



Australian Social Trends

USING STATISTICS TO PAINT A PICTURE OF AUSTRALIAN SOCIETY



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Australian Statistician

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Introduction

Australian Social Trends draws on a wide range of data, sourced both from ABS and other agencies, to present a picture of Australian society. This publication aims to inform decision-making, research and discussion on social conditions in Australia. It covers social issues of current and ongoing concern, population groups of interest, and changes in these over time.

The selection of articles aims to address current and perennial social concerns and to provide answers to key social questions. Some topics are revisited as new data become available. The aim of this approach is for each report to remain responsive to contemporary concerns, while accumulating a more comprehensive picture of Australian social conditions over time. For this reason, articles often include cross references to other relevant articles in the current issue, and in previous issues. All articles published since 1994 are available from the Australian Social Trends page of the ABS web site: www.abs.gov.au/socialtrends.

Australian Social Trends is structured according to the ABS Wellbeing Framework which identifies areas of social concern, population groups and transactions among people and entities within their social environments (see ABS [Measuring Wellbeing: Frameworks for Australian Social Statistics, 2001](#) – cat. no. 4160.0). The broad areas of social concern are:

- population
- family and community
- health
- education and training
- work
- economic resources
- housing
- crime and justice
- culture and leisure
- other areas - including environment, religion, and transport and communication.

Australian Social Trends is now issued on a quarterly basis, and in the course of a year the articles will cover a wide range of the areas of social concern.

The articles focus strongly on people and social concerns. Each article aims to tell a story, providing a sense of the social and historical context in which a particular topic is embedded, moving from the general to the specific, and using statistics to bring light to the issue. Articles aim to balance 'what' analysis (relating the relevant statistical facts surrounding the issue, e.g. number, characteristics, change over time, sex, age and other differences), with 'why' analysis (providing context and explanation by highlighting relevant social changes and events and the chronologies of these). For example, an article on work may examine current labour force participation, how the labour market has changed over time, how different groups of people are affected by social and economic conditions, and how these factors may be linked to observed employment trends.

Overemployment

Achieving an optimal work/life balance is widely regarded as highly desirable as it allows people to balance their need for income and job experience with their need to care for family members, look after their own health, and participate in social, spiritual, recreational, educational and political activities.

Most Australians do work their preferred number of hours each week. However, there are many who are either underemployed, unemployed or discouraged job seekers. At the other end of the spectrum, some Australian workers prefer to work fewer hours per week and may be considered as overemployed. A key concern is that spending too much time working may cause work/life imbalance, the effects of which include fatigue,^{1,2} stress and burnout,³ and relationship breakdown.⁴

How common is overemployment?

Between April and July 2007, the ABS surveyed Australian workers aged 15 years and older about their employment arrangements. At that time, around two-thirds (65%) felt they were working close to their preferred number of hours. While 1.4 million workers (14%) wanted to work more hours, about 2.2 million (21%) preferred to be working fewer hours.

In 2007, most overemployed workers (89%) usually worked full time (i.e. at least 35 hours a week), though a significant proportion (11%) usually worked part time (i.e. less than 35 hours a week). Generally though, the more hours usually worked, the more likely people were to be overemployed. Only 4% of employed people

Data sources and definitions

Most of the data presented in this article have been sourced from the ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation (SEARS).

In this article, *employed people (workers)* are defined as people aged 15 years or older who usually perform at least one hour of paid work per week (excluding those who are a contributing family worker in their main job, and those whose preference for working fewer, more or about the same number of hours per week is not known).

Overemployed workers have been defined as employed people who prefer to work fewer hours each week (taking into account how that would affect their income). This definition is similar to the International Labour Organization (ILO) definition of *inadequate employment related to excessive hours* which the ILO defines as a situation where persons in employment wanted or sought to work fewer hours than they did during the reference period, either in the same job or in another job, with a corresponding reduction of income.⁵

The *overemployment rate* is the percentage of employed people in a specified population group who were overemployed.

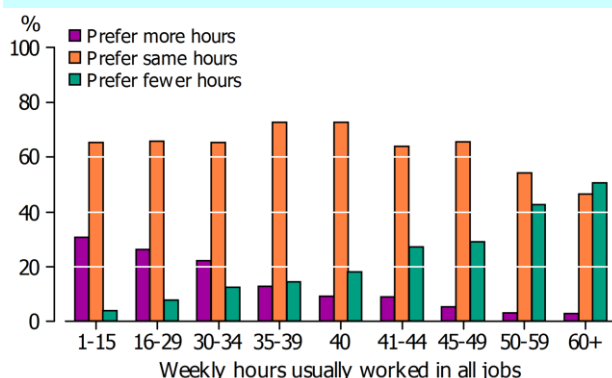
In this article, employed people are regarded as *full-time* if they usually work 35 hours or more per week. Employed people are regarded as *part-time* if they usually work less than 35 hours per week.

Casual employees are not entitled to paid sick or holiday leave, whereas *other employees* are entitled to paid sick leave and/or paid holiday leave. In this article, *owner managers of incorporated enterprises* (OMIEs) are not considered to be employees.

Equivalised household income. Equivalising adjusts actual household income to take into account the different needs of households of different size and composition. There are economic advantages associated with living with others, because many household resources can be shared.

Income deciles are derived by ranking all the population from lowest to highest income and then dividing that population into 10 equal groups. The lowest decile is made up of the 10% of the population with the lowest income. For more information about household income measures see ABS [Household Income and Income Distribution](#) (cat. no. 6523.0).

Employed people(a), usual hours by preferred hours – 2007



(a) Excludes contributing family workers and those whose preferred hours are not known.

Source: ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation

usually working 1–15 hours a week were overemployed. The overemployment rate gradually increased through hours worked cohorts to 51% of those usually working at least 60 hours a week being overemployed. In summary, full-time workers were considerably more likely than part-time workers to be overemployed (27% compared with 7%).

Legislative changes since mid-2007

The *Fair Work Act 2009* sets out National Employment Standards comprising 10 minimum, safety-net standards of employment for all employees in the national workplace relations system. These minimum terms and conditions of employment took effect on 1 January 2010 and included:

Maximum weekly hours of work – 38 hours per week, plus reasonable additional hours.

