

2.10 Dependency ratio—including identification of age distributions within ratio

The **dependency ratio** is expressed as a percentage derived as follows:

$$\frac{\text{Percentage of population aged under 15 years} + \text{percentage of population aged 65 years and over}}{\text{Percentage of population aged 15–64 years}}$$

It is used as a proxy for the ratio between those who are not economically active (and therefore dependent) and those who are economically active.

The youth and aged dependency ratios can be calculated separately if required:

Youth dependency ratio $\frac{\text{Percentage of population aged under 15 years}}{\text{Percentage of population aged 15–64 years}}$

Aged dependency ratio $\frac{\text{Percentage of population aged 65 years and over}}{\text{Percentage of population aged 15–64 years}}$

Data sources

Data for this indicator come from ABS Australian population and Indigenous-specific ‘low series’ population estimates and projections based on the 2001 Census of Population and Housing. Data from the Census are adjusted for a number of factors, including undercount and not-stated Indigenous status, to produce population estimates by Indigenous status, age and geographic regions.

The Census year estimate of the Indigenous population is used as the basis for revising Indigenous population figures for previous years. This adjustment removes the effects of unexplained intercensal growth from Indigenous time series, and presents growth in terms of demographic factors alone (following the development of the 2001 Indigenous population estimates, the size and structure of the Indigenous population for 1991 to 2000 was rebased on the 2001 estimates).

As Indigenous population estimates by remoteness region are only available for the Census year 2001, data by remoteness are presented for this year only.

Data analyses

Age distribution of population

- The Indigenous population has a younger age structure than the non-Indigenous population which is shown in the population pyramid in Figure 2.10.1. In 2001, 39% of Indigenous people were aged under 15 years compared with 20% of non-Indigenous people. People aged 65 years or over comprised 3% of the Indigenous population and 13% of the non-Indigenous population. These figures reflect higher rates of fertility and deaths occurring at younger ages among the Indigenous population.
- The age structure of the Indigenous and non-Indigenous populations are similar across most states and territories (Table 2.10.1). The main variations from the national average are that the Australian Capital Territory has a lower proportion of Indigenous people aged 65 years and over (1%), and the Northern Territory has a lower proportion of non-Indigenous people aged 65 years and over (4%) compared to other states and territories.

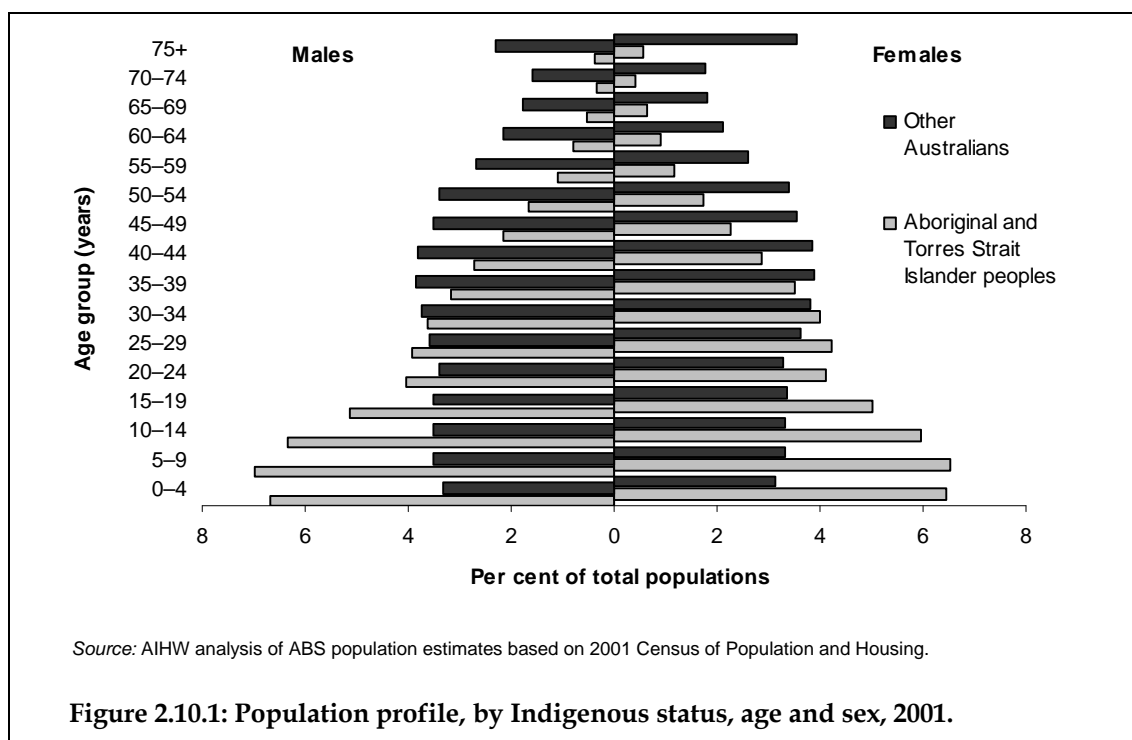


Table 2.10.1: Age distribution of population, (percentage) by age group, state/territory and Indigenous status, 2001

