom 5% of children in terms of the overall measure of wellbeing.

Figure 1   Child outcome indices at Wave 3, by joblessness over Waves 1–3, K cohort

Note: 95% confidence interval shown.

Source: LSAC W1–W3, K cohort

Of course, these associations may reflect many different underlying factors other than just joblessness. As demonstrated above, children in jobless families (particularly persistently jobless families) have, on average, mothers with much lower levels of educational attainment and they live in more disadvantaged neighbourhoods. These are factors associated with lower levels of child wellbeing and development. In the next section, statistical techniques are used that allow the association between joblessness and child wellbeing to be estimated while holding constant the effects of observable characteristics that are related to both the likelihood of living in a jobless family and child developmental outcomes.

5.2   Statistical method

The effects of living in a jobless family on children's developmental outcomes at age 8–9 years can be estimated using statistical techniques that allow the effects of other factors affecting children's developmental outcomes to be held constant. Because the measures of child developmental outcomes analysed in this paper are continuous variables, ordinary least squares (OLS) regression is an appropriate statistical technique. Family joblessness is analysed through the inclusion of a set of dummy variables that capture having never been in a jobless family, and having been jobless for one wave, for two waves or for three waves. The omitted category is never having been jobless.

For each of the developmental domains, three models are estimated. The first model (Model 1) includes only the measures of family joblessness. This model provides an estimate of the association between living in a jobless family, according to persistence of joblessness, and developmental outcomes. The second model (Model 2) includes a range of control variables that attempt to capture the key factors that affect developmental outcomes. This model provides an estimate of the extent to which the associations between joblessness and developmental outcomes can be explained by a range of other factors that are associated with both the likelihood that a child experiences parental joblessness and children's developmental outcomes. The third model (Model 3) includes equivalised parental income. This is included in an attempt to understand how much of the impact of family joblessness can be explained by its effects on income.

The selection of the control variables included in Models 2 and 3 was informed by current theoretical frameworks of child developmental outcomes. Important factors include characteristics of the child and the family, as well as human capital, and demographic and social characteristics of the environment in which they live.[21] The control variables included in the regression analysis were: family type (whether child was living in a lone-parent family, highest level of parental educational attainment (of the parents with whom the child was living), parenting style (measured as the higher of mothers' and fathers' angry parenting, and the lower of mothers' and fathers' parenting consistency), having no parent whose main language spoken was English, first child of parent was born when parent aged less than 25 years, primary carers' mental health, parents' reports that the neighbourhood is safe, gender of the child, age of the child (months), whether the child was Indigenous, whether the child had a low birth weight, number of siblings, and whether the child had attended preschool.

5.3   Multivariate estimates of the relationship between family joblessness and children's developmental outcomes

Given the focus of this paper on the impact of joblessness on developmental outcomes, the results for the measures of joblessness are discussed first. The results for family type (lone- versus two-parent)

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[21]   While there are a range of theoretical frameworks that are used to explain the determinants of child developmental outcomes, two that are currently influential are the risk and resiliency framework (Garbarino 1995; Rutter 1999), and the bio-ecological developmental systems perspective (Bronfenbrenner & Morris 2006). Garbarino 1995 James Garbarino, Raising children in a socially toxic environment. (San Francisco: Jossey-Bass Publishers, 1995); Michael Rutter, 'Resilience concepts and findings: implications for family therapy' (1999) 21(2) *Journal of family therapy* pp. 119-144; Urie Bronfenbrenner and Pamela A. Morris, 'The bioecological model of human development' in W Damon and RM Lerner (eds), *Handbook of child psychology* (6th ed, 2006) vol 1: Theoretical models of human development, pp. 793–828.

and parental income are then discussed. The results pertaining to the other control variables, the full regression results and the descriptive statistics are provided in Appendix A.

The results of estimating Model 1 reveal that for all three measures of developmental outcomes that are modelled, having lived in a jobless family is associated with poor outcomes for children at age 8–9 years (Table 7). The negative effects increase the greater the number of waves the child was living in a jobless family. The results are not discussed in detail because they are very similar to those presented in Section 5.1.