Requests for flexible working arrangements – allowing parents or carers of a child under school age, or of a child under 18 with a disability, to request a change in working arrangements to assist with the child's care.

These two minimum standards have some potential to lower the rate of overemployment observed in mid-2007.

Source: Australian Government Fair Work Ombudsman, 2011, *National Employment Standards (NES)*, <www.fairwork.gov.au>.

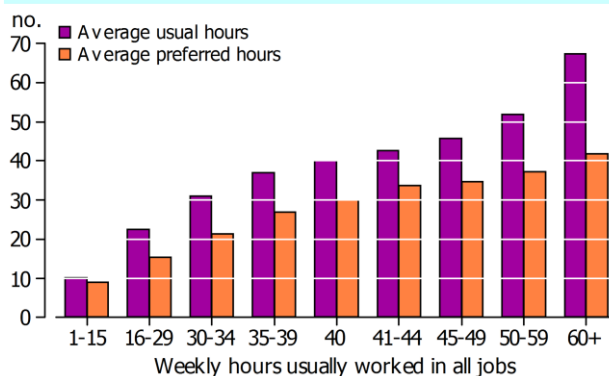
Since mid-2007, there has been a slowdown in economic activity, and legislative changes introduced in 2009 were designed to make it easier for some workers to reduce their weekly working hours if they want to do so. Given these two developments, the proportion of Australian workers who are overemployed may have eased since mid-2007.

How many hours do overemployed workers prefer to work?

In 2007, the number of hours that overemployed workers usually worked was considerably different from the number of hours they preferred to work. While most (89%) overemployed workers were usually working full time (35 hours or more), nearly two in five (39%) full-time overemployed workers preferred to be working part time (less than 35 hours). Among overemployed full-time workers, females were more likely to prefer part-time hours (55%), than males (30%).

The difference between usual and preferred hours was greatest among overemployed workers who usually worked at least 60 hours a week. The average number of hours usually worked weekly by these overemployed workers was 67 whereas the average number of hours they preferred to be working was 42. There were also differences between average usual and average preferred working hours among overemployed workers in all other usual hours worked cohorts, with the exception of those usually working 1–15 hours a week where there was no statistically significant difference.

Overemployed workers(a), average usual and average preferred hours(b) – 2007



(a) Excludes contributing family workers and those whose preferred hours are not known.

(b) Those whose preferred number of hours was not known were excluded prior to the calculation of averages.

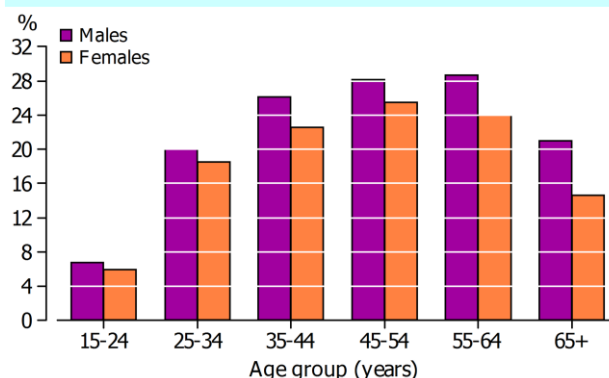
Source: ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation

Who is overemployed?

In 2007, Australia's 5.7 million male workers were more likely than its 4.6 million female workers to be overemployed (22% compared with 19%). This is in line with full-time workers being more likely to be overemployed, as employed males were more likely than employed females to be working full time (84% compared with 52%).

When comparing male and female full-time workers, 30% of the 2.4 million female full-time workers were overemployed compared with 25% of the 4.8 million male full-time workers. Similarly, female part-time workers (2.2 million) were also more likely than male part-time workers (912,900) to be overemployed (8% compared with 6%).

Proportion of employed people(a) who were overemployed, age groups by sex – 2007



(a) Excludes contributing family workers and those whose preferred hours are not known.

Source: ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation

Proportion of employed people(a) who were overemployed by family status – 2007

	%
Partnered workers	25.1
Parent whose youngest child is aged 0-4 years	23.5
Fathers	25.9
Mothers	19.0
Parent whose youngest child is aged 5-14 years	25.0
Fathers	28.1
Mothers	21.1
Other partnered workers	25.7
Males	26.1
Females	25.1
Unpartnered workers	13.5
Parent whose youngest child is aged 0-4 years	18.5
Fathers	**38.2
Mothers	16.7
Parent whose youngest child is aged 5-14 years	13.9
Fathers	*19.5
Mothers	13.0
Other unpartnered workers	13.4
Males	13.6
Females	13.2
All employed people(a)	20.9

(a) Excludes contributing family workers and those whose preferred hours are not known.

* This proportion has a relative standard error between 25% and 50% and should only be used with caution.

** This proportion has a relative standard error exceeding 50% and is unsuitable for most purposes.

Source: ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation

...young workers or older workers?

In 2007, the likelihood of being overemployed tended to increase with age before declining among employed people of Age Pension qualifying age. Only 7% of employed youth (aged 15–24 years) were overemployed. Rates were progressively higher among 25–34 year olds (19%), 35–44 year olds (25%) and 45–64 year olds (27%), before declining to 19% of employed people aged 65 years or older. This pattern by age group was similar for both males and females, with females generally having lower overemployment rates in each age group.

Overemployed workers were overrepresented in the 35–64 year age group. While people in this age group represented 59% of all employed people, 35–64 year old overemployed workers accounted for 72% of all overemployed workers.

...workers with young children?

In 2007 (prior to the passing of the *Fair Work Act 2009*) there were around 1.4 million employed parents living with one or more 0–4 year old children. Of these parents, 26% of partnered fathers were overemployed, along with 19% of partnered mothers and 19% of lone parents (most of whom were women/mothers).

...partnered workers?

