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**Article: How many children
have women in Australia had?**

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How many children have women in Australia had?

In 2006, 11% of women aged 40–44 years had had four or more babies, compared with 28% of women that age in 1981.

Despite recent increases in Australia's fertility rate, low fertility remains a significant population issue in Australia. The magnitude of the future economic and social impacts of an ageing population will be largely determined by long-term fertility, as well as migration trends.^{1,2}

Population fertility is most often measured by looking cross-sectionally at birthrates in a particular year. This is summarised by the total fertility rate (TFR). The TFR is a hypothetical measure of the total number of babies a woman would have on average, if the age-specific fertility rates of that year prevailed throughout her reproductive life. Alternatively, fertility can be measured by counting the total number of babies ever had by women. Using information on 'children ever born' from selected population censuses, this article examines changes in completed fertility and the number of children had by women at particular ages and from selected sociodemographic backgrounds.

Children ever born

Over the past several decades, successive generations of Australian women have been having fewer babies on average throughout their childbearing years, and tending to have them at older ages. In 1981, women who could be considered to have largely completed their fertility (aged 40–44 years) had had an average of 2.8 children each (including the women who had no children). By 2006 the average number of children ever

Data sources and definitions

The primary sources of data for this article are the 1981, 1986, 1996 and 2006 Censuses of Population and Housing. Each of these censuses asked a question about the number of children ever born (live born only) to females aged 15 years and over.

Completed fertility is the number of children a certain cohort of women who have completed childbearing actually had during their entire reproductive lifetime. In this article the age group 40–44 years is used to represent those women who have recently finished their fertility potential. Although some women may still have babies at age 45 years or over, they have been excluded as only a negligible proportion of all births are to women aged over 44 years (less than 0.2% in 2006).

The *total fertility rate* (TFR) for any given year is the sum of the age-specific fertility rates for that year. It is a hypothetical measure which represents the average number of babies a woman would give birth to during her lifetime if the age-specific fertility rates of that year prevailed at each age of her reproductive life.

Age-specific fertility rates (ASFR) are the number of live births in a year to mothers at each age per 1,000 of the female population of the same age.

born had fallen by 0.7 babies each to 2.0, just below the replacement level of 2.1 babies.

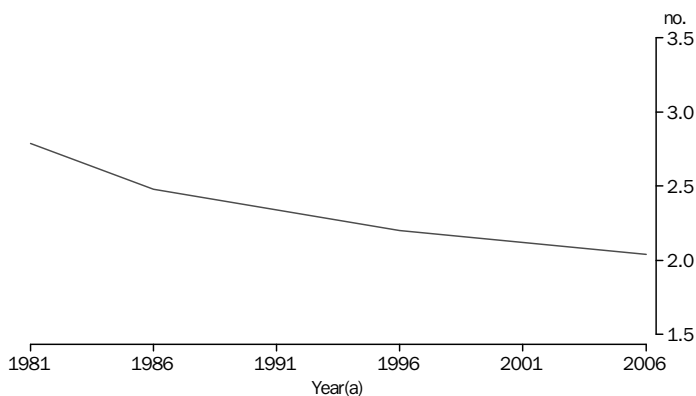
The higher level of completed fertility among the 40–44 year old women in 1981 reflects the particular fertility experience of these women (born 1937–1941) who were in their early twenties when the baby boom peaked in 1961. Just 8% of women in this cohort were childless by the time they were aged 40–44 years and 28% had had four or more children. In contrast, women aged 40–44 years in 2006 (born 1962–66) were twice as likely to be childless (16%) and only 11% had had four or more children.

...delaying of births

One of the features of decreased fertility in recent decades is the progressive postponement of women's first birth. Delays in childbearing reduce the remaining time in which women can have babies and increase their likelihood of remaining childless.

