

Determinants of health

This section presents information on various determinants of health: the social and economic factors that influence health. It contains indicators such as educational attainment, household income and unemployment. Indicators of social capital are also presented.

Determinants of health

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Summary

Social determinants of health are the economic and social conditions under which people live and work which determine their health. For example, consistent evidence shows that unemployment is detrimental to health, and influences a range of health outcomes, including depression, other mental health-related problems and chronic illnesses such as cardiovascular disease, and is associated with high levels of risk behaviours such as smoking. While medical care can prolong survival and improve prognosis after some serious diseases, more important for the health of the population as a whole are the social and economic conditions that make people ill and in need of medical care in the first place. Recognition of the role that factors in society or in our living conditions play in determining health has led public policy to place greater emphasis on shaping the social environment in ways conducive to better health. This chapter presents data on social and economic factors that are associated with health. These include indicators of household income, income sources, housing tenure, private health insurance coverage, unemployment rates, financial stress, school retention rates, crime rates and social capital. The indicators are based on data from the Australian Bureau of Statistics (ABS); the *Victorian population health survey*; and the Private Health Insurance Administration Council (PHIAC).

The mean equivalised disposable household income of all households in Victoria in 2005–06 was \$635 per week, the median was somewhat lower at \$564.

Average weekly total earnings increased for both males and females from 1983 to 2006. In November 2006, average weekly ordinary-time earnings for adults working full-time was \$1098 for males and \$931 for females.

A key determinant of housing affordability is the amount of rent or mortgage payments per week compared to household income. In 2006 the mean rental payment per week was \$186, compared with a mean weekly mortgage payment of \$301.

The proportion of individuals who are owners with a mortgage was almost four times greater for households with equivalised gross incomes in the highest quintile, compared with those in the lowest quintile (27.8 per cent and 7.6 per cent respectively).

Approximately 79 per cent of those from jobless one-parent family households were renters, compared with 21 per cent of those described as jobless two-parent family households.

Private health insurance coverage in Victoria remained stable between 1999 and 2007, with participation rates for hospital cover of 42.9 per cent at September 2007. The proportion of the adult population covered by private hospital insurance was greatest in the age group 55–59 years, and lowest in the age group 25–29 years.

Opportunities to undertake formal education have improved over time. The proportion of people who had not completed Year 12 or equivalent increased with increasing age, as did the proportion that had not been to school. Year 10–12 retention rates in Victorian schools have increased, from 81 per cent in 1999 to 84 per cent in 2006, with higher retention rates in non-government schools compared to government schools.

The unemployment rate in Victoria declined from approximately 12 per cent in 1993 to approximately five per cent in August 2006. Over the four-year period 2003–06 the male labour force participation rate increased from 71.2 per cent to 72.9 per cent. In the same period, the female participation rate increased from 54.8 per cent in 2003 to 57.1 per cent in 2006. In 2006 Victoria performed similarly to Australia on most measures of labour underutilisation (unemployment and underemployment).

Financial stress arises when individuals and families encounter difficulties in meeting regular or unexpected commitments due to an inability to find the cash or other resources to discharge their obligations. The proportion of individuals who were unable to raise \$2,000 within a week for something important ranged from a high of 29 per cent of those in the lowest quintile of equivalised gross household income to less than two per cent of those in the highest quintile.

Estimates from the 2006 ABS *Personal safety survey* indicate that a greater proportion of males under 25 years experienced physical violence compared to females in this age group; however, a greater proportion of females 45 years and over experienced physical violence. More than twice the number of females experienced sexual violence compared to males.

Sexual assault rates fell from 1997 to 2001, but have since remained static. Most other offence rates have shown an overall decline since 2001, with the exception of the rate of assaults, which increased from 2001–06.

For women under the age of 45 years, intimate partner violence was responsible for an estimated 9.0 per cent of the total disease burden. For all Victorian women it represented 3.2 per cent of the total disease burden.

In a socially connected, inclusive community, people feel cared for and valued. Research consistently shows strong links between social inclusion and individual health and wellbeing. Estimates from the *Victorian population health survey* (VPHS) 2006 reveal that 7.6 per cent of males and 7.5 per cent of females did not feel valued by society in 2006.

Trust is an important aspect of social capital because it underlies and contributes to the quality and number of interactions between people. VPHS 2006 survey estimates indicate that most Victorians agreed that people can be trusted either ‘sometimes’, or ‘yes definitely’ (79.8 per cent). Males (41.4 per cent) were significantly more likely than females (35.8 per cent) to agree that people can be trusted ‘yes, definitely’.

Volunteering helps individuals form interpersonal ties and develop their social networks. Increased social contact and stronger support networks are associated with better health. Results from the VPHS 2006 reveal that participation rates in volunteer work increased with age with Victorians aged 65 years and over (38.4 per cent) being significantly more likely to engage in volunteer work than people in the youngest age group (24.2 per cent).

Household income and income distribution

Household income and income distribution, Victoria and Australia, 2005–06

Household characteristics	Unit	Victoria	RSE (%)	Australia	RSE (%)
Equivalised disposable household income (per week)					
Mean income	\$	635	1.5	644	0.8
Median income	\$	564	1.4	563	0.6
Mean household net worth	\$	566,312	6.6	562,859	3.1
Proportion of households with characteristic					
Principal source of household income					
Zero or negative income	per cent	0.3	39.3	0.5	14.3
Wages and salaries	per cent	58.9	1.5	59.3	0.7
Own unincorporated business income	per cent	5.7	10.6	6.1	5.3
Government pensions and allowances	per cent	26.8	3.0	26.1	1.4
Other income	per cent	8.3	8.5	8.0	3.9
Contribution of government pensions and allowances to gross household income					
Nil or less than 1 per cent	per cent	43.8	2.3	43.7	0.9
1 per cent to less than 20 per cent	per cent	20.5	4.9	20.2	2.1
20 per cent to less than 50 per cent	per cent	8.9	7.2	9.5	3.4
50 per cent to less than 90 per cent	per cent	9.6	7.3	8.6	3.4
90 per cent and over	per cent	16.9	3.7	17.3	2.1

Note: RSE = relative standard error. The relative standard error is a measure of accuracy of a survey estimate, calculated as the ratio of standard error to the estimate.

Source: Australian Bureau of Statistics, 2007, Household income and income distribution, Australia, 2005–06, Catalogue no 6523.0. DO001, Canberra.

Disposable income is defined as gross income minus income tax and the Medicare levy (if applicable). Income data are generally reported at the household level even though income is usually received by individuals. This practice is followed because income tends to be shared by co-resident family members and, to a lesser extent, by other household members, who benefit from economies of scale. Equivalence scales are then applied to incomes measured at the household level to account for the different income levels required by households of different sizes to achieve a similar standard of living. The data reported for this indicator are standardised to the equivalent income requirements of a single-person household.

Income distribution in Victoria in 2005–06 generally reflected that of Australia as a whole. While the average (mean) equivalised disposable household income of all households in Victoria in 2005–06 was \$635 per week, the median (that is, the midpoint, when all people are ranked in ascending order of income) was more than \$60 lower, at \$564. This difference reflects the typically skewed pattern distribution of income, where a relatively small number of people have relatively very high household incomes, and a large number of people have relatively lower household incomes.

For a majority of households in Victoria and Australia in 2005–06, wages and salaries represented the principal source of income (58.9 per cent and 59.3 per cent, respectively). Transfer payments or government pensions and allowances represented the principal source of income for a further 26.8 per cent of Victorian households, compared with 26.1 per cent of Australian households. Government pensions and allowances contributed 90 per cent or more of the gross household income of 16.9 per cent of Victorian households in 2005–06.

Reference

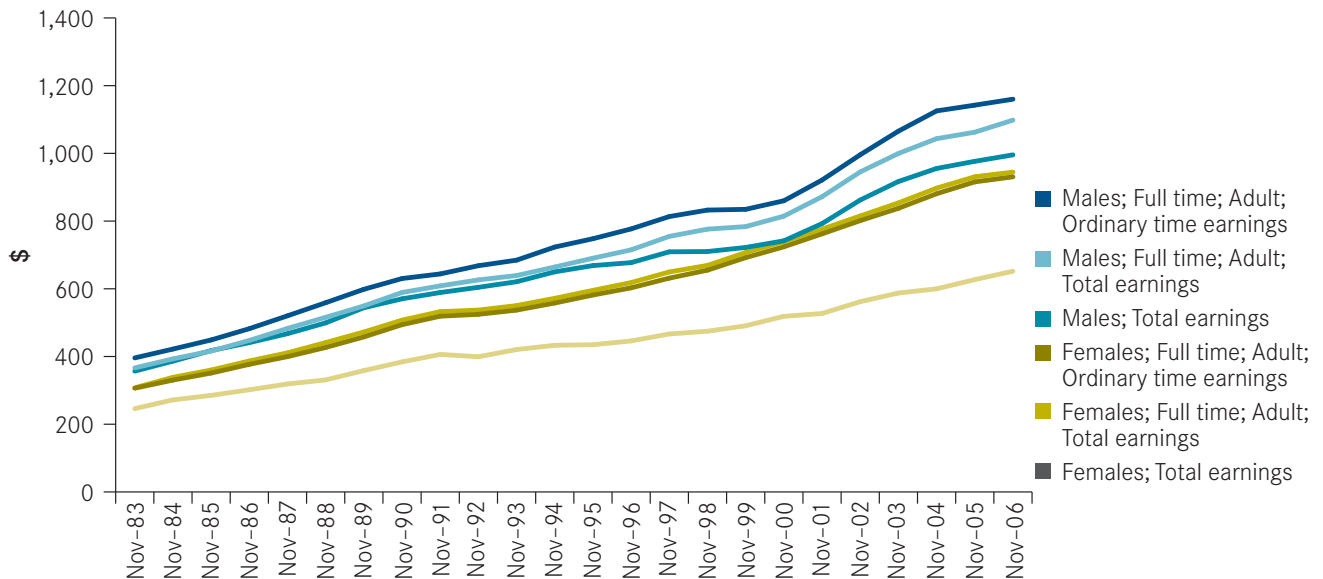
Australian Bureau of Statistics, 2007, Household income and income distribution, Australia, 2005-06, Catalogue no 6523.0. DO001, Canberra.