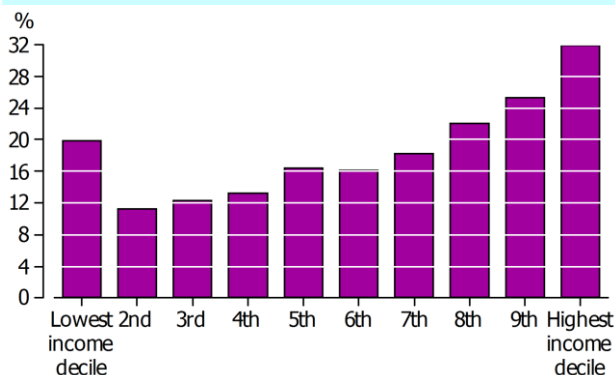
Workers who were partnered were considerably more likely to be overemployed than workers without a partner (25% compared with 14%). Higher overemployment rates among partnered workers are associated with their tendency to work longer hours (39 hours per week on average) than unpartnered workers (34 hours per week).

...workers living in high income households?

After equivalising household incomes to standardise different household sizes and compositions, workers tended to be more likely to be overemployed the higher their household income. In 2007, only 12% of workers living in low income households (i.e. the 2nd or 3rd equivalised gross household income deciles)⁶ were overemployed. By comparison, 32% of workers living in households in the highest equivalised gross household income decile were overemployed.

Both hours worked and overemployment rates were associated with household income. For example, the average number of hours worked weekly by employed people living in low income households was 28, and 12% were overemployed.

Proportion of employed people(a) who were overemployed by equivalised gross household income decile(b) – 2007



(a) Excludes contributing family workers and those whose preferred hours are not known.

(b) Due to a number of reasons (including the possession of assets or underreporting) people in the lowest income decile may not necessarily be experiencing economic hardship.⁶

Source: ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation

Employed people with household income in the highest decile averaged 43 hours of work per week, and 32% were overemployed.

...multiple job holders?

In 2007, only 6% of employed people had more than one job. Overemployed workers were no more likely to be multiple job holders (7%) than other workers (6%).

...employees or owner managers?

In 2007, only 7% of casual employees were overemployed, largely reflecting the high rate of part-time employment amongst casual workers (69%). Other employees and owner managers of unincorporated enterprises (OMUEs) were more likely to be overemployed (23% and 24% respectively), while owner managers of incorporated enterprises (OMIEs) were even more likely to want to work fewer hours (37%).

The relatively high overemployment rate among OMIEs partly reflects their comparatively long working week (44 hours on average). Employees with paid leave entitlements and OMUEs both averaged 40 hours of work per week, while casual employees worked a 24 hour week on average.

...doctors, farmers and politicians?

Some occupations are anecdotally highlighted by the media as entailing long working hours that can induce fatigue, burnout or accidents. In 2007, the major occupation groups most likely to experience overemployment were Managers (38%) and Professionals (26%).

Not all organisations offer supervisory or managerial jobs to part-time workers,⁷ and senior management positions are less commonly available on a part-time basis in many organisations. Furthermore, keen competition for stimulating, well-remunerated jobs with prestige and autonomy may underpin long working hours to some extent in deregulated labour markets such as Australia. All other factors being equal, candidates for such jobs who work longer hours are more likely to achieve more and be selected for these jobs. In such cases, long working hours may represent an investment that enhances prospects for career progression.^{8, 9, 10}

Among managers, those who were Education, Health or Welfare Services Managers were particularly likely to have been overemployed (52%). The overemployment rate was 39% among Chief Executives, General Managers and Legislators, and 34% among Farmers and Farm Managers.

Of professionals, those who were Medical Practitioners (45%), School Teachers (38%) or Legal Professionals (32%) were among the most likely to have been overemployed in 2007. The high overemployment rate among medical practitioners may be partly due to demand for health care services exceeding the supply of doctors.¹¹ Labour shortages could be a key factor behind relatively high rates of overemployment in some occupations, although cultural factors such as a well-established tradition of long working hours may also contribute to overemployment in others.^{8, 9, 10}

Selected characteristics of employed people(a) by occupation in main job – 2007

	Number employed	Proportion working full time	Proportion usually working 50 or more hours per week in all jobs	Average hours usually worked per week in all jobs	Average equivalised gross household income per week(b)	Proportion who are overemployed
	'000	%	%	no.	\$	%
Managers	1,461.3	86.6	45.7	46.9	1,280	37.6
Professionals	2,173.2	75.6	21.6	38.8	1,324	26.1
Technicians and trades workers	1,451.3	86.2	20.2	41.1	895	17.9
Community and personal service workers	848.2	46.0	6.4	29.9	879	10.5
Clerical and administrative workers	1,593.5	63.9	8.9	33.6	1,057	20.9
Sales workers	950.4	41.3	10.1	28.0	863	12.7
Machinery operators and drivers	707.3	84.7	27.8	42.8	854	16.6
Labourers	1,120.6	55.2	11.1	31.7	738	11.0
All employed people(a)	10,305.8	69.6	19.8	37.2	1,006	20.9

(a) Excludes contributing family workers and those whose preferred hours are not known.

(b) Excludes those whose equivalised gross household income per week was not known.

Source: ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation

...people working in the mining and agriculture industries?

At the broadest level of classification, people employed in the Mining industry and people employed in the Agriculture, Forestry and Fishing industry worked the longest hours (averaging 50 and 46 per week respectively).

Long hours, however, do not necessarily translate into high overemployment rates. People employed in the Mining industry were not more likely than other workers to be overemployed (22% compared with 21%), while Agriculture, Forestry and Fishing industry workers were only a little more likely than other workers to be overemployed (26% compared with 21%).

With an overemployment rate of 28%, people working in the Education and Training industry were more likely than Mining industry workers and just as likely as Agriculture, Forestry and Fishing industry workers to be overemployed, despite working a considerably shorter week (35 hours on average).

At a more detailed level of classification, industries with relatively high overemployment rates (at least 30%) included Exploration and Other Mining Support Services (39%), Electricity Supply (32%), Telecommunications Services (32%), and Preschool and School Education (31%).

Why do overemployed workers want to work fewer hours?