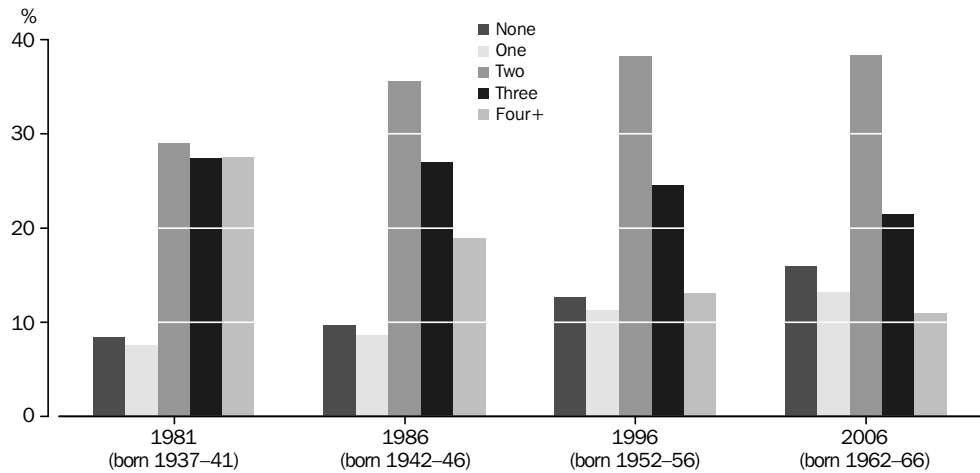
In 1986, 25% of women aged 20–24 years (i.e. born 1962–66) had had at least one child. For women in the same age group a decade later in 1996 (born in 1972–76), 18% had at least one child, while 14% of those born in 1982–86 had at least one child by their early to mid twenties.

Average number of children ever born: women aged 40–44 years



(a) Graph based on five yearly data. Data for 1991 and 2001 are interpolated.
Source: ABS 1981, 1986, 1996 and 2006 Censuses of Population and Housing.

Number of children ever born to women aged 40–44 years



Source: ABS 1981, 1986, 1996 and 2006 Censuses of Population and Housing.

...childlessness

As women have delayed childbearing, a greater proportion have remained childless into their thirties and forties. In 2006, 37% of women in the peak child bearing age of 30–34 years (born 1972–76) had not had any children. This was greater than the 29% of childless 30–34 year olds in 1996 (born 1962–66) and the 20% in 1986 (born 1952–56).

For women aged 40–44 years, childlessness increased from 10% for women born in 1942–46, to 13% for women born in 1952–56, and 16% for women born in 1962–66. Due to recent increases in first births to older women, the rise in childlessness over the

lifetime for these successive cohorts of women was not as great as it might otherwise have been. In the decade to 2005, the proportion of women who had their first baby at 35 years of age or older doubled from 5% to 10%.

Social trends associated with changing fertility

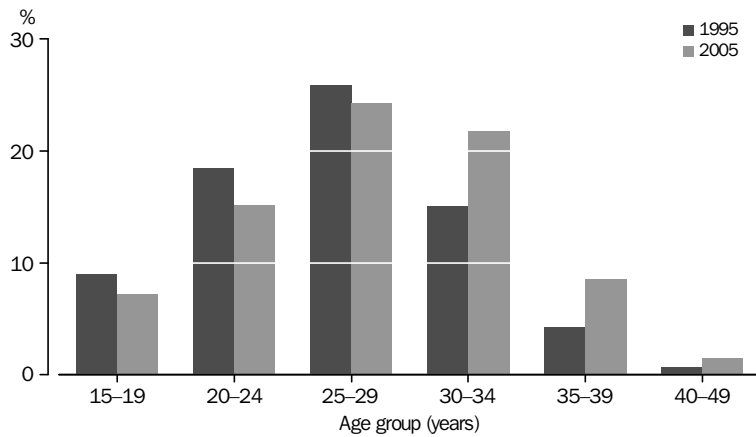
Declining fertility levels over the lifetimes of successive cohorts of women in recent decades have been associated with particular societal changes in Australia and other developed countries. Increasing social liberalism (including the availability and use of contraception) as well as economic