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Average weekly earnings

Average weekly earnings, trend series, by sex, Victoria, 1983–2006



Source: Australian Bureau of Statistics, *Average weekly earnings, Australia, 2007*, Catalogue no. 6302.0, Canberra

Average weekly earnings statistics represent average gross (before tax) earnings of employees and do not relate to average award rates, nor to the earnings of the ‘average person’. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of number of employees.

‘Weekly ordinary time earnings’ refers to one week’s earnings of employees for the reference period attributable to award, standard or agreed hours of work. ‘Weekly total earnings’ of employees is equal to weekly ordinary time earnings plus weekly overtime earnings. Several aspects can contribute to changes, including variations over time in the proportions of full-time, part-time, casual and junior employees, variations in the occupational distribution within and across industries, variations in the distribution of employment between industries and variations in the proportion of male and female employees.

The ratio of female-to-male trend average weekly total earnings was stable between 1983 and 2006, varying between 0.63 and 0.70 during this period. Total weekly earnings rose steadily for both males and females from 1983 to 2006. Adult average weekly, full-time, ordinary-time earnings in November 2006 was \$1098 for males and \$931 for females.

Weekly ordinary earnings

Weekly ordinary earnings is calculated before taxation and any other deductions (for example, superannuation, board and lodging) are made. Included in ordinary time earnings are award, workplace and enterprise bargaining payments, other agreed base rates of pay, over-award and over-agreed payments, penalty payments, shift and other allowances, commissions and retainers, bonuses and similar payments related to the reference period, payments under incentive or piecework, payments under profit sharing schemes normally paid each pay period, payment for leave taken during the reference period, all workers’ compensation payments made through the payroll and salary payments made to directors. Excluded are overtime payments, retrospective pay, pay in advance, leave loadings, severance, termination and redundancy payments and other payments not related to the reference period.

Reference

Australian Bureau of Statistics, *Average weekly earnings, Australia, 2007*, Catalogue no. 6302.0, Canberra.

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Housing tenure and affordability

Characteristics of the household to which the selected person belongs, by remoteness, Victoria 2006

	Major cities	RSE (%)	Inner regional	RSE (%)	Other areas	RSE (%)	All persons	RSE (%)
Owner without a mortgage (per cent)	35.6	4.4	38.3	7.7	51.6	10.0	37.1	3.2
Owner with a mortgage (per cent)	41.1	4.0	35.7	9.4	30.2	13.8	39.3	3.1
Renter with state or territory housing authority (per cent)	1.9	26.9	NA	NA	NA	NA	2.5	22.8
Renter with private landlord (per cent)	18.4	6.9	13.8	12.2	9.5	29.4	16.9	5.6
All other tenure types (per cent)	3.0	18.8	7.4	32.0	7.1	49.3	4.2	15.9
Mean equivalised gross household income per week (\$)	899	7.7	634	4.3	595	9.9	830	6.2
Mean mortgage payments per week (\$)	318	2.2	255	6.9	205	15.3	301	2.1
Mean rent payments per week (\$)	201	3.6	141	5.9	136	12.2	186	3.3
Number of persons aged 18 years and over ('000)	2,829	1.8	795	9.5	224	25.5	3,848	0.0

Note: NA = not available for publication, but included in totals where applicable.

Source: Australian Bureau of Statistics, 2007, *General social survey – Victoria, 2006*, Catalogue no 4159.2.55.001, Canberra.

Household tenure type is one of a number of indicators of the housing circumstances of Victorians. Housing tenure relates to the issues of stability and security. Homeownership provides household members with autonomy in terms of their social and recreational activities and is a form of social insurance to owners. Housing equity is also a major component of personal wealth.

In Victoria in 2006 37.1 per cent of adults described themselves as owners without a mortgage. The proportion of individuals who were owners without a mortgage varied by area remoteness: from 35.6 per cent of those from major cities, to 38.3 per cent of those from inner regional areas, and 51.6 per cent of those from other areas. A little more than one-fifth (23.6 per cent) of those aged 18 years and over were renters, and 39.3 per cent were owners with a mortgage. The proportion of individuals who were renters was 23.3 per cent in major cities.

For renters, the amount of rent paid per week compared to household income is a key determinant of housing affordability. For owners with a mortgage, the corresponding figure is the weekly mortgage payment. The mean rent payment per week was \$186, compared with a mean weekly mortgage payment of \$301. In major cities the mean weekly rental payments for households was \$201 (22.4 per cent of mean equivalised weekly household income) and the mean weekly mortgage was \$318 (35.4 per cent of mean weekly equivalised household income). In inner regional areas the mean weekly rental payment was \$141 and the mean weekly mortgage payment was \$255.

Reference

Australian Bureau of Statistics, 2007, *General social survey – Victoria, 2006*, Catalogue no 4159.2.55.001, Canberra.

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Characteristics of the household to which the selected person belongs, by household tenure and landlord type, Victoria

Equivalised gross household income quintile	Owner without a mortgage		Owner with a mortgage		Renter with state or territory housing authority		Renter with private landlord		All other tenure types		All persons	
	(per cent)	RSE (%)	(per cent)	RSE (%)	(per cent)	RSE (%)	(per cent)	RSE (%)	(per cent)	RSE (%)	(per cent)	RSE (%)
Lowest	28.3	7.4	7.6	15.4	71.1	9.7	18.1	14.8	19.0	27.8	19.2	6.1
Second	18.8	9.2	14.4	11.8	27.9	23.3	20.1	15.9	14.9	32.8	17.3	5.4
Third	18.8	11.1	23.0	7.9	0.0	0.0	23.3	15.5	21.4	31.1	20.8	6.5
Fourth	16.4	9.3	27.2	8.5	0.0	0.0	20.4	14.9	24.7	21.3	21.3	6.4
Highest	17.6	13.2	27.8	7.8	0.0	0.0	18.1	14.1	19.9	27.4	21.4	5.8

Note: RSE = relative standard error. The relative standard error is a measure of accuracy of a survey estimate, calculated as the ratio of standard error to the estimate.

Source: Australian Bureau of Statistics, 2007, *General social survey – Victoria, 2006*, Catalogue no 4159.2.55.001, Canberra.

Income data are generally reported at the household level because income tends to be shared by co resident family members and, to a lesser degree, by other household members who benefit from economies of scale, even though it is usually received by individuals. Equivalised gross household income is household income that is adjusted for the household's size and composition. This allows the relative standard of living of different households to be compared. For example, an adjustment is made to more accurately account for the difference that would exist in the standard of living between a couple with children and a couple without children who both receive the same gross household income. When comparing equivalised gross household income, it is the relative magnitude of the figures is most relevant, rather than the absolute levels.

The proportion of individuals from households that rent with a private landlord ranged from a low of 18.1 per cent of those in the highest and lowest quintiles of equivalised gross household income to a high of 23.3 per cent of those in the third quintile. The proportion of individuals who were owners with a mortgage was almost four times greater for households with equivalised gross incomes in the highest quintile, compared with those in the lowest quintile (27.8 per cent and 7.6 per cent respectively).

