Parenthood in Transition: Longitudinal Insights into the One-Child Family

Long Abstract

Introduction

Having only one child has become an increasingly common experience in many countries including in Australia, where the share of women aged 45-49 with one child doubled from 7.9% in 1981 to 15.1% in 2021 (Qu, et al 2024). While this trend is often attributed to rising age at first birth, a more detailed understanding of the individual demographic and behavioural processes leading to stopping at parity one is lacking. In recent years, greater attention has been paid to how experiences surrounding the transition to parenthood, both positive and negative, can motivate or deter subsequent childbearing (Margolis & Myrskylä 2015).

The transition to first time parenthood often brings about many significant changes in people's lives including in their relationship dynamics, time use, finances, as well as mental and physical health. The wide-ranging nature of the possible changes creates multiple pathways which may influence future fertility. Recent studies have begun to explore this heterogeneity in first-birth experiences and how it relates to subsequent fertility, including in relation to the effect of leisure time (Jarosz et al. 2023), parenthood worries (Moilanen et al. 2024), satisfaction with the division of labour at home (Luppi 2016), as well as experiences of pregnancy and birth, including birth trauma (Gottvall & Waldenström 2002).

This study uses longitudinal data to follow women from before pregnancy through early parenthood to identify what differentiates those who stop at one child from those who have subsequent births. We aim to assess whether stopping at parity one is primarily determined by factors before the first birth, during pregnancy, or after the transition to parenthood. Australia provides an interesting case study, given its persistently low fertility rate but strong two-child norm.

Data & Method

The data are from the Household Income and Labour Dynamics in Australia (HILDA) survey. HILDA is a large-scale longitudinal household survey that has been conducted annually since 2001. Individuals aged 15 and over are interviewed each year, with questions asked on a wide range of topics including education, labour market activity, relationships, and family formation. Respondents are also given a paper and pen self-completion questionnaire containing more sensitive questions including relating to attitudes, physical and mental health, and parenting experiences.

We use data from 2001-2023, selecting women who were childless at their first survey participation but who subsequently had at least one child during the panel period. Observations are included for the seven years following the first birth to capture potential second births. Information is drawn from three stages:

- Pre-pregnancy: relationship status, country of birth, education, fertility desires, and background characteristics.
- Pregnancy : measures of physical and psychological well-being using the SF-36 scales for general health, mental health, and bodily pain.
- Post-birth: subjective experiences of parenting (e.g., "*Being a parent is harder than I thought it would be", "I feel trapped by my responsibilities as a parent*"), labour-force participation, and child characteristics (sex and health).

Women with twin first births are excluded. The final analytical sample includes 2,246 women, of whom 33% had one child and 67% had two or more children by the last observation.

Descriptive characteristics of the sample by parity status are shown in Table 1, followed by preliminary event-history models estimating the hazard of a second birth.

The timing variable measures the number of months from the first birth to the conception of a second child; women who did not have a second birth are censored at their last observation or when the first child reached age seven. Predictors are entered in four models corresponding to the 1) pre-pregnancy, 2) pregnancy, 3) first year post-birth, 4) second year post-birth.

Table 1. Selected descriptive characteristics of sample, by whether or not they had one child or two or more children at the last observation (column percentages)

	One child	*Two+ children*	*Total*
	%	%	%
Highest level of education (at birth of first child)			
University	43	45	44
Diploma	13	10	11
Certificate	20	19	19
High school (last year)	15	17	16
High school (<last year)	10	9	10
Age at first birth			
18-24	22	26	25
25-29	31	37	35
30-34	27	30	29
35-39	16	6	10
40+	4	1	2
Childbearing desire score (0-10), prior to pregnancy			
Lowest (0-4)	4	2	3
5-6	8	3	4
7	6	3	4
8	12	9	10
9	13	12	12
Highest (10)	57	72	67
Number of children wanted, prior to pregnancy			
One child	27	8	14
2+ children	73	92	86
Relationship status			
At child aged 0			
Single	12	5	7
Partnered with child's other parent	76	89	85
Partnered but not with child's other parent	-	-	-
At child aged 1			
Single	17	8	11
Partnered with child's other parent	81	91	87
Partnered but not with child's other parent	3	1	2
Total %	100	100	100
Total N	738	1,508	2,246

Source: HILDA 2001-2023

Results

Descriptive Kaplan–Meier estimates show substantial variation in the timing of second pregnancies across several key characteristics, including age at first birth, relationship status, and health during pregnancy. The largest differences are observed by age at first birth and relationship status (Figure 1), but meaningful variation also appears across other aspects of the transition to parenthood. Specifically, the likelihood and timing of a second conception differ by different aspects of physical and mental health during and after pregnancy, including the level of bodily pain experienced during pregnancy (Figure 2). Subjective experiences of parenting, including whether the woman or her partner indicated a higher level of perceived difficulty with parenting during the child's first (Figure 3) and second years of life.