The most commonly cited main reason for preferring to work fewer hours was social reasons, recreational activities and/or free time (chosen by 36% of all overemployed workers). A lower proportion of overemployed workers nominated family reasons (24%) such as caring for children (11%) as their main reason for

Main reason overemployed workers(a) would prefer to work fewer hours – 2007

	%
Employment reasons	
Current job regularly involves long hours	16.6
Work less unpaid overtime	5.9
Other employment reasons	3.0
Personal reasons	
Own ill health / injury / disability	3.0
Only wants / needs limited income	1.7
Study purposes	2.1
Social reasons / recreational activities / free time	35.7
Other personal reasons	6.6
Family reasons	
Caring for children	11.2
Unable to find suitable child care	**0.1
Caring for ill / disabled / elderly person	*0.6
Pregnancy	**0.1
Home duties	2.3
Other family reasons	9.2
Other reasons	1.9
All main reasons for preferring to work fewer hours	100.0
All overemployed workers(a) ('000)	2,158.4

(a) Excludes contributing family workers and those whose preferred hours are not known.

* This proportion has a relative standard error between 25% and 50% and should only be used with caution.

** This proportion has a relative standard error exceeding 50% and is unsuitable for most purposes.

Source: ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation

wanting to cut back their working hours. It was uncommon for overemployed workers to want to reduce their working hours mainly because of ill health, injury or disability (3%) or mainly for study purposes (2%). However, these

How frequently employed people(a) feel rushed or pressed for time – 2007



(a) Excludes contributing family workers and those whose preferred hours are not known.

Source: ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation

How frequently employed people(a) feel their work and family responsibilities are in balance – 2007



(a) Excludes contributing family workers and those whose preferred hours are not known.

Source: ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation

reasons (along with all other reasons) may also be a factor in preferring to work fewer hours.

Some insight into why around one in five workers prefers to work fewer hours can be gained from how frequently these workers feel rushed or pressed for time. In 2007, over two-thirds (70%) of overemployed workers often or always felt rushed or pressed for time. In comparison, less than half of other workers (41%) felt this way.

Among overemployed workers who always or often felt rushed or pressed for time, the most commonly cited main reason for feeling this way was trying to balance work and family responsibilities (38%). Other main reasons included the pressure of work/study (23%), having too much to do or being subject to too many demands (22%), and taking on too much (9%).

Another indication of why some workers prefer to reduce their working hours can be gained from examining the extent to which overemployed workers feel that their work and family responsibilities are balanced. Among all overemployed workers, around one in four (24%) felt that their work and family responsibilities were rarely or never in balance. Other Australian workers tended to experience a better balance, with a lower proportion (13%) feeling that their work and family responsibilities were rarely or never in balance.

Summary

In 2007, there were around 2.2 million overemployed workers in Australia. Most overemployed workers usually worked full time (89%), most were partnered (77%), and most were either managers or professionals (52%).

Overemployed workers were more likely than other Australian workers to always or often feel rushed or pressed for time, and to feel that their work and family responsibilities were rarely or never in balance. However, the single most commonly cited main reason for wanting to work fewer hours was social reasons, recreational activities and/or free time.

Endnotes

- 1 Dawson, D. McCulloch, K. and Baker, A., 2001, *Extended Working Hours in Australia: Counting the Costs*, The Centre for Sleep Research, The University of South Australia, <www.justice.qld.gov.au>.
- 2 Sluiter, JK. Van Der Beek, AJ. and Frings-Dresen, MHW., 1999, *The influence of work characteristics on the need for recovery and experienced health: a study on coach drivers*, in *Ergonomics* vol. 42, no. 4, <www.ncbi.nlm.nih.gov>.
- 3 Lingard, H., 2004, *Work and Family Sources of Burnout in the Australian Engineering Profession: Comparison of Respondents in Dual- and Single-Earner Couples, Parents and Nonparents*, in *Journal of Construction Engineering and Management* vol. 130, no. 2, <ascelibrary.org>.
- 4 Pocock, B., 2003, *The work-life collision: what work is doing to Australians and what to do about it*, Federation Press, Sydney, <www.federationpress.com.au>.
- 5 International Labour Organization, 1998, *Sixteenth International Conference of Labour Statisticians, Geneva, 6-15 October 1998: Report of the Conference*, <www.ilo.org>.
- 6 Income and expenditure data reported in ABS Household Expenditure Surveys have shown that households in the lowest decile who have negative gross income tend to have expenditure levels slightly above the average expenditure of households in the fifth decile. Other households in the lowest decile have, in past surveys, had average expenditures above the average of households in the second decile. For more information, see Explanatory Notes 29–32 in ABS *Household Income and Income Distribution, Australia, 2007–08* (cat. no. 6523.0). For analysis of the expenditure and net worth of households in the lowest income decile, see Appendix 4 in ABS *Household Wealth and Wealth Distribution, Australia, 2003–04* (cat. no. 6554.0).
- 7 Whittard, J., December 2003, *Training and Career Experiences of Women Part-time Workers in a Finance Sector Organisation: Persistent Remnant of the 'Reserve Army'?* in *Australian Journal of Labour Economics*, vol. 6, no. 4, <www.business.curtin.edu.au>.
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- 10 Eastman, W., January 1998, *Working for Position: Women, Men, and Managerial Work Hours*, in *Industrial Relations* vol. 37, no. 1, <www.ingentaconnect.com>.
- 11 Gorman, DF., and Brooks, PM., February 2009, *On solutions to the shortage of doctors in Australia and New Zealand*, in *The Medical Journal of Australia*, vol. 190, no. 3, <www.mja.com.au>.

Work and Health

The impact of work on people's health is complex and multi-faceted. Evidence suggests that work can be beneficial for people's physical and emotional wellbeing, quite apart from the financial rewards associated with employment.¹ Yet there are also aspects of work that can pose risks to workers' health and safety.

Along with the effect on individuals' health and wellbeing, workplace injuries have an economic impact on the broader community in the form of medical and legal expenses, as well as the costs associated with retraining, and loss of productivity and morale among co-workers. Safe Work Australia has estimated the cost of work-related injuries as \$57.5 billion dollars in 2005–06, or 5.9% of Australia's gross domestic product.²

This article explores the relationship between work and health through data on work-related injuries and fatalities. While this data illustrates the direct impact that work can have on employees' health, there is also evidence that the physical and psychosocial aspects of work, though more subtle and gradual, can nonetheless have a significant impact on health over the longer-term.^{3, 4} For example, recent evidence suggests that even seemingly innocuous aspects of some jobs such as long periods of sitting down can increase the risk of heart disease, diabetes and premature mortality.⁵

Work and general health

Self-assessed health is considered a good proxy indicator of the overall health of a population. Research has shown that self-assessed health is

Data sources and definitions

This article draws on data from the ABS 2007–08 National Health Survey, and the work-related injuries topic of the ABS 2009–10 Multipurpose Household Survey (MPHS). The MPHS collected information on the most recent work-related injury experienced by people aged 15 years and over, (excluding those living in Very Remote areas) who worked at some time during the 12 months to June 2010.