Reference

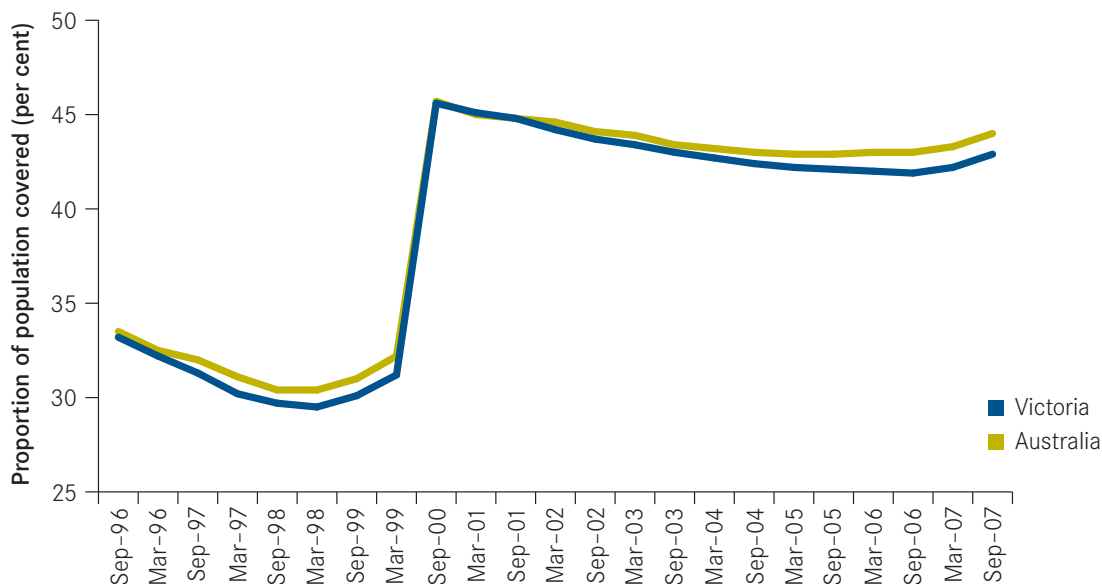
Australian Bureau of Statistics, 2007, *General social survey – Victoria, 2006*, Catalogue no 4159.2.55.001, Canberra.

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Private health insurance coverage

Private health insurance coverage, Victoria, 1996–2007



Source: The Private Health Insurance Administration Council (PHIAC).

Medicare is a tax-financed public health insurance system available to all permanent Australian residents. It provides cover for a range of primary care services, including visits to medical practitioners and entitlement to treatment as a public patient in a public hospital, free of direct charge. The Medicare system is supplemented by optional private health insurance. Private health insurance is provided through private health insurers registered under the *Private Health Insurance Act 2007*. Depending on the type of cover purchased, private hospital insurance provides cover for all or part of hospital theatre, accommodation and medical costs in private hospitals, or in public hospitals if individuals choose to be admitted as private patients. Private health insurance also provides cover for ancillary services not insured by Medicare, including private dental services, optical, chiropractic, home nursing, ambulance and natural therapies. Private health cover is considered to be one of the main vehicles for enhanced choice of provider and level of care.

Participation in private health insurance in Victoria, particularly private hospital insurance, declined steadily from the introduction of Medicare in 1984. While 34.1 per cent of Victorians had private hospital cover and 25.5 per cent had ancillary cover in 1995, by 1999 the proportion of Victorians with private hospital cover decreased to 29.8 per cent. The Australian Government introduced several policy initiatives (including a 30 per cent rebate on private health insurance in 1999, and the age-rated Lifetime Health Cover in 2000), which increased participation in private hospital insurance and in ancillary cover by 12.6 per cent and six per cent respectively. Private health insurance coverage in Victoria remained stable between 1999 and 2007, with participation rates for hospital cover of 42.9 per cent at September 2007.

For more information

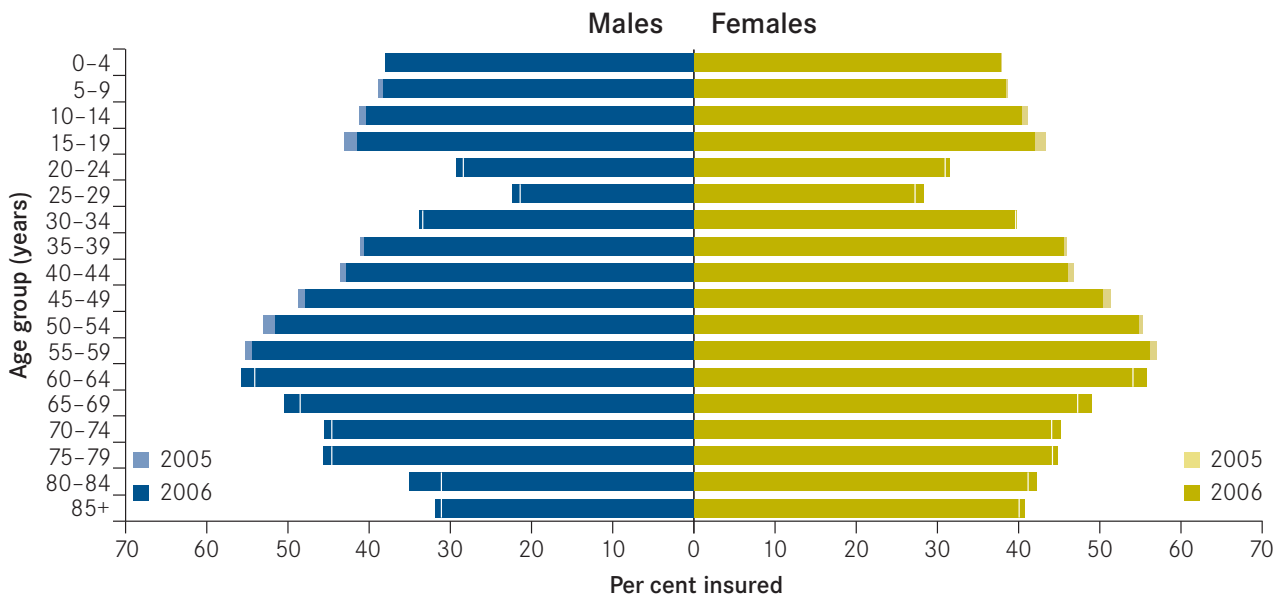
The Private Health Insurance Administration Council (PHIAC): www.phiac.gov.au

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Private hospital insurance coverage

Private hospital insurance coverage, by sex and age group, Victoria, December 2005 and 2006



Note: Where a bar does not have a segment for 2005, the number of people in that category is less than that of 2006. The number is shown as a white line on the overlying 2006 bar.

Source: The Private Health Insurance Administration Council (PHIAC).

The financial performance of registered private health insurers is monitored by the Private Health Insurance Council (PHIAC), an independent Australian Government body. In fulfilling this mandate the PHIAC reports on the age and sex distribution of the proportion of the population with private health insurance coverage, based on an annual survey of registered health insurance funds.

Because insurance involves risk-pooling and age is an important determinant of the need for and use of health care, the age distribution of the pool of individuals with private hospital insurance is a key determinant of premium levels. One government initiative that impacts directly on the age distribution of the population with private hospital insurance coverage is a policy known as Lifetime Health Cover. Under this policy, which commenced on 1 July 2000, the premium that a person pays for private hospital insurance depends upon the length of time they have had hospital cover with a registered health fund.

To ensure the lowest premiums for life under Lifetime Health Cover, a person needs to take out hospital cover with a registered fund by the first of July following their 31st birthday. If a person decides to take out hospital cover after this cut-off, they are required to pay an extra 2 per cent on top of their premium for every year they are aged over 30. People who were born on or before 1 July 1934 are exempt from Lifetime Health Cover and are able to join a health fund at any time in the future and pay the same premium as someone who takes out cover at age 30. Based on a recent a review of Lifetime Health Cover, the loading that a person is required to pay now ceases if a person has had hospital cover for a continuous period of ten years.

The proportion of the adult population covered by private hospital insurance was greatest in the age group 55–59 years and lowest in the age group 25–29 years. These proportions ranged from 21 per cent to 55 per cent for males. The proportion of the female population with private hospital insurance ranged from 27 per cent of those aged 25–29 years to 57 per cent of those aged 55–59 years. The proportion of adults aged 85+ years with private hospital insurance was 31 per cent for males, compared with approximately 40 per cent for females.

For more information

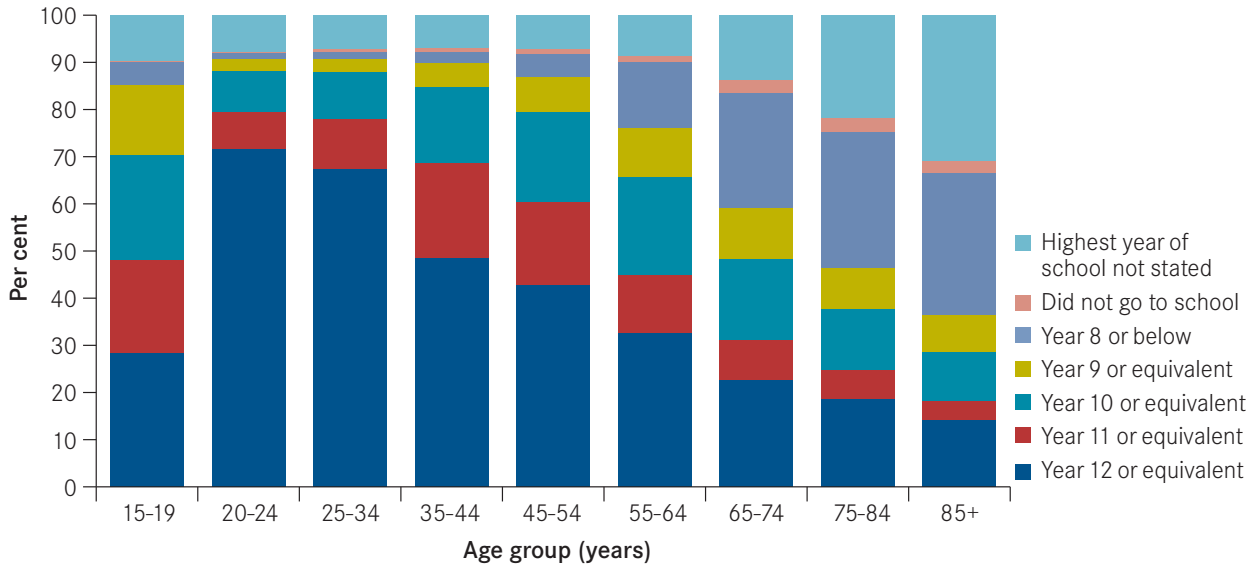
The Private Health Insurance Administration Council (PHIAC): www.phiac.gov.au

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Education level

Highest year of school completed by age group, Victoria, 2006



Note: Based on counts of persons aged 15 years and over.