Figure 1 Time to second child conception, by relationship status when first child aged 0

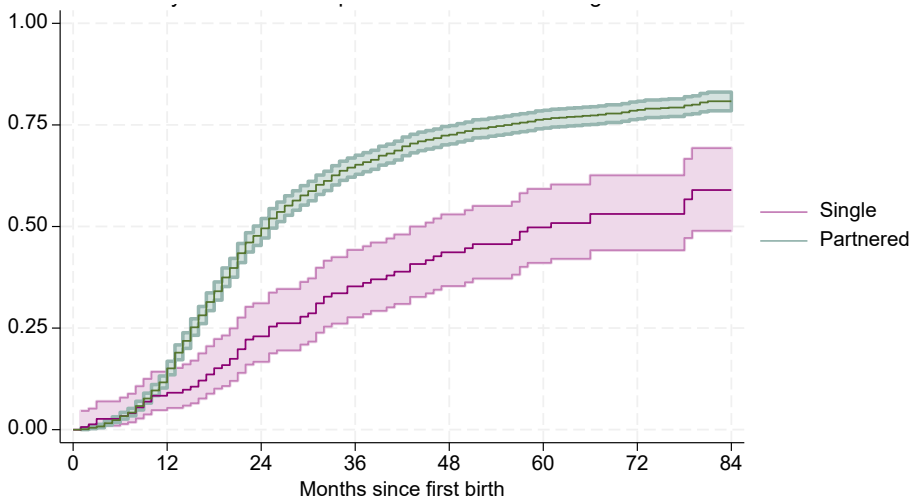


Figure 2 Time to second child conception, by level of bodily pain during pregnancy

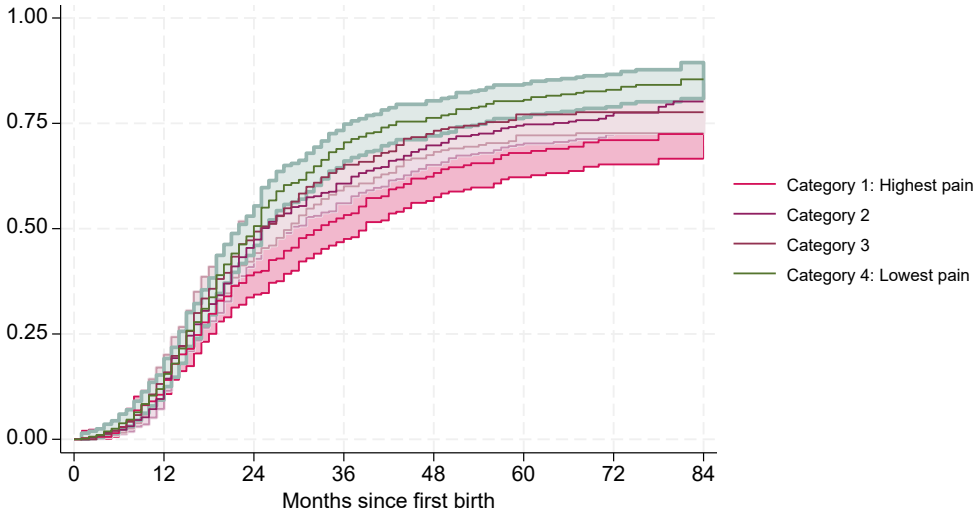
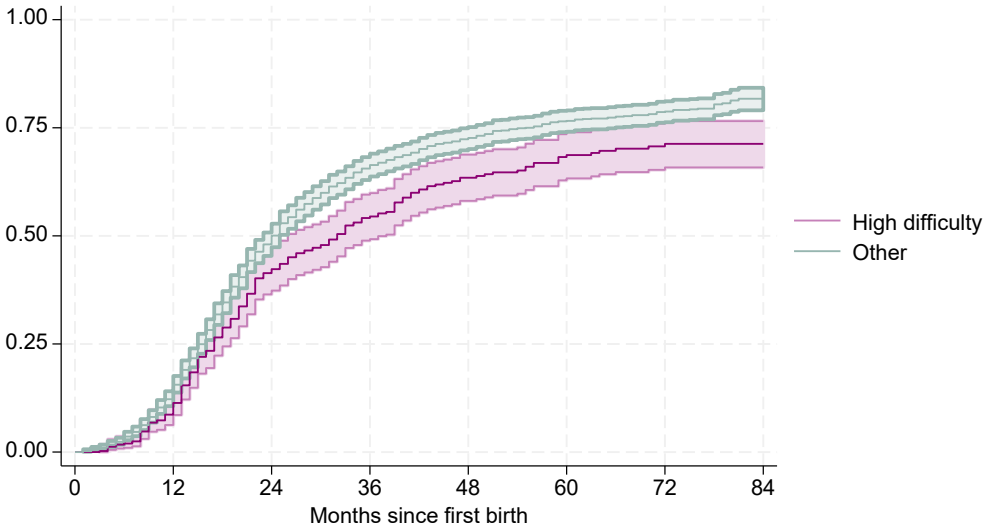