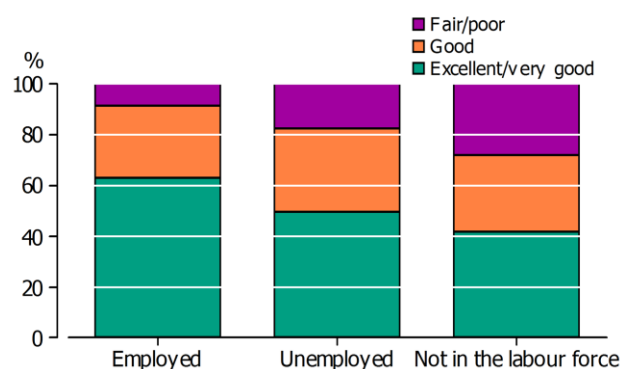
A *work-related injury* is any injury, illness or disease which first occurred in the 12 months prior to interview, where a person suffered either physically or mentally from a condition that arose out of, or in the course of employment. Included are work-related injuries that occurred while commuting to and from work, outside of work but while on duty, or during work breaks. Injuries suffered by workers residing as patients in hospital at the time of interview were not included, while injuries that resulted in death prior to data collection were not measurable.

Types of injuries or illnesses and how these occurred have been classified based on the *Types of Occurrences Classification System*.⁶

The *injury rate* for all employed persons and for those by sex and age are calculated by dividing the number of injured workers by the number of people employed (in that group) at any time in the 12 months to June 2010. Injury rates for all other groups (e.g. industry and occupation) are calculated by dividing the number of injured workers by the number of people employed (in that group) at the time of interview.

In this article, *white collar* workers include Managers, Professionals, Community and Personal Service Workers, Clerical and Administrative Workers, and Sales Workers as defined in the [Australian and New Zealand Standard Classification of Occupations](#) (ANZSCO) major occupation groups. *Blue collar* workers are those categorised in ANZSCO as Technicians and Trades Workers, Machinery Operators and Drivers, and Labourers.

Self-assessed health status(a) by labour force status – 2007-08



(a) People aged 15 years and over.

Source: ABS 2007–08 National Health Survey

a strong predictor of mortality and morbidity, and provides an insight into how people perceive their own health.⁷

In 2007–08, over half (56%) of the Australian population aged 15 years and over rated their own health as excellent or very good. A further 29% rated their health as good, while 15% rated their health as fair or poor. Women were slightly more likely than men to rate their health as excellent or very good (57% compared with 55%). These figures have remained steady since the previous survey in 2004–05.

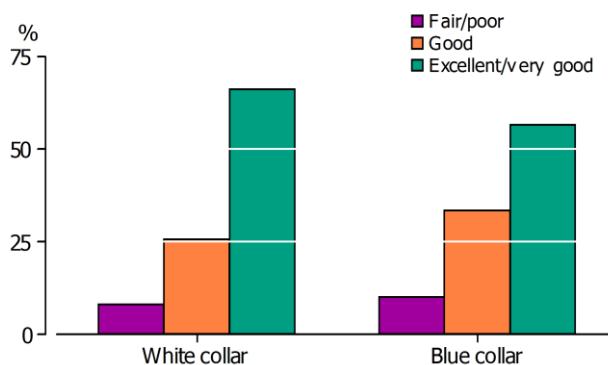
People in paid work tend to rate their health as better than people who are outside the workforce. In 2007–08, almost two-thirds (63%) of Australians in employment rated their own

health as excellent or very good, and only 9% as fair or poor. Of those who were unemployed, half (50%) rated their health as excellent or very good, and 18% as fair or poor. Of those people not in the labour force, 42% rated their health as excellent or very good, while 28% considered their health to be fair or poor. This pattern was similar for men and women, though the difference in self-assessed health between those in and out of the workforce was more pronounced for men.

In considering the relationship between health and labour force status, it should be noted that poor health is the reason why many people are not in the labour force. Furthermore, people are more likely to experience poor health as they age, particularly later in life when many people are retired from paid work. Indeed, the proportion of people who rated their health as excellent or very good in 2007–08 declined with age (from 67% of people aged 15–24 years to 36% of people aged 65 years and over). However, the disparities in self-assessed health between those in and out of the workforce were still evident, even when controlling for the effects of age.

Among employed people, self-assessed health varied considerably according to the type of work they did. After controlling for the effects of different age profiles, blue collar workers were 16% less likely than white collar workers to rate their own health as excellent or very good. Professionals had the highest levels of self-assessed health with 70% rating their health as excellent or very good. High proportions of Clerical and Administrative Workers (67%) and Community and Personal Service Workers (65%) also rated their health as excellent or very good. By contrast, only half (50%) of Machinery Operators and Drivers, and 54% of Labourers rated their health as excellent or very good.

Self-assessed health(a)(b) by white collar/blue collar occupation – 2007-08



(a) Employed people aged 15 years and over.

(b) Age standardised to the employed population aged 15 years and over.

Source: ABS 2007-08 National Health Survey

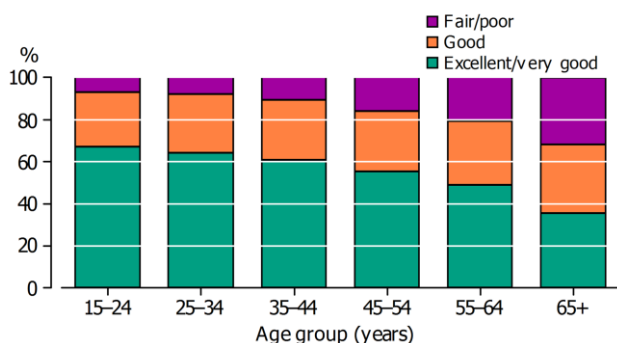
Work-related injuries

Along with the positive effect that work can have on individuals' health and sense of wellbeing, people also encounter risks to their health and safety in the workplace. Of the 12 million people who were employed at some time during the 2009–10 financial year, 5.3% (640,700 people) experienced at least one work-related injury or illness.