Source: Australian Bureau of Statistics, 2008, *Census of population and housing – Community profile series 2006*, Cat. no. 2001.0 Canberra.

Education and knowledge help to empower individuals, allowing them to be more autonomous within society. Education also relates to other facets of society including health and participation in the cultural and social life of communities. The ability to use various forms of written information has become increasingly important to function in society.

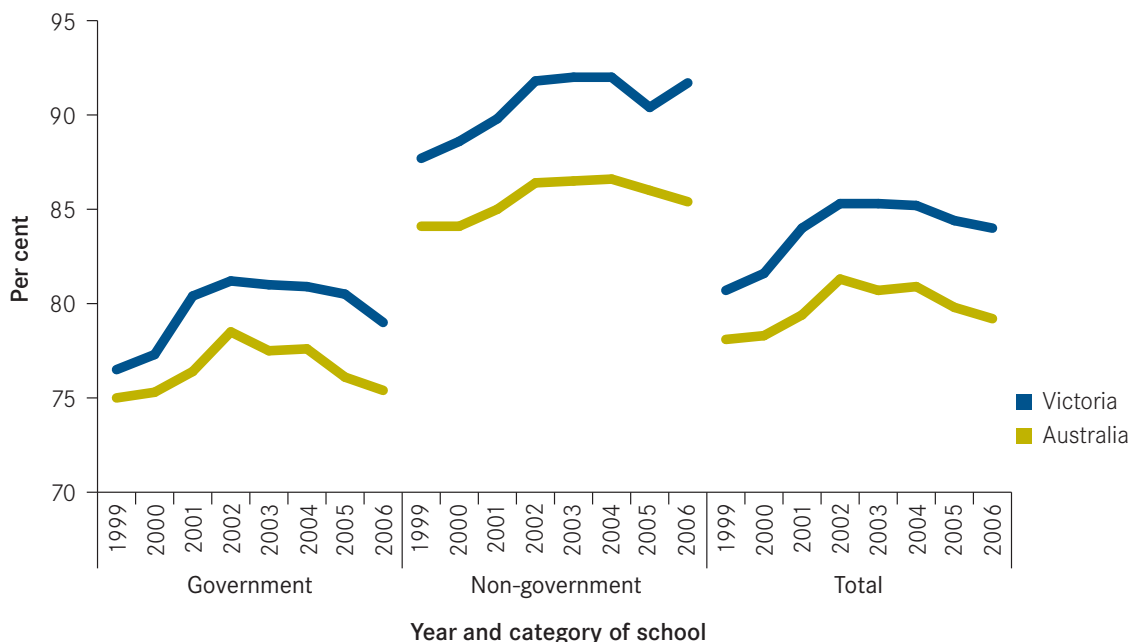
Opportunities to stay in secondary school have changed over time. The proportion of people who had not completed Year 12 or equivalent increased with increasing age, as did the proportion that had not been to school. Overall, 44 per cent completed Year 12 or equivalent and approximately 75 per cent completed Year 10 or equivalent or higher. Ten per cent of the population did not state their highest year school completed.

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Participation in education

Apparent retention rates, all secondary students, from Year 10 to Year 12, by category of school, Victoria and Australia



Source: Australian Bureau of Statistics, 2007, *Schools, Australia, 2006*, Catalogue no 4221.0, Canberra.

The lifetime costs of leaving school early include both direct monetary costs and social costs. The costs that are borne largely by an individual who leaves school early include reduced chances of employment, decreased financial security, fewer opportunities for mobility and job training and reduced cultural participation. Costs to the government and community due to early school leaving may include increased social welfare costs, increased use of health care services, higher costs of crime prevention and detection, and decreased cohesion within the society (King, 1999).

Apparent retention rates reflect the proportion of students in a given cohort who are considered to be continuing students. The data for this indicator refers to students who remained at school beyond Year 10. The retention rates are considered 'apparent' because the figures do not include mature-age, part-time or repeating students, or those who have relocated to a different schooling jurisdiction (e.g., interstate).

The Year 10–12 retention rates in Victorian schools increased from 81 per cent in 1999 to 84 per cent in 2006, with higher retention rates in non-government schools compared to government schools. Victoria's overall retention rate of 84 per cent in 2006 was above the Australian average retention rate of 79 per cent, with the pattern maintained for the period 1999–2006 regardless of the category of school.

Reference

King, A, 1999, *The cost to Australia of early school leaving*, Report commissioned by the Dusseldorp Skills Forum, National Centre for Social and Economic Modelling, University of Canberra, Canberra.

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Unemployment and labour force participation

Unemployment and labour force participation for those 15+ years, Victoria 2003–06

	Unit	Males				Females			
		2003	2004	2005	2006	2003	2004	2005	2006
Trend									
Employed full time	('000)	1,105.8	1,133.0	1,169.8	1,179.2	556.4	587	594.5	608.4
Total employed	('000)	1,303.7	1,333.0	1,377.6	1,399.2	1,049.7	1,081.7	1,106.1	1,146.9
Total unemployed	('000)	75.2	84.4	71.4	69.5	66.3	68	70.7	59.8
Unemployment rate	(per cent)	5.5	6	4.9	4.7	5.9	5.9	6	5
Participation rate	(per cent)	71.4	72.2	72.8	72.8	55	55.8	56.4	57.2
Seasonally adjusted									
Employed full time	('000)	1,103.5	1,135.2	1,174.8	1,181.5	554.6	591.8	587.7	610.1
Total employed	('000)	1,301.0	1,332.9	1,388.0	1,403.1	1,045.7	1,084.2	1,109.1	1,149.7
Total unemployed	('000)	74.4	85.2	67.6	67.5	66.6	74.6	71.5	55
Unemployment rate	(per cent)	5.4	6	4.6	4.6	6	6.4	6.1	4.6
Participation rate	(per cent)	71.2	72.2	73.1	72.9	54.8	56.2	56.6	57.1
Population aged 15 years+	('000)	1,931.1	1,964.1	1,991.6	2,018.6	2,029.6	2,062.1	2,085.3	2,111.3

Source: Australian Bureau of Statistics, 2006, *Labour force—Australia*, August 2006. 2006. Catalogue no 6202.0, Canberra

The relationship between unemployment and health is complex and varies for different population groups. However, consistent evidence shows that unemployment is detrimental to health and influences a range of health outcomes, including depression and other mental health-related problems, chronic illnesses such as cardiovascular disease, and is associated with high levels of risk behaviours such as smoking.

The labour force consists of all people who were employed for pay, profit or commission for one hour or more per week during the reference period for a labour force survey, plus those who were looking for work and available to start work in the reference week, regardless of whether they received unemployment benefits. The unemployment rate is calculated as a percentage of those participating in the labour force, rather than of the entire population of working age.

The unemployment rate in Victoria declined from approximately 12 per cent in 1993 to approximately five per cent in August 2006. The seasonally adjusted unemployment rate was 4.6 per cent for males and females in August 2006. Over the four-year period 2003–06 the male labour force participation rate increased from 71.2 per cent to 72.9 per cent. In the same period the female participation rate increased from 54.8 per cent in 2003 to 57.1 per cent in 2006.

Reference

Mathers, CD and Schofield, DJ, 1998, 'Health consequences of unemployment: the evidence', *Medical Journal of Australia*, volume 168, pp. 178–82.