	NSW		Vic.		Qld		WA		SA		Tas		ACT		NT		Australia ^(a)	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
	(per cent)																	
0–4	13.5	6.5	12.9	6.4	13.6	6.6	12.9	6.4	12.6	6.0	12.6	6.4	13.0	6.4	12.1	7.6	13.1	6.4
5–9	13.8	6.8	13.5	6.8	14.0	7.0	13.2	6.9	13.4	6.5	13.2	6.9	13.8	6.8	12.3	7.4	13.5	6.8
10–14	12.5	6.8	12.2	6.8	12.3	7.0	12.7	7.2	12.2	6.6	13.6	7.1	11.3	7.0	11.4	6.8	12.3	6.8
15–19	10.0	6.7	10.1	6.8	10.0	7.1	10.1	7.2	10.5	6.8	11.5	7.0	10.5	7.7	10.5	6.3	10.2	6.9
20–24	7.6	6.6	8.0	6.8	8.2	6.8	8.2	6.8	8.0	6.3	7.8	5.9	8.9	8.3	9.5	7.5	8.2	6.7
25–29	7.7	7.3	8.1	7.3	8.3	7.2	8.3	7.2	8.2	6.6	6.7	6.1	9.1	8.1	9.3	9.4	8.2	7.2
30–34	7.3	7.5	7.7	7.8	7.6	7.4	7.8	7.6	7.8	7.2	6.8	6.7	8.8	8.0	8.1	9.8	7.6	7.6
35–39	6.7	7.7	6.5	7.7	6.6	7.6	6.8	7.8	6.9	7.5	6.4	7.3	6.9	7.9	6.9	9.4	6.7	7.7
40–44	5.7	7.6	5.6	7.6	5.4	7.6	5.4	7.9	5.8	7.7	6.2	7.8	6.6	7.8	5.5	8.8	5.6	7.7
45–49	4.5	6.9	4.6	7.0	4.3	7.1	4.5	7.4	4.4	7.2	4.8	7.3	4.8	7.5	4.3	8.0	4.4	7.1
50–54	3.6	6.7	3.8	6.6	3.3	6.9	3.3	7.0	3.4	7.0	3.5	7.1	2.5	7.4	3.2	7.3	3.4	6.8
55–59	2.5	5.3	2.4	5.1	2.1	5.4	2.2	5.1	2.3	5.5	2.3	5.6	1.7	5.0	2.2	4.7	2.3	5.3
60–64	1.8	4.3	1.7	4.3	1.6	4.3	1.6	4.1	1.7	4.5	1.8	4.8	0.9	3.5	1.8	2.9	1.7	4.3
65–69	1.3	3.7	1.1	3.6	1.1	3.4	1.2	3.3	1.1	3.9	1.1	4.0	0.5	2.6	1.1	1.6	1.2	3.6
70–74	0.8	3.5	0.8	3.4	0.7	3.1	0.8	3.0	0.8	3.9	0.7	3.7	0.2	2.3	0.7	1.2	0.8	3.3
75+	0.8	6.1	1.1	6.0	0.9	5.4	1.1	5.0	0.9	7.1	0.8	6.5	0.4	3.8	1.0	1.3	0.9	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes other territories.

Source: AIHW analysis of ABS population estimates based on 2001 Census of Population and Housing.

Dependency ratios

The dependency ratio is the percentage of the population aged under 15 years and aged 65 years and over, divided by the percentage of the population aged 15–64 years. The dependency ratio for the Indigenous population is mainly influenced by the proportion of children, whereas the dependency ratio for the non-Indigenous population is much more strongly influenced by the proportion of older people. Therefore it is necessary to look at the youth dependency ratio (percentage of the population aged under 15 years divided by the percentage of the population aged 15–64 years) and age dependency ratios (percentage of the population aged 65 years and over divided by the percentage of the population aged 15–64 years) separately for the Indigenous and non-Indigenous populations.