For all three measures of developmental outcomes, the inclusion of the control variables (Model 2) reduces the estimated effects of living in a jobless family on children. Once the control variables are included, for all three measures, the estimates suggest that having been in a jobless family for only one wave does not have a statistically significant impact on children's developmental outcomes. However, having been in a jobless family at two waves is estimated to have a negative and statistically significant impact upon social/emotional (3.4 points less) and physical developmental outcomes (3.2 points less), but not on learning/cognitive outcomes. Having lived in a jobless family for three waves has a statistically significant negative impact upon all three measures of children's outcomes. The negative effects of parental joblessness on children are larger the greater the number of interviews at which the child was living in a jobless family. This finding is consistent with research into the effects of poverty on children's outcomes, which generally has found that it is the experience of persistent poverty, rather than more transient experiences of poverty, that has the greatest impact.[22]

The estimated effects of living in a jobless family on developmental outcomes were largely unchanged by the inclusion of equivalised parental income as an explanatory variable (Model 3). Equivalised parental income was estimated to have a positive effect on each of the developmental domains.[23]

The estimated effects of persistent joblessness (after holding constant the effects of other variables) are quite large, being between one-third and one-half of a standard deviation. One way of assessing the size of the effects of persistent joblessness is compare the estimated size of the effect of joblessness that those of other variables included in the model. The estimated effects of parental joblessness on children are greater than those estimated for most other controls included in the models.

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[22] For example, Kerry E. Bolger, Charlotte J. Patterson, William W. Thompson and Janis B. Kupersmidt, 'Psychosocial adjustment among children experiencing persistent and intermittent family economic hardship' (1995) 66(4) *Child Development*, pp. 1107-1129; Greg J. Duncan, Jeanne Brooks-Gunn and Pamela Kato Klebanov, 'Economic deprivation and early childhood development' (1994) 65(2) *Child Development*, pp. 296-318.

[23] These analyses resulted in the unexpected finding that cognitive outcomes are higher in lone-parent rather than two-parent families, after controlling for joblessness, income and a range of other important variables. No differences in socio-emotional or physical outcomes were apparent for children in lone-parent families, controlling for these factors. Given the focus here is on joblessness rather than family type per se, this result is not explored further in this paper.

Table 7   OLS estimates of the impact of living in a jobless family on child wellbeing

	Learning/cognitive			Social/emotional			Physical		
	Model 1 (no controls)	Model 2 (+ controls)	Model 3 (+ income)	Model 1 (no controls)	Model 2 (+ controls)	Model 3 (+ income)	Model 1 (no controls)	Model 2 (+ controls)	Model 3 (+ income)
Never jobless (omitted category)									
Jobless one wave	–2.1**	–0.5	–0.6	–4.0***	–1.4	–1.7*	–3.1***	–1.6	–1.6
Jobless two waves	–3.5**	–1.6	–1.2	–6.7***	–3.4**	–3.6**	–4.9***	–3.2**	–2.8*
Jobless three waves	–8.0***	–5.1***	–4.9***	–7.3***	–3.3**	–2.6*	–5.5***	–3.2*	–3.0*
Lone parent		2.5***	2.9***		–0.8	–0.5		0.1	0.3
Equivalised parental income per week (A$ '000)			1.5***			1.1***			1.1**

Notes: The estimation of the models takes account of the initial stratification and clustering in LSAC sample. The standard errors are robust to heteroskedasticity. The full set of coefficient estimates and *t*-statistics are provided in Appendix A. * $p < 10\%$, ** $p < 5\%$, *** $p < 1\%$.

Data: LSAC W1-W3, K-cohort.

The results for lone- versus two-parent families are also shown in Table 7, as earlier descriptive analyses has explored these family types separately. Note that the results for being in a lone parent family are the estimated effects for the additional effect of being in a lone-parent family, holding constant the effects of being jobless, and the effects of other control variables. As many of the lone-parent families were jobless, it is important to keep this in mind. This may contribute to the unexpected result for learning/cognitive outcomes, which shows a higher score for lone-parent families. Similar associations are not apparent for the other outcomes.

Given the much higher rate of joblessness among lone-parent families, an important policy-relevant question is whether the negative effects of parental joblessness on children's developmental outcomes differ between lone- and two-parent families. This question can be tested by extending the statistical models used in the previous section to include a set of interactions between the measures of joblessness and family type (lone-parent family). When the full set of control variables are included, none of the interactions between joblessness and family type are statistically significant (at the 5% confidence level). This result suggests that the effects of parental joblessness on children's developmental outcomes do not differ between lone- and two-parent families.

6   Implications for public policy and concluding comments

With the release of data from the third wave of LSAC, Australia now joins most other OECD countries in having a nationally representative longitudinal study of child development. This paper has used this new source of longitudinal data to better understand the extent and persistence of children in Australia growing up in families in which there is no employed parent, and the impacts of this on their developmental outcomes. The previous lack of data that would allow family joblessness and the persistence of joblessness to be linked to measures of children's development and wellbeing has meant that this is a question on which there has been very little evidence to inform related areas of policy. Rather, the existing research has focused on questions for which the necessary data have been available, such as the impacts associated with family joblessness on government expenditure and taxation revenue as well as adult physical and mental health.