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Unemployment rates by local government area (LGA)

Unemployment rate estimates, by local government area, Victoria 2006–07

Local government area	Unemployment rate (percent)					
	2006				2007	
	Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr
Metropolitan regions						
Banyule (C)	3.3	3.3	3.1	3.0	3.1	3.0
Bayside (C)	2.2	2.5	2.7	2.9	2.8	2.5
Boroondara (C)	3.8	3.8	3.7	3.7	3.4	3.2
Brimbank (C)	8.5	8.4	8.3	8.3	8.6	8.8
Cardinia (S)	3.4	3.4	3.4	3.7	3.7	3.7
Casey (C)	4.2	4.1	4.1	4.2	4.2	4.3
Darebin (C)	7.6	7.5	7.0	6.6	6.6	6.2
Frankston (C)	5.9	5.9	5.3	4.8	4.7	4.6
Glen Eira (C)	3.2	3.7	3.8	4.2	4.0	3.6
Greater Dandenong (C)	7.2	6.9	6.8	7.1	6.9	6.9
Hobsons Bay (C)	4.9	4.9	4.8	4.9	5.1	5.2
Hume (C)	8.8	8.0	7.5	7.1	6.5	6.5
Kingston (C)	3.8	4.5	4.8	5.3	5.2	4.7
Knox (C)	4.1	4.1	3.9	3.6	3.8	3.6
Manningham (C)	4.4	4.3	4.1	4.1	3.9	3.8
Maribyrnong (C)	8.7	8.6	8.4	8.3	8.6	8.8
Maroondah (C)	4.5	4.5	4.3	3.8	4.0	3.8
Melbourne (C)	5.3	4.9	5.2	4.9	5.2	5.4
Melton (S)	5.6	5.6	5.7	5.8	6.2	6.5
Monash (C)	5.5	5.5	5.3	5.3	5.0	4.8
Moonee Valley (C)	4.0	3.9	3.8	3.7	3.7	3.7
Moreland (C)	6.7	6.0	5.5	5.2	4.5	4.4
Mornington Peninsula (S)	4.5	4.5	4.1	3.7	3.6	3.5
Nillumbik (S)	1.7	1.7	1.6	1.6	1.6	1.5
Port Phillip (C)	3.6	3.4	3.6	3.4	3.5	3.7
Stonnington (C)	2.4	2.5	2.6	2.6	2.6	2.5
Whitehorse (C)	5.6	5.6	5.3	5.3	5.0	4.8
Whittlesea (C)	5.9	5.8	5.5	5.2	5.2	4.9
Wyndham (C)	5.5	5.4	5.3	5.4	5.7	6.0
Yarra (C)	5.1	4.7	5.1	4.9	5.1	5.4
Yarra Ranges (S)	4.5	4.5	4.2	3.8	3.9	3.9

Unemployment rate estimates, by local government area, Victoria 2006–07 (continued)

Local government area	Unemployment rate (percent)					
	2006				2007	
	Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr
Rural regions						
Alpine (S)	5.7	5.4	4.9	4.3	3.9	3.4
Ararat (RC)	6.4	7.1	7.6	7.9	7.7	7.4
Ballarat (C)	7.9	8.9	9.3	9.3	8.7	8.5
Bass Coast (S)	7.7	7.0	5.7	5.5	5.8	5.8
Baw Baw (S)	4.4	3.9	3.1	3.0	3.2	3.4
Buloke (S)	3.8	3.9	3.7	3.5	3.1	2.9
Campaspe (S)	4.7	4.6	4.2	3.6	3.3	3.1
Central Goldfields (S)	11.1	11.6	11.0	10.5	9.0	8.5
Colac-Otway (S)	5.5	5.2	5.0	4.9	4.6	4.5
Corangamite (S)	3.7	3.5	3.5	3.3	3.2	3.2
Delatite (S)	6.4	6.1	5.7	4.9	4.5	4.0
East Gippsland (S)	7.5	6.7	5.5	5.2	5.6	5.7
Gannawarra (S)	3.8	3.9	3.8	3.7	3.3	3.3
Glenelg (S)	7.9	7.6	7.7	7.7	7.5	7.3
Golden Plains (S)	4.5	4.3	4.4	4.3	4.1	3.9
Greater Bendigo (C)	7.3	7.5	7.1	6.7	5.9	5.6
Greater Geelong (C)	7.2	7.0	7.0	7.0	6.8	6.7
Greater Shepparton (C)	7.1	7.1	6.7	6.0	5.4	4.8
Hepburn (S)	8.2	9.0	9.3	9.3	8.6	8.5
Hindmarsh (S)	4.4	5.0	5.3	5.3	5.3	5.4
Horsham (RC)	6.2	6.8	7.1	6.9	6.7	6.9
Indigo (S)	3.9	4.0	3.8	3.3	3.0	2.5
La Trobe (S)	9.3	8.3	6.6	6.2	6.5	6.7
Loddon (S)	6.0	6.1	5.6	5.4	4.8	4.7
Macedon Ranges (S)	3.0	3.0	2.9	2.7	2.4	2.4
Mildura (RC)	7.7	8.0	7.7	7.6	6.8	6.6
Mitchell (S)	5.8	5.6	5.0	4.3	3.8	3.4
Moira (S)	5.3	5.2	4.7	4.1	3.7	3.3
Moorabool (S)	4.6	5.1	5.4	5.4	5.1	5.0
Mount Alexander (S)	8.1	8.3	7.9	7.4	6.4	6.1
Moyne (S)	4.2	4.1	4.0	3.8	3.6	3.5
Murrindindi (S)	5.0	5.0	4.5	3.9	3.5	3.0
Northern Grampians (S)	6.6	7.3	7.7	7.7	7.2	7.2
Pyrenees (S)	7.5	8.5	9.0	8.8	8.3	8.1
Queenscliff (B)	4.7	4.6	4.4	4.2	3.8	3.4
South Gippsland (S)	4.5	4.0	3.1	3.0	3.1	3.3
Southern Grampians (S)	5.5	5.3	5.1	5.1	4.8	4.8
Strathbogie (S)	4.6	4.5	4.2	3.9	3.6	3.3
Surf Coast (S)	3.9	3.8	3.8	3.9	3.7	3.6
Swan Hill (RC)	6.0	6.4	6.0	5.8	5.1	4.8
Towong (S)	2.9	2.8	2.6	2.3	2.2	2.0
Wangaratta (RC)	6.2	6.0	5.5	4.8	4.3	3.8
Warrnambool (C)	6.7	6.5	6.5	6.5	6.2	6.2
Wellington (S)	6.2	5.5	4.4	4.0	4.2	4.3
West Wimmera (S)	3.4	3.8	3.8	3.8	3.5	3.3
Wodonga (RC)	5.9	5.7	5.1	4.3	3.8	3.4
Yarriambiack (S)	5.6	6.2	6.5	6.6	6.4	6.2
Unincorporated Vic	3.4	3.4	1.7	1.7	1.7	1.7

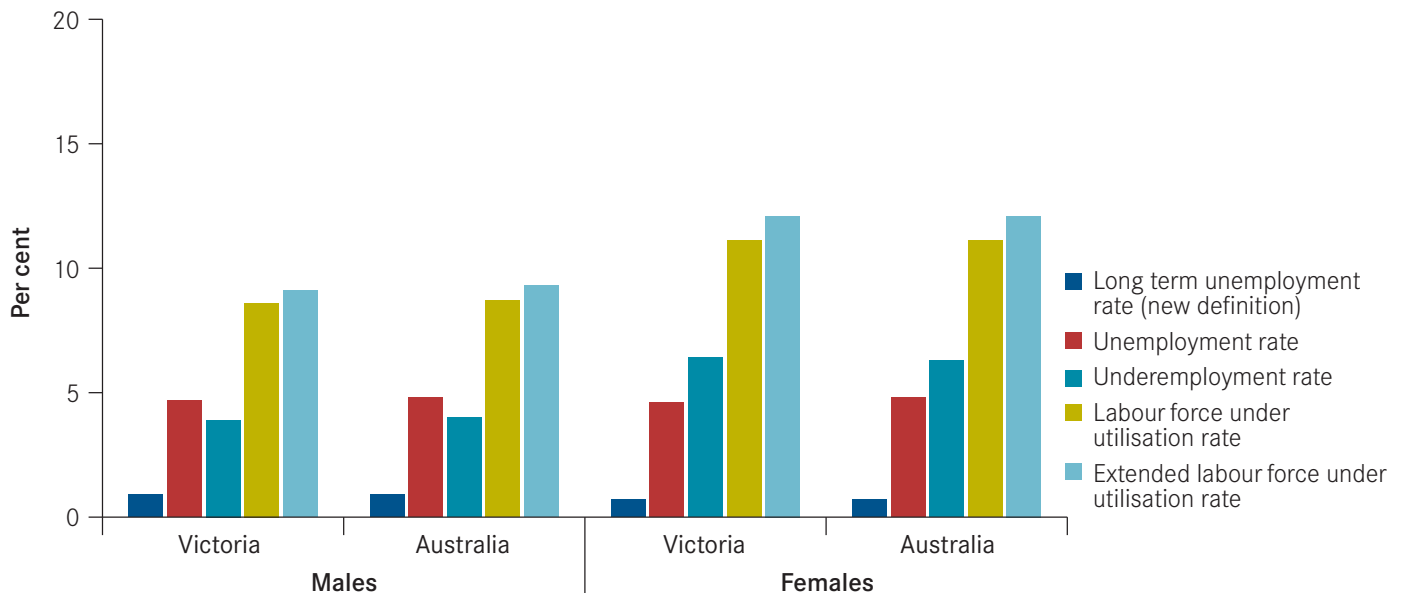
Source: Australian Bureau of Statistics, 2007, *State and Regional Indicators, Victoria*, September 2007, Catalogue no 1367.2, Canberra.

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Unemployment and underemployment: Victoria compared with Australia

Underutilised labour rates, for Victoria and Australia, 2006



Note: The unemployment rate is the number of unemployed expressed as a proportion of the labour force. The long-term unemployment rate is the number of long-term unemployed persons expressed as a percentage of the labour force. The underemployment rate is the number of underemployed expressed as a proportion of the labour force. The labour force underutilisation rate is the unemployed, plus the underemployed, expressed as a proportion of the labour force. The extended labour force underutilisation rate includes the unemployed, plus the underemployed, plus persons who are classified as discouraged job seekers and those who are marginally attached to the labour force, as a proportion of the labour force.