- In 1996 the dependency ratio for Indigenous Australians was 0.75 compared to 0.50 for non-Indigenous Australians and in 2001, the dependency ratio for Indigenous Australians was 0.72 compared to 0.49 for non-Indigenous Australians (Table 2.10.2).
- In 2001, the youth dependency ratio was higher for Indigenous Australians than non-Indigenous Australians (0.67 compared to 0.30), whereas the aged dependency ratio was lower for Indigenous Australians than non-Indigenous Australians (0.05 compared to 0.18).
- In 2001, the youth dependency ratio for Indigenous people ranged from 0.58 in the Northern Territory to 0.69 in New South Wales and Queensland, and the aged dependency ratio for Indigenous people was 0.02 in the Australian Capital Territory and 0.05 in all other states and territories (Table 2.10.2).
- In 2001, the youth dependency ratio for Indigenous people was lowest in remote and very remote areas (around 0.6) and highest in inner and outer regional areas (between 0.7 and 0.8). In contrast, the aged dependency ratio was lowest in major cities (0.04) and highest in remote and very remote areas (0.06) (Table 2.10.3).
- For non-Indigenous Australians, the youth dependency ratio was similar across all remoteness categories (around 0.3). The aged dependency ratio for non-Indigenous Australians was lowest in remote and very remote areas (around 0.1), and highest in major cities, inner and outer regional areas (around 0.2).

Table 2.10.2: Total and youth and aged dependency ratios, by state/territory and Indigenous status, 1996 and 2001

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia ^(a)
1996									
Indigenous									
Dependency ratio	0.77	0.75	0.77	0.75	0.75	0.82	0.71	0.68	0.75
Youth dependency ratio	0.72	0.69	0.71	0.70	0.69	0.77	0.70	0.63	0.70
Aged dependency ratio	0.05	0.06	0.05	0.06	0.05	0.05	0.01	0.05	0.05
Non-Indigenous									
Dependency ratio	0.50	0.50	0.49	0.48	0.52	0.53	0.41	0.36	0.50
Youth dependency ratio	0.31	0.31	0.32	0.32	0.3	0.33	0.31	0.31	0.31
Aged dependency ratio	0.19	0.19	0.17	0.16	0.22	0.20	0.10	0.05	0.18
2001									
Indigenous									
Dependency ratio	0.75	0.72	0.74	0.72	0.75	0.73	0.64	0.63	0.72
Youth dependency ratio	0.69	0.66	0.69	0.67	0.69	0.68	0.63	0.58	0.67
Aged dependency ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.02	0.05	0.05
Non-Indigenous									
Dependency ratio	0.50	0.49	0.48	0.47	0.52	0.53	0.41	0.35	0.49
Youth dependency ratio	0.30	0.30	0.31	0.30	0.3	0.31	0.28	0.30	0.30
Aged dependency ratio	0.20	0.19	0.18	0.17	0.22	0.22	0.12	0.06	0.19

(a) Includes other territories.

Source: AIHW analysis of ABS population estimates based on 1996 and 2001 Census of Population and Housing.

Table 2.10.3: Total and youth and aged dependency ratios, by remoteness and Indigenous status, 2001

	Major cities	Inner regional	Outer regional	Remote	Very remote
Indigenous					
Dependency ratio	0.70	0.79	0.75	0.69	0.66
Youth dependency ratio	0.65	0.75	0.70	0.63	0.60
Aged dependency ratio	0.04	0.05	0.05	0.06	0.06
Non-Indigenous					
Dependency ratio	0.47	0.56	0.53	0.47	0.39
Youth dependency ratio	0.28	0.33	0.33	0.34	0.29
Aged dependency ratio	0.18	0.22	0.20	0.14	0.10

Source: AIHW analysis of ABS population estimates based on the 2001 Census of Population and Housing.

Time series analysis

Table 2.10.4 and Figure 2.10.2 present the youth and aged dependency ratios for Indigenous and non-Indigenous Australians over the period 1996–2005.

- Over the period 1996–2005, there was a significant decline in the youth dependency ratio for both Indigenous and non-Indigenous Australians. The fitted trend implies an average yearly decline in the ratio of around 0.01 for Indigenous Australians and 0.003 for non-Indigenous Australians.
- Over the same period, there was a significant decline in the aged dependency ratio for Indigenous Australians, with an average yearly decline in the ratio of around 0.001, and a significant increase in the aged dependency ratio for non-Indigenous Australians, with an average yearly increase in the ratio of around 0.002.