Figure 3 Time to second child conception, by perceived level of parenting difficulty



Multivariate event-history models confirm that age at first birth and union stability are the strongest structural constraints on progression to a second birth (Table 2). In addition, childbearing desire prior to pregnancy significantly predicts parity progression: women reporting weaker fertility desires before their first pregnancy are less likely to have a second child.

Beyond these structural and attitudinal factors, several individual-level experiences during pregnancy and the first two years of the child's life independently affect the likelihood of a second birth. Poor physical and mental health during pregnancy, difficulties in early parenting, and having a child with health problems each substantially reduce the probability of progressing to parity two.

Table 2. Selected coefficients of time to second pregnancy (Cox-regression model)

	Year before pregnancy	Year of pregnancy	Child aged 0	Child aged 1
Age at first birth				
18-24	0.15	0.39**	0.12	0.17
25-29	0.04	-0.04	0	-0.05
30-34	(base)	(base)	(base)	(base)
35-39	-0.51***	-0.41*	-0.36*	-0.47**
40+	-1.29***	-0.65	-1.04**	-1.66***
Country of birth				
Overseas	(base)	(base)	(base)	(base)
Australia	0.17	0.11	0.09	0.31**
Childbearing desire (year before pregnancy)				
Lowest (0-4)	-0.43	-0.56	-0.77	-0.39
5-6	-0.57**	-0.54	-0.76**	-0.37
7	-0.49**	-0.22	-0.58*	-0.24
8	-0.02	0	-0.19	0.07
9	(base)	(base)	(base)	(base)
Highest (10)	0.18*	0.04	0.07	0.24
Highest level of education				
University	(base)	(base)	(base)	(base)
Diploma	-0.29**	-0.53**	-0.33*	-0.41**
Certificate	-0.12	-0.22	-0.05	-0.19
Highest year of secondary school	-0.16	-0.25	-0.13	-0.33**
Less than highest year	-0.30**	-0.28	-0.50**	-0.55**
Relationship status (time varying)				
Single	-0.31***	-0.44*	-0.75***	-0.85***
Partnered	(base)	(base)	(base)	(base)
Mental health score (time varying)				
Highest	(base)	(base)	(base)	(base)
1	-0.01	-0.21	-0.38**	-0.14
2	0.01	-0.26	-0.29	-0.16
Lowest	0.03	-0.31	-0.42***	-0.04
General health (time varying)				
Highest	(base)	(base)	(base)	(base)
1	0.23**	0.24	0.08	0.36**
2	0.31***	0.47**	0.24	0.52***
Lowest	0.45***	0.57**	0.27*	0.52***
Change in mental health score from previous wave		0.00	-0.01*	0
Change in pain score from previous wave		-0.01**	-0.01***	0
Child health				
No health condition			(base)	(base)
Has health condition			-0.31*	-0.20*
Perceived difficulty of parenting				
Difficult			-0.33**	-0.32**
Other			(base)	(base)
Missing			-0.25	-0.48

Source: HILDA 2001-2023

These results suggest that the likelihood of stopping at one child is shaped by conditions before conception, during pregnancy, and after the first birth. While a higher age at first birth is strongly related to the likelihood of having one child, other important influences include different partnership trajectories, as well as physical and psychological experiences during and after pregnancy. The analysis will be refined in terms of the selection of variables and it will be expanded through the use of interaction effects to better understand how experiences surrounding the first birth shape subsequent fertility outcomes.

References

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