Source: Australian Bureau of Statistics, 2007, *Australian Labour Market Statistics, January 2007*, Catalogue no. 6105.0, 2007, Canberra.

Employment is recognised as an integral part of adult participation in a society. It is a major determinant of the material standard of living enjoyed by individuals for whom work is the main source of income. In addition, it provides individuals with opportunities for social interaction and personal development. Lack of work, whether due to unemployment or underemployment, is associated with reduced financial wellbeing, decreased social cohesion, crime and poor health.

At a given point in time, the labour force – the labour supply available for the production of economic goods and services – consists of those who were employed, unemployed and underemployed (as defined below). Those who are unemployed may be unemployed for a shorter or a longer period of time. Similarly, those who are employed may be employed for fewer hours per week than they are willing and able to work.

At a societal level, these distinctions are reflected in various measures of labour underutilisation that exist to track changes in the structure of the labour force and associated work conditions and security.

Using most measures of underutilised labour, the situation in Victoria mirrored that of Australia as a whole in 2006. However, as the previous indicator illustrates, there is likely to have been considerable variation across local government areas in the extent of labour underutilisation according to these measures.

Labour force terms

Long-term unemployed (new definition)

Person unemployed for 12 months or more, where duration of unemployment was based on the previous job.

Unemployed person

Person aged 15 years or more who was not employed during the reference week but who had actively looked for work or was currently available for work.

Underemployed person

Employed person working less than 35 hours per week who is willing and available to work more hours.

Discouraged jobseeker

Person with marginal attachment to the labour force who wanted to work and was available to start work within the next four weeks, but was not actively looking for work because they believed that, for various reasons (e.g., considered to be too young/too old by employers, difficulties because of language or ethnic background, no jobs in their locality or line of work) they would not be able to find a job.

Marginal attached to the labour force

Person who was not in the labour force in the reference week, wanted to work and (a) was actively looking for work, but did not meet the availability criteria to be classified as unemployed; or (b) was not actively looking for work, but was available to start work within four weeks or could start work within four weeks if child care was available.

For more information

Australian Bureau of Statistics, *Australian Labour Market Statistics, January 2007*, Catalogue no. 6105.0, 2007, Canberra.

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Financial stress

Financial stress, by equivalised gross household income quintile, Victoria, 2006

	Equivalised gross household income quintile										All persons	
	Lowest		Second		Third		Fourth		Highest		Estimate	RSE (%)
	Estimate	RSE (%)	Estimate	RSE (%)	Estimate	RSE (%)	Estimate	RSE (%)	Estimate	RSE (%)		
Unable to raise \$2,000 within a week for something important (per cent)	29.1	11.1	25.0	13.1	12.2	16.7	5.9	24.9	1.6	54.8	13.9	7.4
Had at least one cash flow problem in previous 12 months (per cent)	23.5	11.3	22.2	14.5	19.4	13.2	13.7	12.3	6.7	26.6	16.4	8.1
Took at least one dissaving action in previous 12 months (per cent)	21.5	12.2	24.3	10.3	17.3	16.8	19.4	11.1	11.9	16.0	18.5	7.3
Mean equivalised gross household income per week (\$)	231	1.7	410	0.9	635	0.6	909	0.7	2,078	11.1	830	6.2

Note: RSE = relative standard error.

Source: Australian Bureau of Statistics, 2007, *General social survey, Victoria, 2006*, Catalogue no 4159.2.55.001, Canberra.

The proportion of individuals who were unable to raise \$2,000 within a week for something important ranged from a high of 29 per cent of those in the lowest quintile of equivalised gross household income to less than two per cent of those in the highest quintile.

Between one-fifth and one-quarter of individuals in the lowest to third quintiles of equivalised gross household income reported having had at least one cash flow problem in the previous 12 months, compared with under seven per cent of those in the highest quintile.

The proportion of individuals who reported taking at least one 'dissaving' action in the previous 12 months was not similar across quintiles of equivalised gross household income. It ranged from 24 per cent of those in the second quintile to 12 per cent of those in the highest quintile.

For more information

Australian Bureau of Statistics, 2007, *General social survey, Victoria, 2006*, Catalogue no 4159.2.55.001, Canberra.

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Experience of violence

Experience of violence during the previous 12 months, by type of violence in most recent incident, by age group and sex, Victoria, 2005

	Males		Females	
	Rate per 100,000	Per cent	Rate per 100,000	Per cent
Never experienced violence				
18-24	190.7	11.9	206.3	11.3
25-34	260.4	16.2	324.4	17.8
35-44	310.8	19.3	352.6	19.4
45-54	309.1	19.2	330.2	18.1
55 and over	538.0	33.4	607.1	33.3
Total	1,608.9	100.0	1,820.5	100.0
Experienced physical violence ^(a)				
18-24	74.6	39.6	26.9	26.2
25-34	57.7	30.7	29.9	29.1
35-44	37.1	19.7	22.9	22.3
45-54	*11.0	*5.9	*15.1	*14.8
55 and over	*7.8	*4.1	*7.8	*7.6
Total	188.1	100.0	102.6	100.0
Experienced sexual violence ^(b)				
Total	*17.2	*100.0	40.9	100.0
Total of those who experienced violence ^(c)				
18-24	76.5	38.9	32.3	25.4
25-34	57.7	29.4	36.9	29.0
35-44	40.2	20.5	28.9	22.7
45-54	*12.1	*6.2	*17.7	*13.9
55 and over	*10.0	*5.1	*11.3	*8.9
Total	196.5	100.0	127.1	100.0
Total	1,805.4	100.0	1,947.6	100.0

Note: * Estimate has a relative standard error of 25% to 50%, and should be used with caution.

(a) Includes physical threat and physical assault.

(b) Includes sexual threat and sexual assault.

(c) Components may not add to total because a person may have experienced both physical and sexual violence.

Source: Australian Bureau of Statistics, 2006 (reissue), *Personal safety survey, Australia: State tables, 2005*, Catalogue no. 4906.0.55.004, Canberra.

Measuring violence in the community through household surveys is a complex task. It tests people's memories by asking about events that occurred in the past, which may have been traumatic and which may have involved people closely related to them. The accuracy of the statistics can be affected if respondents feel threatened by the act of providing information or if they are concerned that the information might be used against the perpetrator. Through consultation with experts in the field and testing, the ABS gave attention to the type of information collected and the manner in which it was collected. Special steps were taken to improve the quality of the survey results, including detailed and precise questioning and the use of personal interviews. Respondents were informed that the survey was not compulsory, and a specific requirement was that interviews were conducted in private, thus ensuring confidentiality of any information disclosed. The use of specially trained interviewers ensured that rapport could be established with respondents and that the relevant concepts and definitions could be explained as necessary.

'Violence' is any incident involving the occurrence, attempt or threat of either physical or sexual assault. 'Physical assault' involves the use of physical force with the intent to harm or frighten. An attempt or threat to inflict physical harm is included only if a person believes it is likely to be carried out. 'Sexual assault' includes acts of a sexual nature carried out against a person's will through the use of physical force, intimidation or coercion, or any attempts to do this. Unwanted sexual touching was excluded from sexual assault. 'Sexual threat' involves the threat of an act of a sexual nature which the person believes is likely to be carried out. 'Experience of violence' includes any incident involving the occurrence, attempt or threat of either physical or sexual assault.

In the 12 months prior to the survey, a greater proportion of males under 25 years experienced physical violence compared to females. However, a greater proportion of females 45 years and over experienced physical violence. More than twice the number of females experienced sexual violence than males.

For more information

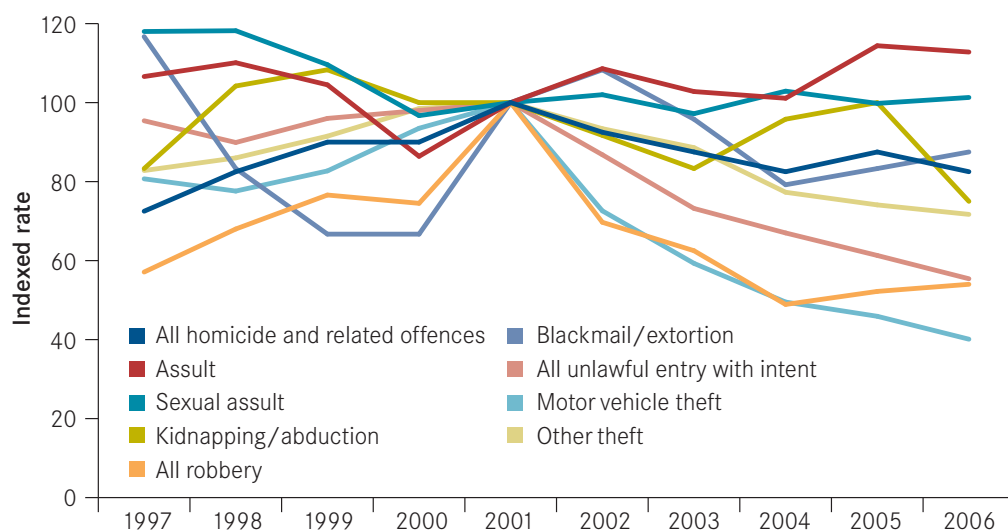
Australian Bureau of Statistics, 2006 (reissue), *Personal safety survey, Australia: State tables, 2005*, Catalogue no. 4906.0.55.004, Canberra.