The work-related injury rate in 2009–10 was 53 injuries per 1,000 people employed, down from a rate of 64 per 1,000 in 2005–06. The fall in the overall work-related injury rate since 2005–06 was driven by a reduction among men (from 74 to 55 per 1,000), while the rate among women remained steady (at 51 per 1,000).

Men accounted for 56% of people who experienced a work-related injury in 2009–10 (356,500 men compared with 284,300 women). While the rate of work-related injuries was similar for men and women, the higher number of work-related injuries among men was largely due to the fact that men made up more than half (54%) of those who were employed at some time during the year.

Self-assessed health(a) by age – 2007-08



(a) People aged 15 years and over.

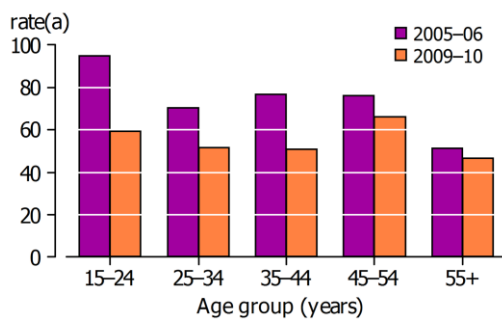
Source: ABS 2007-08 National Health Survey

...by age

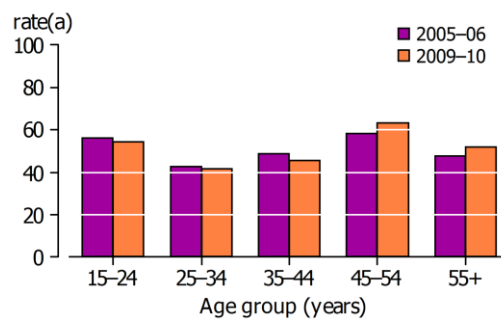
Workplace injury rates vary across age groups. In 2009–10, the injury rate for men was similar across the age groups from 15 to 44 years (between 59 and 51 injuries per 1,000 workers). The injury rate was high among men aged 45–54 years (at 66 per 1,000), and was lower among men aged 55 years and over (at 47 per 1,000). Among women, the injury rate among those aged between 25 and 44 years (44 per 1,000) was lower than among those aged 45 years and over (59 per 1,000).

Work-related injury rates by age and sex

MALES



FEMALES



(a) Injuries per 1,000 workers.

Source: ABS 2009-10 Multipurpose Household Survey

The fall in injury rate for men between 2005-06 and 2009-10 was evident across those aged between 15 and 44 years, but was particularly marked among men aged 15-24 years (from 95 to 59 per 1,000 workers).⁸ There was little change in the injury rates for women across the age groups.

...by occupation and industry

The types of risks to which people are exposed in the workplace vary considerably according to the type of job they do and the industry in which they work. The risks associated with different work environments are reflected in the rates and types of injuries across occupation and industry groups.

In 2009-10, the highest rates of injuries were found among the more manual, blue collar occupations groups such as Labourers (88 per 1,000), Machinery Operators and Drivers (86), and Technicians and Trades Workers (78). There was also a high injury rate among the white collar occupation group, Community and Personal Service Workers (84). The lowest injury rates were among the white collar

occupation groups such as Clerical and Administrative Workers (32 per 1,000), Professionals (42) and Managers (45).

Men make up the majority of workers in the blue collar occupation groups with high workplace injury rates (i.e. Labourers, Machinery Operators and Drivers, Technicians and Trades Workers).

Women, on the other hand, predominate in many of the white collar occupation groups with lower workplace injury rates (i.e. Clerical and Administrative Workers, Sales Workers). Women who worked in the blue collar occupations were just as likely to suffer a work-related injury as men were. However, among some white collar workers (i.e. Managers, Sales Workers, and Professionals), the rate of work-related injuries was considerably higher among women than men, with women in these occupations reporting high rates of chronic joint or muscle conditions.

The work-related injury rates indicate that workers in some industries face greater risks than others. Some of the highest rates of workplace injuries in 2009-10 were found among the Accommodation and Food Services (84 injuries per 1,000), Arts and Recreational Services (77), and Transport, Postal and Warehousing (74) industries. People working in other industries including the Professional, Scientific and Technical Services industry (24 injuries per 1,000) faced comparatively lower risks.

Work-related injury rates by occupation group(a) – 2009-10



(a) Occupation data are classified according to the ANZSCO - [Australian and New Zealand Standard Classification of Occupations, First Edition, 2006](#) (cat. no. 1220.0).

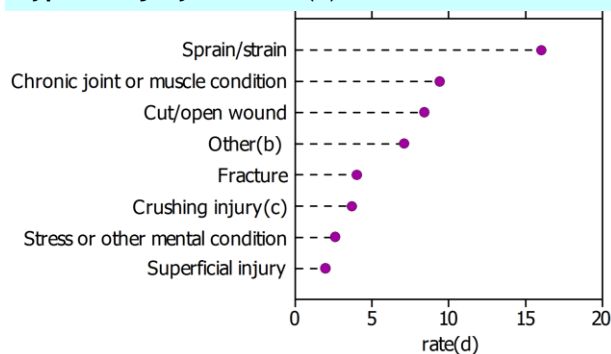
(b) Injuries per 1,000 workers.

Source: ABS 2009-10 Multipurpose Household Survey

Type of injury

There is a wide variety in the type and severity of injuries suffered in the workplace, ranging from fractures and crushing injuries resulting in internal organ damage, to minor cuts and strains. Of the most recent workplace injury suffered in 2009-10, around one-third of those reported were sprains or strains. This was the most common type reported by men (17 per 1,000 workers) and women (15 per 1,000) alike. Other common types of workplace injuries included chronic joint or muscle conditions (9 per 1,000 persons employed) along with cuts or open wounds (8 per 1,000 persons employed).