Number of children ever born: mother's birth cohort and age

Cohort, age group at Census	None	One	Two	Three	Four or more	Average number of children
	%	%	%	%	%	No.
Mother born 1952–56						
30–34 years (1986 Census)	19.9	15.4	36.2	20.0	8.5	1.8
40–44 years (1996 Census)	12.8	11.3	38.2	24.6	13.1	2.2
Mother born 1962–66						
20–24 years (1986 Census)	75.4	14.6	7.7	1.8	0.5	0.4
30–34 years (1996 Census)	29.0	18.8	30.7	15.0	6.4	1.5
40–44 years (2006 Census)	15.9	13.2	38.3	21.5	11.0	2.0
Mother born 1972–76						
20–24 years (1996 Census)	81.5	11.6	5.2	1.3	0.4	0.3
30–34 years (2006 Census)	36.5	20.8	26.7	11.0	5.0	1.3
Mother born 1982–86						
20–24 years (2006 Census)	85.5	9.3	3.9	0.9	0.3	0.2

Source: ABS Censuses of Population and Housing.

Women having a first birth by age group(a)



Source: Australian Institute of Health and Welfare (AIHW), *Australia's Mothers and Babies, 1996 and 2005*, derived from age of mother and number of births.

deregulation have produced conditions in which women have become freer to control their fertility, while at the same time increasing the perceived opportunity costs of childbearing.³

Increasing liberalism was characterised by an upsurge in lifestyle options for women and men. A key indicator related to the decline in fertility (particularly at younger ages) is the decline in the proportion of the population who were cohabiting in either a registered or de facto marriage. In 1986, almost three-quarters (74%) of people aged 18–44 years were either married or in a de facto relationship. By 2006, the proportion cohabiting had declined to around one-half (51%).

Women's labour force participation and level of qualification increased considerably from the 1980s as changing attitudes and labour markets opened employment opportunities to women. In 1986, 59% of women aged 18–44 years were employed. By 2006, 70% of women this age were employed. By contrast, employment of men aged 18–44 years remained at 84% in each period.

In tandem with increasing labour market opportunities, women have been becoming increasingly educated over time. In 1986, 7%

of women aged 18–44 years had a Bachelor degree or higher; by 2006, this had increased to 25%. Pursuing post-school education can reduce fertility directly as women are less likely to have children while studying, and upon completing their qualification, women may delay childbearing in order to establish a career.

Socioeconomic differentials in fertility

Education, income, religion and country of birth all have some bearing on the fertility experience of women, and many of these factors can also be seen to be interrelated to varying extents.

...income

In 2006, women aged 40–44 years in the lowest quintile of equivalised household income had an average of 2.4 babies each, compared with 1.4 for those in the highest quintile of income. The average of the second, third and fourth quintiles fell in order between the lowest and highest quintile.

...education

Women with higher levels of educational qualification tend to have fewer children than do those with lower education levels. In 2006, women aged 40–44 years with a Bachelor degree or higher qualification had an average of 1.7 babies, while those with no non-school qualifications had 27% more children on average, with an average of 2.2 babies each. Not surprisingly, the differential between qualification level is greatest at younger ages. Among women aged 25–29 years in 2006, the average number of children ever born to those without non-school qualifications was almost five times that of women with a Bachelor degree or higher qualification (1.04 and 0.22 respectively).

As education may provide incentives to participate in the labour force, and skilled workers tend to earn greater incomes than unskilled workers, it follows that income is

Selected population characteristics: women aged 18–44 years

	1986	1996	2006
	%	%	%
In a registered or de facto marriage	74.2	55.1	51.2
Females employed	58.7	64.6	70.2
Females with Bachelor degree or higher qualification	6.5	16.0	25.0

Source: ABS, 1986, 1996 and 2006 Censuses of Population and Housing.

closely associated with educational attainment and completed fertility.

However, while it is apparent that fertility was generally lower in higher income groups, it is also evident that lower education level within each income quintile is associated with higher lifetime fertility level.