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Recorded crime

Recorded crime victims, by offence category, Victoria, 1997–2006



Note: In order to compare two values of recorded crime it was necessary to designate one of the time periods as the 'reference' period and set its value to 100.0. This period is referred to as the base period or year, because it is the first period for constructing the index. The index for all other periods (that is, the comparison values) is calculated by determining the ratio of the comparison period value to the reference period value and then multiplying by 100. The indexes refer to victimisation rates per 100,000 persons, and 2001 was selected as the base year.

Source: Australian Bureau of Statistics, 2007, *Recorded crime – victims, Australia*, Catalogue no 4510.0, Canberra.

The definition of a victim varies according to the category of the offence. Depending on the type of offence, a victim in the recorded crime collection can be a person, premises, an organisation or a motor vehicle. A person reporting a crime with multiple offences in the same incident may be counted multiple times, depending on the types of offence. For example, a victim who was robbed and abducted in the same incident would be counted separately as a victim under the offences of robbery and kidnapping/abduction. Conversely, a victim of multiple assaults in the same incident would be counted only once, because the offences committed fall within the same offence group. As a result, it is not meaningful to aggregate the number of victims across each offence type and produce a 'total number of victims'. For this reason, only victim counts within each offence category are meaningful.

Sexual assault rates fell from 1997 to 2001, but remained static since then. Most other offence rates showed an overall decline since 2001, with the exception of the rate of assaults, which increased from 2001–06. However, the *Family violence code of practice for the investigation of family violence* was introduced in August 2004, and continues to have an impact on the assault data, resulting in an increase from 2005. This initiative involved a proactive approach by police and prosecutions in gathering evidence, investigation and laying charges, where appropriate, relating to family violence, and it may also have led to more victims feeling confident in reporting family violence to police. The code of practice also introduced mandatory reporting of alleged offenders. All family and domestic violence related assaults are recorded, even if the victim does not want to proceed.

For more information

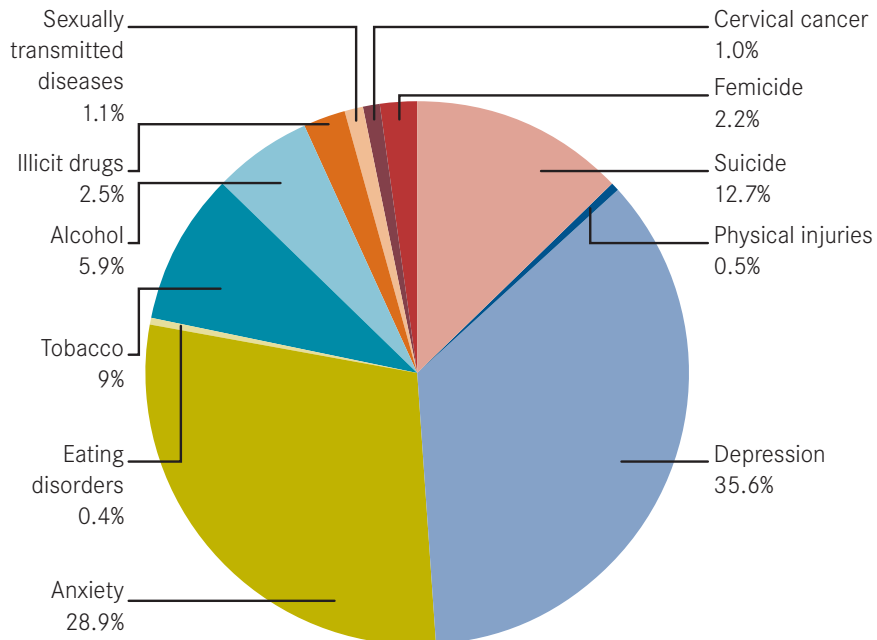
Australian Bureau of Statistics, 2006, *Recorded crime – victims, Australia*, Catalogue no 4510.0, Canberra.

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Intimate partner violence

Health outcomes contributing to the disease burden of intimate partner violence in women, Victoria, 2001



Total disability-adjusted life years attributable to intimate partner violence, females, Victoria, 2001

Condition	Disability-adjusted life years (DALYs)			Per cent of intimate partner violence burden
	18-44 years	45+ years	Total DALYs	
Femicide	134	91	225	2
Suicide	958	321	1,279	13
Physical injuries	38	14	52	1
Depression	2,377	1,206	3,583	36
Anxiety	2,304	612	2,916	29
Eating disorders	44	-	45	0
Tobacco	178	733	911	9
Alcohol	271	327	598	6
Drug use	229	22	251	2
Sexually transmitted diseases	104	10	114	1
Cervical cancer	31	67	98	1
Total burden	6,669	3,404	10,073	100

Note: DALYs = disability-adjusted life years.

The overall size of burden of disease and injury due to intimate partner violence (IPV) in Victoria in 2001 was 10,073 disability-adjusted life years (DALYs). The greatest proportion of the IPV disease burden for women was from mental health problems (depression, anxiety, eating disorders, alcohol and illicit drug use—accounting for greater than 80 per cent). Suicide and smoking are also significant contributors. In women under the age of 45 years, intimate partner violence was responsible for an estimated 9.0 per cent of the total disease burden. The proportion was lower for older women and for 3.2 per cent of the disease burden in all Victorian women. Intimate partner violence had a greater impact than that of any other risk factor on the health of Victorian women under the age of 45 years. The burden contributed by this form of violence was greater than for many other risk factors, such as elevated body mass, cholesterol, blood pressure and illicit drug use.

For further information

Victorian Health Promotion Foundation, 2004, *The health costs of violence. Measuring the burden of disease caused by intimate partner violence: a summary of findings*, www.vichealth.vic.gov.au

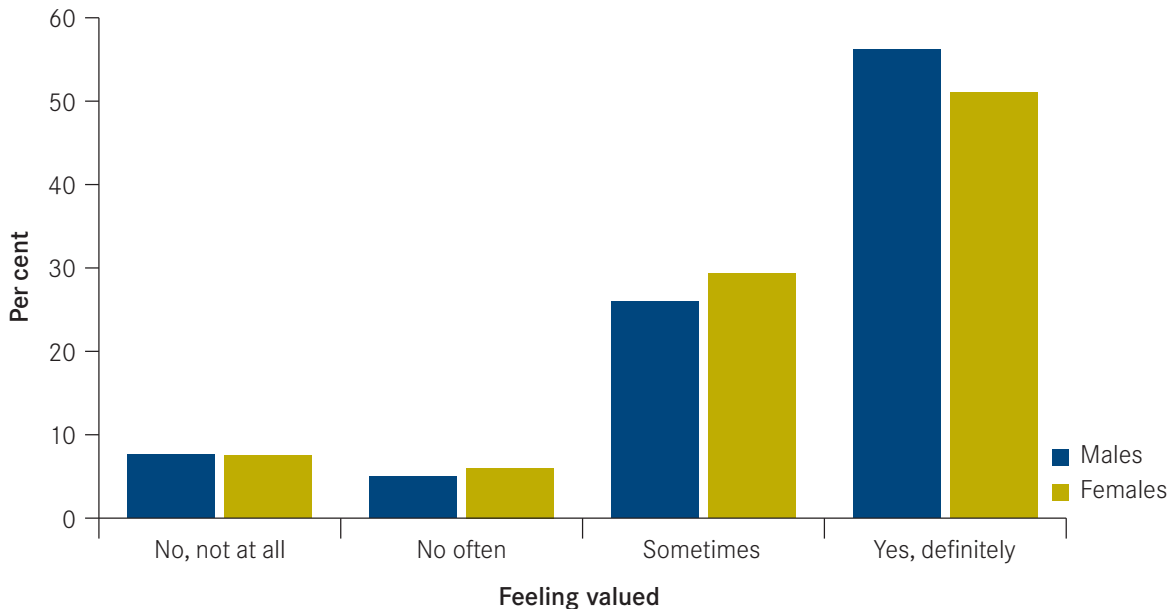
Department of Human Services, (DHS), 2001, *The Victorian burden of disease study: mortality and morbidity in 2001*, Melbourne: Victorian Government Department of Human Services: www.health.vic.gov.au/healthstatus

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Feeling valued by society

Feeling valued by society, persons aged 18 years or over, by sex, Victoria, 2006



	Males		Females		Persons	
	%	SE (%)	%	SE (%)	%	SE (%)
No, not at all	7.6	0.6	7.5	0.6	7.5	0.4
No often	5.0	0.5	6.0	0.5	5.5	0.4
Sometimes	26.0	1.1	29.3	0.9	27.7	0.7
Yes, definitely	56.2	1.3	51.0	1.0	53.6	0.8

Note: SE = standard error. Column totals may not add to 100% as some respondents replied 'don't know'.

Source: Department of Human Services, *Victorian population health survey 2006*.

Having a sense of social inclusion involves communication with others and the development of personal relationships and social networks. Being socially connected involves the sharing of values and beliefs between individuals who meet their own needs, but also reach out to meet the needs of others. In a socially connected, inclusive community, people feel cared for and valued, and research consistently shows strong links between social inclusion and individual health and wellbeing.