Type of injury suffered(a) – 2009-10



(a) Most recent injury during the 12 months to June 2010.

(b) Includes burns.

(c) Includes injuries resulting in internal organ damage.

(d) Injuries per 1,000 workers

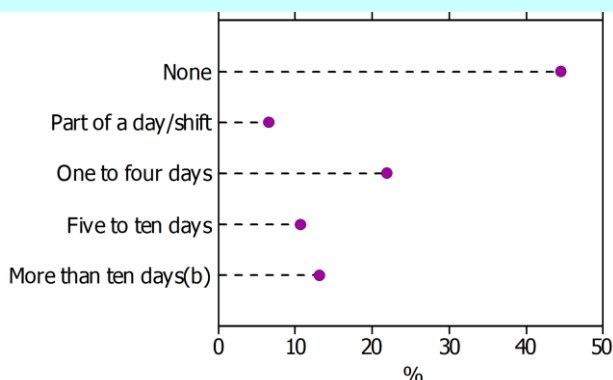
Source: ABS 2009-10 Multipurpose Household Survey

The type of injuries suffered also varied according to occupation. The rate of sprains and strain injuries was considerably higher among blue collar workers (24 per 1,000 persons employed) than white collar workers (15 per 1,000). Blue collar workers were also more likely than white collar workers to suffer chronic joint or muscle conditions (14 per 1,000 compared with 9 per 1,000) and cuts or open wounds (19 per 1,000 compared with 5 per 1,000).

Time off work

Apart from the obvious health impacts, work-related injuries also have a significant effect on workers and businesses due to the time spent off work. Almost half (44%) of people who suffered a work-related injury in 2009-10, however, did not miss any work due to their most recent work-related injury, while 7% missed only part of a shift or day's work. Around one in five (22%) missed between one and four day's work, and 27% (or 172,900 people) missed five or more days. The

Time off work due to work-related injury(a) – 2009-10



(a) Most recent injury during the 12 months to June 2010.

(b) Includes those who are yet to return to work.

Source: ABS 2009-10 Multipurpose Household Survey

Workers' compensation

According to data from Safe Work Australia, there were 134,800 serious workers' compensation claims in Australia in 2007-08. This equates to an incidence rate of 13.8 serious claims per 1,000 employed people. Men lodged two-thirds of all serious claims with an incidence rate of 17.8 serious claims per 1,000 employed people, almost double the rate among women (9.4 claims per 1,000 employed people). The incidence rate of serious claims declined 15% between 2003-04 and 2007-08 for both men and women.

Despite having a lower incidence rate than men, women spent more time off work due to serious claims. In 2007-08 the median time lost from work for a serious claim was 4.8 weeks for women and 3.6 weeks for men. The time lost due to serious claims increased from a median of 3.6 weeks to 4.0 weeks from 2003-04 to 2007-08. At the same time, the average payment for serious claims increased from \$5,500 to \$6,900, with the average payment for men in 2007-08 slightly higher than that for women (\$7,000 compared with \$6,700).⁹

Not all work-related injuries result in serious workers' compensation claims. Indeed, comparison of compensation claims with the data from the ABS 2005-06 Multipurpose Household Survey indicates that serious workers' compensation claims represents only one in five work-related injuries. Despite this, the decline in serious workers' compensation claims is broadly consistent with ABS data on work-related injuries. However, while the decline in the rate of work-related injuries has been apparent only for men, the rate of serious workers' compensation claims has declined for men and women alike.

distribution of time spent away from work following a work-related injury was similar for both men and women, and across the age groups.

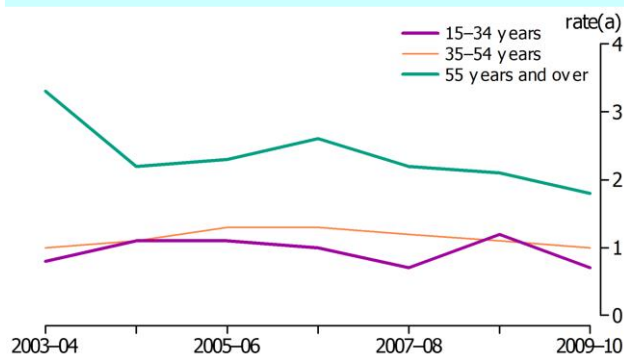
The time people were absent due to their most recent workplace injury differed according to the type of injury suffered. The longest absences were associated with stress and fractures. More than half (55%) of people who suffered stress or other mental conditions were absent from work for five days or more. Similarly, 53% of workers who suffered fractures were away from work for five days or more.

Cuts and open wounds, and crushing injuries were associated with relatively short absences from work. More than half of those who suffered a cut or open wound (56%), or a crushing injury (57%) did not miss any work due to their injury.

Workplace fatalities

While the majority of work-related injuries are minor, resulting in little or no time off work, there are rare occasions when they result in death. The Australian Government's [National OHS Strategy 2002-2012](#) set targets to lower the incidence of fatalities by 20% over the decade to 2012. Data from Safe Work Australia indicates

Workplace fatality rates by age



(a) Fatalities per 100,000 workers.

Source: Safe Work Australia, [Notified Fatalities Statistical Report 2009-10](#)

that the number of fatalities had fallen by 10% (to 134) over the five years to 2007-08. The number of work-related deaths rose sharply in 2008-09 (to 151) before falling again in 2009-10 (to 111 deaths). By 2009-10, the overall workplace fatality rate had fallen to a low of 1.0 per 100,000 workers.

The increase in workplace fatalities in 2008-09 was driven by an increase in deaths among people aged 15-24 years, with the fatality rate increasing from 0.7 per 100,000 workers in 2007-08 to 1.2 in 2008-09.

Of the 111 people who died in workplace incidents in 2009-10, the vast majority (95%) were men. Twenty-nine of the people who died were workers aged 15-34 years, 49 were aged 35-54 years, and 33 were aged 55 years and over. The fatality rate among workers in 2009-10 increased with age, from 0.7 per 100,000 workers aged 15-34 years, to 1.0 among 35-54 year olds, and 1.8 among workers aged 55 years and over. Though the fatality rate among workers aged 55 years and over has been trending downwards in recent years it is still more than double that of younger workers.