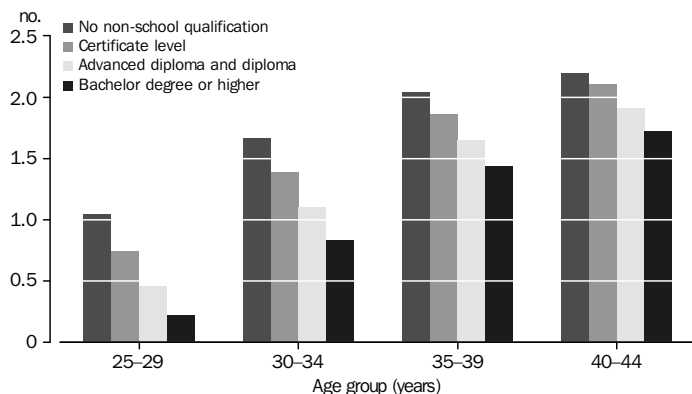
...country of birth

Women who were born in Australia tend to have more babies than Australian residents who were born overseas. In 2006, Australian-born women aged 40–44 years had an average of 2.1 babies each compared with 2.0 for those born overseas. This pattern has been consistent throughout recent decades and may be in part because larger families are less likely to migrate, and many migrants are seeking to establish themselves economically so family formation may be a lower priority. This is supported by the observation that the more recently a woman migrated, the lower her fertility. For example, women aged 40–44 years in 2006 who arrived from overseas more than twenty years earlier (i.e. pre 1986) had an average of 2.1 babies each compared with an average 1.9 babies each for the women aged 40–44 years who had arrived since 1986.

Overseas born women who were born in East Asia tended to have a low average number of children. For example, women aged 40–44 years born in China had an average of 1.5 babies, while women born in either Hong Kong, Thailand or Japan had an average of 1.4 children each.

While on average women born overseas had fewer babies throughout their lifetimes than Australian-born women, there were some notable exceptions. Women aged 40–44 years

Average number of children had by women: highest level non-school qualification — 2006

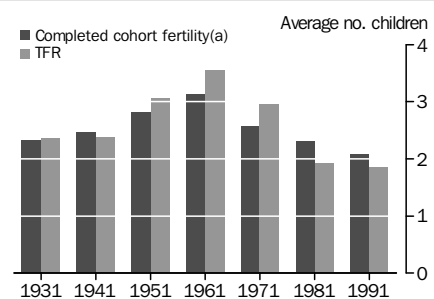


Source: ABS 2006 Census of Population and Housing.

Completed cohort fertility rate (CCFR) and total fertility rate (TFR)

Fertility can be measured in a summary rate either across reproductive lifetimes (CCFR) or cross-sectionally in the population for a particular year (TFR). The major limitation of measuring the completed cohort fertility is that a cohort's fertility can only be fully measured once its members have passed through their potentially reproductive years. While the TFR provides more timely information about fertility levels, it may exaggerate fertility trends whenever there are shifts in the timing pattern of births. For example, during the baby boom (1946–65) the TFR was lifted beyond the actual completed fertility level for any cohort in that time because many births were 'brought forward' as younger women had increased fertility rates, while simultaneously, older women also had higher fertility rates. However, those younger women did not go on to have as many babies in the latter part of their childbearing years as the older women had. Likewise, the decreases in the TFR in recent decades may overstate the decline (compared with the CCFR). This is because the TFR fell in response to the lower fertility among younger women, but the fact that many of these women are delaying (as opposed to cancelling) means that any eventual 'catch-up' at older ages is not reflected in the TFR until a later period.