A key finding is that although a significant minority of children spend time living in a jobless family, about half of the children living in a jobless family at one or more of the first three waves of LSAC were in a jobless family at the time of only one of the waves. From a policy perspective, an important

question is whether the effects of shorter term family joblessness on children's developmental outcomes differ from the impacts of longer term or persistent family joblessness.

The analysis in this paper reveals that children who spend time living in a jobless family have poorer developmental outcomes across the learning/cognitive, social/emotional and physical domains. Children who spend longer periods living in jobless families have worse developmental outcomes. Parents in jobless families have, on average, lower levels of human capital than those who do not experience joblessness, and also exhibit poorer parenting skills. Other significant differences are also apparent. Once these differences are taken into account, there remain negative effects of persistent joblessness on children's outcomes. However, there does not appear to be an effect on children's developmental trajectories from having lived in a jobless family for only one of the first three waves of LSAC. This means that the negative association between living in a jobless family for one wave and children's developmental outcomes is explained by other characteristics, such as parental educational attainment and the quality of parenting.

Joblessness and persistent joblessness are much more prevalent for lone-parent families than for two-parent families. The finding that joblessness has a negative impact on children's outcomes is therefore particularly relevant to lone-parent families. However, there is no evidence that the effects of family joblessness differ between lone- and two-parent families. It appears that regardless of family form, the broad issue of joblessness and of persistent joblessness is important to address in relation to children's outcomes.

The different family and environmental circumstances of jobless families are particularly relevant when considering links between joblessness and children's outcomes. While not the primary focus of this paper, many of the control variables included in the regression models are important in explaining variation in children's outcomes. In fact, some of these factors, such as parenting style, mental health and neighbourhood disadvantage had particular strong associations with children's outcomes.[24] While this paper therefore focuses on joblessness in relation to children, it is important to note that policy and program development in a broad range of other areas is also relevant.

The data presented in this paper provide information that is relevant to the development of social and economic policy. The findings suggest that the current Australian policy focus on jobless families is sensible and that most effort should be put into longer term jobless families and preventing shorter term jobless families becoming the longer term jobless.

Relationship breakdown is an important factor in explaining joblessness. Findings of this research provide further support for the importance of developing policies aimed at improving the employment rate of jobless lone parents (who are mostly lone mothers). Whether or not a two-parent family is jobless depends a great deal on the employability of the mother (and, of course, the father also has to be not employed).

The mechanisms by which joblessness affects children's wellbeing is unclear and needs further research. Possibilities include that the effects are driven by low income, although this research has shown that joblessness has an effect beyond that of income. Another possibility is that joblessness leads to social isolation and mental health problems that can affect children. Another important question is to what extent there is a causal impact.

There may be a role for programs that aim to improve the quality, effectiveness and accessibility of social services in disadvantage communities in improving parenting skills, reducing parental joblessness and improving the wellbeing of children. A significant finding emerging from evaluations of area-based parenting programs in Australia (Communities for Children [CfC]) and England (Sure

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[24]   See also Diana Smart, Ann Sanson, Jennifer A. Baxter, Ben Edwards and Alan Hayes, 'Home-to-school transitions for financially disadvantaged children' (The Smith Family, 2008).

Start)[25] is that these types of programs can have positive effects on children and are associated with a reduction in parental joblessness.[26] Further work is required to understand exactly how these types of programs—which primarily attempt to improve the quality and coordination of local services that aim to help families with children living in disadvantaged areas develop their ability to parent and to create "child family communities"—could also reduce parental joblessness. While there are a number of possible mechanisms, it is likely that helping jobless parents to address factors such as mental and physical health issues, enhances their ability to parent effectively and find and sustain employment, builds parents' confidence and improves their social networks, which can be important in finding employment. The evaluation of CfC suggests that better coordination of services at the local level and having these services "wrapped" around vulnerable families may be particularly important to their success. Another factor that was important to the success of CfC was allowing considerable flexibility at the local level as to which services to provide and how to provide them.[27]

Further research and evaluation effort is needed to assess the effectiveness of these types of parenting programs in addressing the multiple and overlapping issues faced by many jobless families. It is also important to understand which aspects of these area-based programs are most effective and to test how effectively they can be scaled-up in order to be one part of the policy response to family joblessness at the national level.

Australia has a higher rate of family joblessness than many other OECD countries. Finding policies that can help reduce family joblessness and particularly longer-term joblessness will benefit not only parents but also Australia's children.