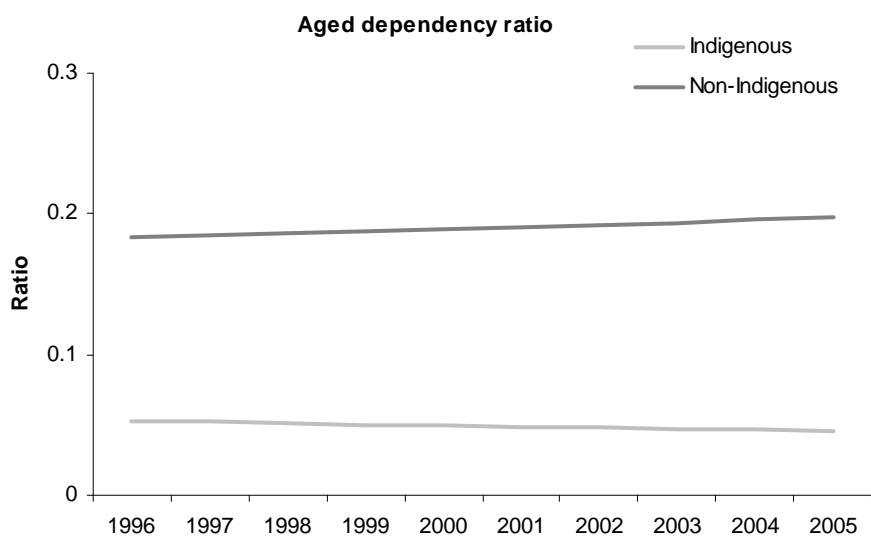
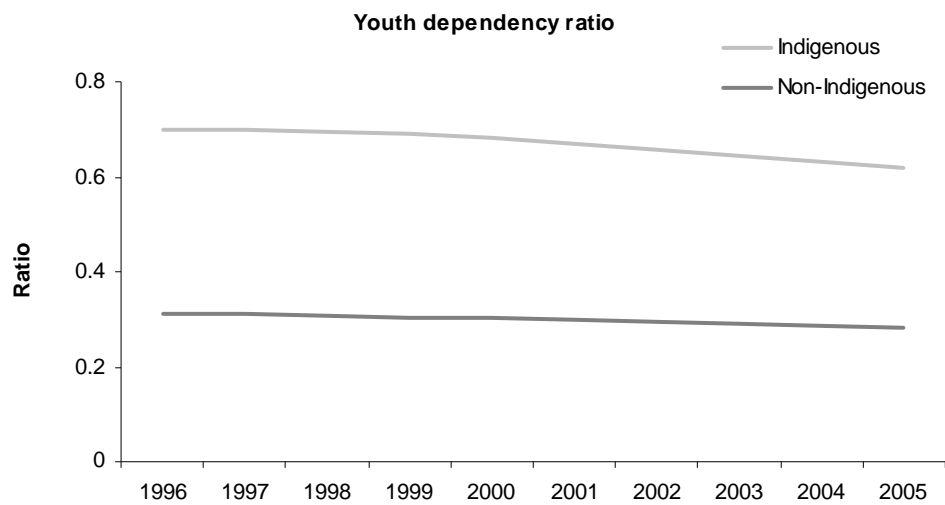
Table 2.10.4: Youth dependency ratio and aged dependency ratio, by Indigenous status, 1996–2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Annual change ^(a)
Non-Indigenous											
Youth dependency ratio	0.70	0.70	0.70	0.69	0.68	0.67	0.66	0.64	0.63	0.62	-0.1*
Aged dependency ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-0.001*
Indigenous											
Youth dependency ratio	0.31	0.31	0.31	0.30	0.30	0.30	0.30	0.29	0.29	0.28	-0.003*
Aged dependency ratio	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.002*

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2003–04.

(a) Average annual change in ratios determined using linear regression analysis.

Source: AIHW analysis of ABS population estimates and projections based on the 2001 Census of Population and Housing.



Source: AIHW analysis of ABS population estimates and projections based on the 2001 Census of Population and Housing

Figure 2.10.2: Youth dependency rate and aged dependency rate, by Indigenous status, 1996-2005

Data quality issues

Census of Population and Housing

The Census uses the National health data dictionary standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example, whether people are counted more than once, or are undercounted (ABS 1996).

For the 2002 NATSISS it was estimated that there were 165,700 Indigenous households compared with 144,700 enumerated in the 2001 Census. While the Census data are adjusted for undercounts at the person level to arrive at the Estimated Resident Population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

ABS population estimates

The ABS refers to Indigenous population estimates and projections as experimental due to concerns about the quality of the data on which they are based, particularly the quality of the Indigenous status identification in the Census and in birth and death records (ABS 2004).

The ABS's policy of backcasting data from successive Censuses retrospectively takes into account changes in the level of Indigenous identification, as occurred between the 1991 and 1996 Censuses, and, to a smaller extent between the 1996 and 2001 Censuses.

References

ABS 2004. Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians 1991–2009. ABS cat. no. 3238.0. Canberra: ABS.