The *2006 Victorian population health survey* included questions about social inclusion and whether people felt valued by society. Survey estimates indicate that, although most adults aged 18 years or more felt valued, 7.6 per cent of males and 7.5 per cent of females did not feel valued by society in 2006.

Reference

Wilkinson, R and Marmot, M, 2003, *Social determinants of health: The solid facts*, 2nd edition, Geneva: World Health Organization.

For more information

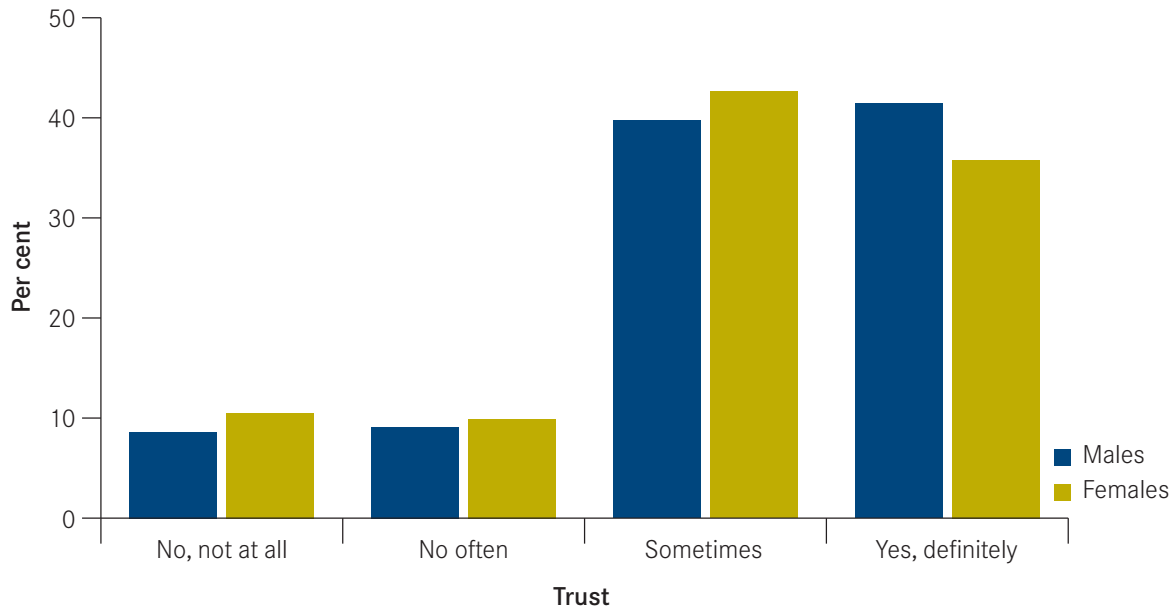
Department of Human Services, Health Intelligence Unit, Public Health, *Victorian population health survey 2006*, Melbourne: www.health.vic.gov.au/healthstatus

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Trust

Trust other people, persons aged 18 years or over, Victoria, 2006



	Males		Females		Persons	
	%	SE (%)	%	SE (%)	%	SE (%)
No, not at all	8.6	0.8	10.5	0.6	9.6	0.5
No often	9.1	0.8	9.9	0.6	9.5	0.5
Sometimes	39.7	1.3	42.6	1.0	41.2	0.8
Yes, definitely	41.4	1.3	35.8	1.0	38.6	0.8

Note: SE = standard error. Column totals may not add to 100% as some respondents replied 'don't know'.

Source: Department of Human Services, *Victorian population health survey, 2006*.

Social capital refers to the social connections between individuals. This includes the social networks, social reciprocity and interdependence that develop between individuals and their community, which can affect the opportunities that arise and the choices that individuals make in their lives. Research suggests that health and wellbeing is influenced by social capital. Communities with high levels of social capital have better health outcomes than those with lower levels, regardless of the level of economic capital available.

A variety of indicators are used to measure different aspects of social capital. The 2006 Victorian population health survey included a series of questions about social and support networks, including a question about trust. Trust is an important aspect of social capital because it underlies and contributes to the quality and number of interactions between people. Trust underlies all positive social interactions, and is a critical component of social cohesion that bonds people in groups and communities through common interests.

Based on VPHS 2006 estimates, most Victorians agreed that people can be trusted either 'sometimes', or 'yes definitely' (79.8 per cent). Males (41.4 per cent, 95% CI 38.9–43.9) were significantly more likely than females (35.8 per cent, 95% CI 33.8–37.8) to agree that people can be trusted 'yes, definitely'.

Reference

Putnam, R, 2000, *Bowling alone—The collapse and revival of American community*, New York: Simon and Schuster.

Wilkinson, R and Marmot, M, 2003, *Social determinants of health: The solid facts*, 2nd edition, Geneva: World Health Organization.

For more information

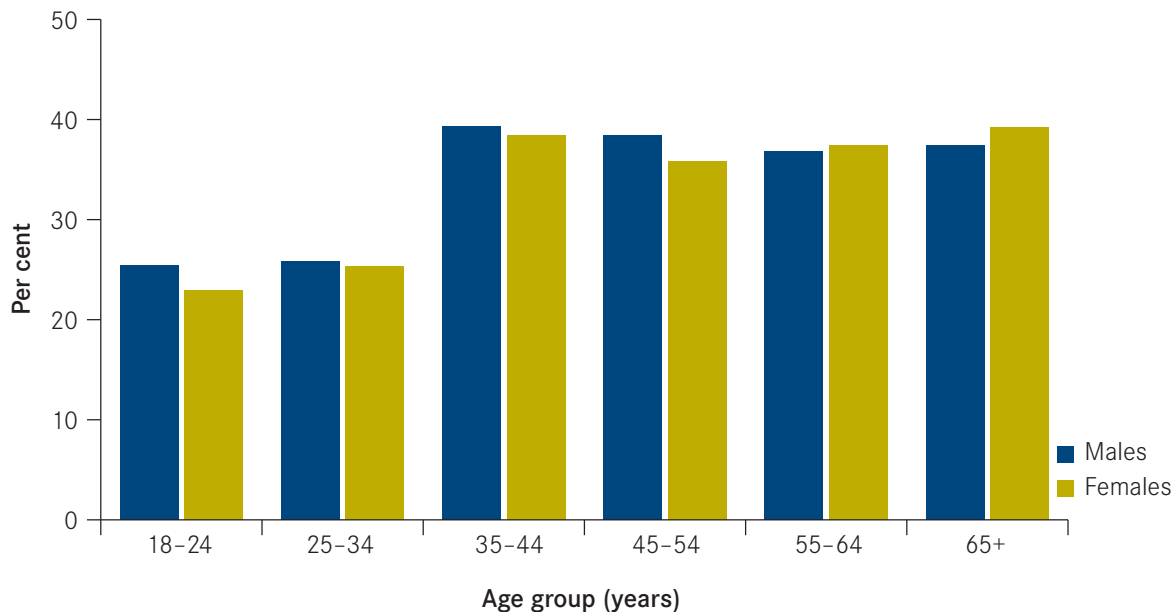
Department of Human Services, Health Intelligence Unit, Public Health, *Victorian population health survey 2006*, Melbourne: www.health.vic.gov.au/healthstatus

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Volunteering

Helped out a local group as a volunteer, persons aged 18 years or over, Victoria, 2006



Age group (years)	Males		Females		Persons	
	%	SE (%)	%	SE (%)	%	SE (%)
18-24	25.4	3.9	22.9	3.3	24.2	2.6
25-34	25.8	3.3	25.3	2.2	25.5	2.0
35-44	39.3	2.8	38.4	1.9	28.8	1.7
45-54	38.4	2.6	35.8	2.0	37.1	1.6
55-64	36.8	2.8	37.4	2.2	37.1	1.8
65+	37.4	2.2	39.2	2.1	38.4	1.5
Total	34.1	1.2	33.7	0.9	33.9	0.8

Note: SE = standard error. Data includes responses from adults aged 18 years or more.

Source: Department of Human Services, *Victorian population health survey 2006*.

Volunteering helps individuals form interpersonal ties and develop their social networks. It provides a sense of purpose and connectedness within a group or community. Increased social contact and stronger support networks are associated with better health, and some studies conclude that the benefits of strong social relationships may be as important to health as health risks such as tobacco smoking, physical inactivity, poor nutrition and high blood pressure.

The *2006 Victorian population health survey* measured the amount of voluntary effort undertaken by individuals in their local community. One in three people (33.9 per cent) aged 18 years or more were involved in helping out a local group as a volunteer at the time of the survey.

Participation rates in volunteer work increased with age, and people in the oldest age group (38.4 per cent, 95% CI 35.4–41.4) were significantly more likely to participate than people in the youngest age group (24.2 per cent, 95% CI 19.2–29.2).

Reference

Wilkinson, R and Marmot, M, 2003, *Social determinants of health: The solid facts*, 2nd edition, Geneva: World Health Organization.

For more information

Department of Human Services, Health Intelligence Unit, Public Health, *Victorian population health survey 2006*, Melbourne: www.health.vic.gov.au/healthstatus

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