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[25] Communities for Children (CfC) is a large-scale area-based initiative designed to enhance the development of children in 45 disadvantaged community sites around Australia. The CfC initiative, which was implemented in 2004, aimed to improve coordination of services for children aged 0–5 years and their families, identify and provide services to address unmet needs, build community capacity to engage in service delivery, and improve the community context in which children grow up. Decisions about which services to provide and how to provide them were made by non-government organisations at the local level. The program had an explicit focus on service coordination, and cooperation in communities was a novel aspect of the initiative. Sure Start was implemented in England in 1999 with the objectives of reducing child poverty and improving child and family services. The program is targeted at all children aged under 4 years and their families living in relatively small areas of marked deprivation. Each local program had extensive local autonomy in terms of the services that were developed.

[26] Ben Edwards, Matthew Gray, Sarah Wise, Alan Hayes, Ilan Katz, Kristy Muir and Roger Patulny, 'Early impacts of Communities for Children on children and families: Findings from a quasi-experimental, cohort study' (forthcoming) *Journal of Epidemiology and Community Health*; National Evaluation of Sure Start Team, 'The impact of Sure Start local programmes on five year olds and their families: Report of the Longitudinal Study of 5-year-old Children and their Families' (Research Report DFE-RR067, Institute for the Study of Children, Families and Social Issues, Birkbeck University of London, 2010).

[27] Ilan Katz, Ben Edwards, Matthew Gray, Sarah Wise, Alan Hayes and Kristy Muir, 'The national evaluation of the Communities for Children Initiative' (2010) (84) *Family Matters*, pp. 35-42.

Appendix A Descriptive statistics and regression model estimates

Table A1 Descriptive statistics

	Mean	SD
Experience of joblessness		
Never jobless (omitted category)	86%	35%
Jobless one wave	7%	26%
Jobless two waves	4%	19%
Jobless three waves	3%	18%
Lone-parent family	15%	36%
Equivalised parental income (A$'000 per week)	$735	$504
Highest parental educational attainment		
Bachelor degree or higher	32%	47%
Completed secondary education or diploma level qualification	57%	49%
Incomplete secondary education	10%	30%
Parenting style		
Angry parenting (1 to 5)	2.33	0.62
Consistent parenting (1 to 5)	4.31	0.58
No parent with main language spoken English	12%	32%
Primary carer first birth aged < 25	27%	44%
Primary carers' mental health (higher = better)	4.39	0.64
Parent reports neighbourhood is safe	94%	23%
Boy	51%	50%
Age of child (months)	105.6 months	2.8 months
Indigenous child	3%	17%
Low birth weight	7%	25%
Number of siblings		
No siblings (omitted category)	8%	27%
One sibling	44%	50%
Two or more siblings	47%	50%
Child had attended preschool	94%	24%
Number of observations	3,473	

Source: LSAC W1–W3, K cohort

Table A2 OLS estimates of the impact of living in a jobless family on child wellbeing – learning/cognitive outcomes

	Model 1 (no controls)		Model 2 (plus controls)		Model 3 (plus income)	
	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Joblessness (ref. category = never jobless)						
Jobless one wave	–2.1	–2.8	–0.5	–0.7	–0.6	–0.7
Jobless two waves	–3.5	–3.4	–1.6	–1.5	–1.2	–1.1
Jobless three waves	–8.0	–5.8	–5.0	–3.7	–4.9	–3.5
Lone-parent family			2.5	4.0	2.9	4.5
Equivalised parental income (A$'000 per week)					1.6	4.4
Highest parental educational attainment (ref. category = bachelor degree or higher)						
Completed secondary education or diploma level qualification			–4.1	–11.1	–3.6	–8.5
Incomplete secondary education			–5.6	–8.7	–4.9	–7.0
Parenting style						
Angry parenting (1 to 5, higher = more angry)			–0.1	–0.5	–0.3	–0.9
Consistent parenting (1 to 5, 5 = more consistent))			2.3	6.5	2.4	6.6
No parent with main language spoken English			0.2	0.4	0.8	1.2
Primary carer first birth aged < 25			–2.1	–4.7	–2.0	–4.4
Primary carers' mental health (higher = better)			0.2	0.8	0.2	0.6
Parent reports neighbourhood is safe			0.1	0.1	0.1	0.1
Boy			–1.0	–2.9	–0.9	–2.5
Age of child (months)			0.0	0.7	0.0	0.2
Indigenous child			–2.6	–2.5	–2.4	–2.2
Low birth weight			–2.9	–4.3	–3.4	–4.9
Number of siblings						
One sibling			–0.4	–0.6	–0.6	–0.9
Two or more siblings			–1.0	–1.4	–1.0	–1.3
Child had attended preschool			2.2	2.5	2.2	2.4
Constant	101.4	410.3	89.1	13.9	90.3	13.4
Number of observations	3,473		3,473		3,237	
R-squared	0.03		0.13		0.14	