Completed cohort fertility and period TFR, 1931–1991

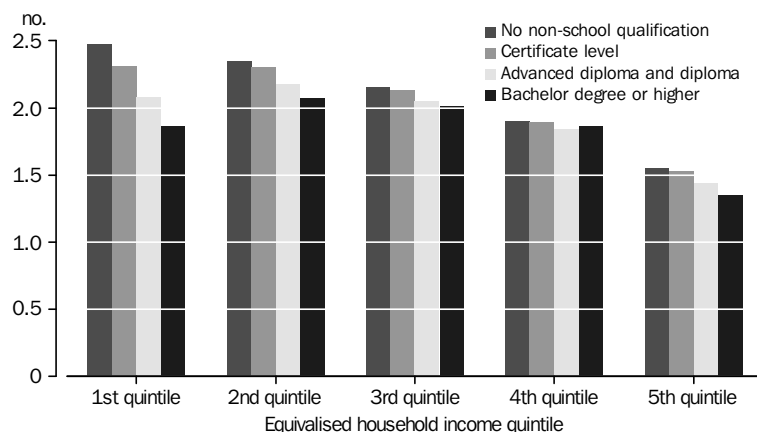


(a) Completed fertility at age 40–44 years for the cohort aged 25–29 years in that year. For example, for 1991, the cohort comprises those women born in 1962–66 and their completed fertility is measured in 2006.⁴

Source: Derived from *Australian Historical Population Statistics* (ABS cat. no. 3105.0.65.001).

born in Polynesia had an average of 2.5 babies each, while women born in the Middle East had 2.8 babies each on average. Within the Middle East, women born in Lebanon had the highest fertility with 3.3 babies per woman. Lebanese-born women aged 40–44 years who arrived more than twenty years earlier (i.e. pre 1986) had an average 3.4 babies each, while those 40–44 year olds who have arrived since then have had 2.9 babies each.

Average number of children ever born, highest non-school qualification and household income: women aged 40–44 years — 2006



Source: ABS 2006 Census of Population and Housing.

...religion

The higher fertility among women born in Middle Eastern countries was also reflected in the fertility pattern associated with religious affiliation. The 10,900 women nominating Islam as their religion in the 2006 Census had higher fertility in all age groups than did women of all other religions or no religion. On average, Islamic women aged 40–44 years had had 2.9 babies each, compared with 2.0 for all women in Australia. These Islamic women tended to have a somewhat lower

level of educational attainment and lower incomes than did Australian women overall. After adjusting to take account of these differences, the average number of children ever born to Islamic women was reduced to around 2.5 babies per woman, still considerably higher than for all women.

Christianity (nominated by 74% of the 749,600 women aged 40–44 years enumerated in the 2006 Census) had the second highest average fertility level at 2.1 babies ever born. There was little difference in average fertility among women belonging to the main denominations of Christian faith with Catholic and Anglican women aged 40–44 years each having an average of 2.1 children.

The 21,200 Buddhist women enumerated in the census had had an average of 1.7 babies each, while the 5,900 Hindu women had an average of 1.8 babies each. Hindu women were more likely than women of any other religion to have had exactly two children (56%); compared with 39% among Christians, 37% among Buddhists and 29% among Islamic women. While adjusting to account for differences in education and income made no difference to the average number of children ever born to Anglican, Catholic or Christian women overall, it made a modest difference for Buddhist and Hindu women. The standardised average number of children ever born to Buddhist women was 1.6 (compared with the unadjusted average of 1.7) while the standardised average for Hindu women was 1.9 (compared with 1.8).

Women who nominated no religious affiliation (18% of all women aged 40–44 years) had an average of 1.8 babies each.

Average number of children ever born by selected countries of birth, women aged 40–44 years — 2006