Source: LSAC W1–W3, K cohort

Table A3 OLS estimates of the impact of living in a jobless family on child wellbeing: social/emotional outcomes

	Model 1 (no controls)		Model 2 (plus controls)		Model 3 (plus income)	
	Coeff	*t*-stat	Coeff	*t*-stat	Coeff	*t*-stat
Joblessness (ref. category = never jobless)						
Jobless one wave	–4.0	–4.9	–1.4	–1.8	–1.8	–2.3
Jobless two waves	–6.7	–4.8	–3.4	–3.1	–3.6	–3.2
Jobless three waves	–7.3	–4.9	–3.3	–2.8	–2.6	–2.2
Lone-parent family			–0.8	–1.2	–0.5	–0.8
Equivalised parental income (A$'000 per week)					1.1	3.8
Highest parental educational attainment (ref. category = bachelor degree or higher)						
Completed secondary education or diploma level qualification			–1.7	–5.7	–1.3	–3.9
Incomplete secondary education			–2.3	–3.6	–2.0	–3.0
Parenting style						
Angry parenting (1 to 5, higher = more angry)			–5.8	–19.9	–5.8	–19.3
Consistent parenting (1 to 5, 5 = more consistent))			2.1	6.6	2.3	6.7
No parent with main language spoken English			0.1	0.3	0.5	0.9
Primary carer first birth aged < 25			–0.5	–1.1	–0.5	–1.1
Primary carers' mental health (higher = better)			3.2	11.3	3.2	10.6
Parent reports neighbourhood is safe			1.6	2.0	1.8	2.3
Boy			–2.5	–8.2	–2.5	–7.9
Age of child (months)			0.0	0.7	0.0	0.7
Indigenous child			–2.2	–1.8	–1.7	–1.4
Low birth weight			–0.6	–0.9	–1.0	–1.5
Number of siblings						
One sibling			0.5	0.8	0.4	0.6
Two or more siblings			0.8	1.2	0.7	1.1
Child had attended preschool			0.6	0.6	0.3	0.3
Constant	101.1	469.3	87.3	14.2	85.6	14.3
Number of observations	3,475		3,475		3,239	
R-squared	0.04		0.33		0.34	

Source: LSAC W1–W3, K cohort

Table A4 OLS estimates of the impact of living in a jobless family on child wellbeing: physical outcomes

	Model 1 (no controls)		Model 2 (plus controls)		Model 3 (plus income)	
	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Joblessness (ref. category = never jobless)						
Jobless one wave	–3.1	–3.7	–1.6	–1.7	–1.6	–1.6
Jobless two waves	–4.9	–4.6	–3.2	–3.0	–2.8	–2.5
Jobless three waves	–5.5	–3.9	–3.2	–2.2	–3.0	–2.0
Lone-parent family			0.1	0.2	0.3	0.5
Equivalised parental income (A$'000 per week)					1.2	2.8
Highest parental educational attainment (ref. category = bachelor degree or higher)						
Completed secondary education or diploma level qualification			–1.3	–3.7	–0.6	–1.7
Incomplete secondary education			–1.0	–1.3	–0.6	–0.7
Parenting style						
Angry parenting (1 to 5, higher = more angry)			–1.8	–6.7	–1.7	–5.9
Consistent parenting (1 to 5, 5 = more consistent))			1.3	4.1	1.5	4.6
No parent with main language spoken English			–1.0	–1.6	–1.0	–1.4
Primary carer first birth aged < 25			–0.3	–0.7	–0.3	–0.6
Primary carers' mental health (higher = better)			2.0	6.1	2.1	6.4
Parent reports neighbourhood is safe			1.2	1.2	1.4	1.3
Boy			–0.4	–1.2	–0.5	–1.3
Age of child (months)			–0.1	–1.1	0.0	–0.4
Indigenous child			–0.8	–0.6	–1.1	–0.9
Low birth weight			–2.1	–3.0	–2.5	–3.8
Number of siblings						
One sibling			1.2	1.6	1.3	1.8
Two or more siblings			2.0	2.8	2.0	2.6
Child had attended preschool			1.7	1.7	1.4	1.3
Constant	101.0	492.4	95.6	12.6	88.1	11.6
Number of observations	3477		3477		3241	
R-squared	0.02		0.09		0.10	

Source: LSAC W1–W3, K cohort