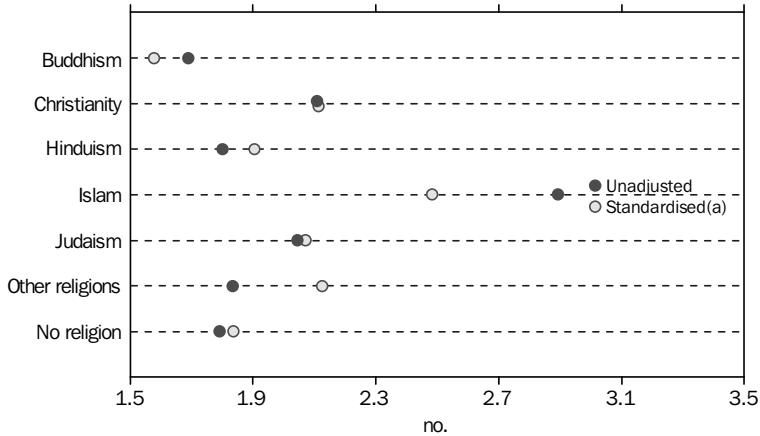
Country of birth	Average number of babies	Proportion of total overseas born women in age group
	No.	%
England	2.0	21.2
New Zealand	2.0	9.4
China (excludes SARs and Taiwan Province)	1.5	6.3
Philippines	1.8	4.7
Viet Nam	2.0	4.6
India	1.8	2.9
Scotland	2.0	2.6
South Africa	2.0	2.4
Lebanon	3.3	2.2
Other overseas born	2.0	43.6
Total overseas born	2.0	100.0
Australia	2.1	. .
Total	2.0	. .

Source: ABS 2006 Census of Population and Housing.

...Aboriginal and Torres Strait Islander women

Fertility among Aboriginal and Torres Strait Islander peoples is considerably higher than among the non-Indigenous population. There were 14,300 Indigenous women aged 40–44 years enumerated in the 2006 Census. Among these women the average number of children ever born was 2.8, compared with 2.0 among non-Indigenous women (the same as for Australian women overall). The younger age at which Indigenous women have children is a particular difference, with almost half (49%) of Indigenous women aged 20–24 years having at least one child, compared with 13% of non-Indigenous women. After adjusting to take account of differences in education and income the relative difference between the average number of children born to Indigenous and

Average number of children ever born and religious affiliation, women aged 40–44 years — 2006



(a) Standardised to the total 40–44 year old women's level of education and income.

Source: ABS 2006 Census of Population and Housing.

non-Indigenous women was reduced. The standardised average for Indigenous women was about 2.5 compared with 2.0 for non-Indigenous women.

...Remoteness Area

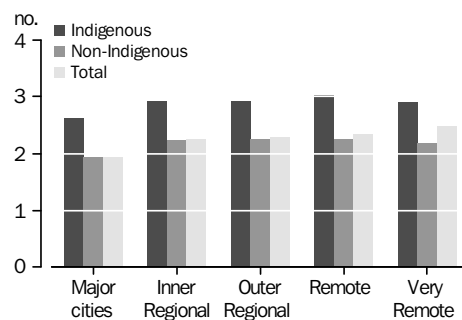
The average number of babies women had increased with their level of remoteness. In 2006, women aged 40–44 years living in Major Cities had an average of 1.9 babies each. This compares with an average 2.5 in Very Remote regions. Higher fertility in the Very Remote regions is partly due to the relatively high proportion of Indigenous people living there. Among the non-Indigenous population, the average number of babies had by women in Very Remote areas was 2.2,

fewer than in the Remote areas (2.3), although higher than the Major Cities (1.9).

Endnotes

- 1 Productivity Commission 2005, *Economic Implications of an Ageing Australia, Research Report*, viewed 1 May 2007 <<http://www.pc.gov.au/study/ageing/docs/finalreport>>.
- 2 Australian Bureau of Statistics, 2006, *Population Projections, Australia, 2004 to 2101*, cat. no. 3222.0, ABS, Canberra.
- 3 McDonnell, P, 2005, *Fertility and the State: the efficacy of policy*, paper presented at the International Union for the Scientific Study of Population 25th International Population Conference, July 18–23, 2005, Princeton.
- 4 McDonald, P, 2000, 'Low fertility in Australia: Evidence, causes and policy responses'. *People and Place*, vol 8, no 2, pp. 6–21.

Average number of children ever born by Remoteness and Indigenous status: women aged 40–44 years — 2006



Source: ABS 2006 Census of Population and Housing.

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