As with work-related injuries, fatalities were concentrated among particular industries and occupation groups, reflecting the relatively dangerous and hazardous working conditions experienced in some sectors. In 2009-10, around 80% of workplace fatalities occurred in the goods producing industries including Construction (28 deaths), Agriculture, Forestry and Fishing (26), Manufacturing (15), Transport and Storage (14) and Mining (6). Since the total number of fatalities is influenced by the number of people working in each industry, a better comparison can be gained by looking at the relative fatality rates. The highest fatality rate in 2009-10 was in the Agriculture, Forestry and Fishing industry (6.9 fatalities per 100,000 workers). This was almost double the rate in the Mining industry (3.5), and almost three times that in the Construction (2.8), and Transport

Workplace fatalities

Data on workplace fatalities are sourced from Safe Work Australia's [Notified Fatalities Statistical Report 2009-10](#).

Workplace fatalities includes workers (both employees and self-employed) who suffer a fatal injury at work. It includes deaths notified to workplace health and safety authorities and generally does not include work-related deaths due to traffic accidents on public roads.

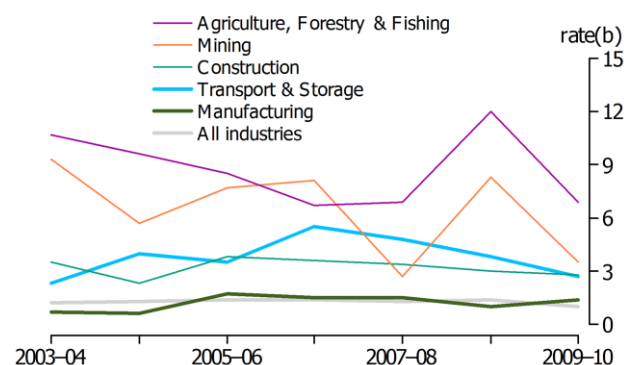
It also excludes bystanders (i.e. passers-by or visitors to workplaces) who suffered a fatal injury as a result of another person's work activity.

The **workplace fatality rate** is the number of workplace fatalities per 100,000 people employed on average over the 12-month period.

and Storage (2.7) industries. Though a large number of fatalities occurred in the Manufacturing industry, the fatality rate was on par with the average across all sectors. There have been fluctuations in the fatality rate across these industries over recent years, with a large spike in 2007-08 in the Agriculture, Fishing and Forestry, and Mining sectors, followed by a continuation of the long-term downward trend.

Workplace fatalities were more common among those who worked in blue collar occupations. In 2009-10, almost three-quarters of those who died in workplace accidents worked as either Intermediate Production and Transport Workers (36 deaths), Tradespersons and Related Workers (23), or Labourers and Related Workers (21). The most common cause of fatalities in 2009-10 were vehicle incidents (23 deaths), followed by falls from a height (18), being hit by moving objects (17), and being hit by falling objects (17). These were consistently the most common causes of workplace deaths, accounting for around two-thirds of all workplace fatalities since 2003-04.

Workplace fatality rates by selected industries(a)



(a) Industry data are classified according to the [Australian and New Zealand Standard Industrial Classification, 1993](#) (cat. no. 1292.0).

(b) Fatalities per 100,000 workers.

Source: Safe Work Australia, [Notified Fatalities Statistical Report 2009-10](#)

Occupational disease indicators

Establishing a causal link between occupational factors and long-term health conditions is difficult given that many such health conditions have multiple causes and often involve long latency periods.¹⁰ For example, mesothelioma, a usually fatal cancer, typically occurs 20 to 40 years after exposure to asbestos.

While taking these caveats into account, Safe Work Australia publishes *Occupational Disease Indicators* in order to monitor trends in occupational disease. The indicators present information on eight disease groups, primarily based on workers' compensation claims data.

Over the period from 2000–01 to 2007–08, the indicators show falls in the rates of five of the eight disease categories: musculoskeletal disorders, mental disorder, infectious and parasitic diseases, contact dermatitis, and cardiovascular disease. Rates for the other three categories, noise-induced hearing loss, respiratory diseases, and occupational cancers, either remained stable or showed no clear trend over the period.¹¹

Occupational disease indicators(a)

Disease	2000-01	2007-08
Musculoskeletal disorders	14,380	11,207
Mental disorders	1,111	839
Noise-induced hearing loss	490	469
Infectious and parasitic diseases	86	66
Respiratory diseases	143	95
Contact dermatitis	155	116
Cardiovascular disease	48	30
Occupational cancers	34	37

(a) Claims per million employees

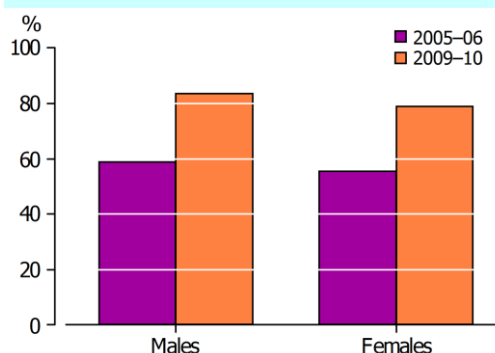
Source: Unpublished data from Safe Work Australia

OHS training

One of the key planks in efforts to reduce the number of injuries and deaths in the workplace is adequate training in occupational health and safety (OHS). Indeed, part of the Australian Government's *National OHS Strategy 2002–2012* is to raise awareness of the importance of OHS programs, and encourage excellence in OHS practices.¹² Of the 640,700 people who experienced a workplace injury during 2009–10, the vast majority (82%) had received formal OHS training in their job prior to the injury. This represents a considerable increase since 2005–06 when only 58% of injured workers had received formal OHS training.

Of all people who were employed at some time during the 2009–10 financial year, 70% had received formal OHS training in their current job. The proportion of men who had received OHS training (73%) was slightly higher than the proportion of women (66%). Workers aged 55 years and over were slightly less likely to have undertaken OHS training than their younger counterparts (61% compared with 70%).

Proportion of injured workers(a) who received formal OHS training



(a) Who had suffered a work-related injury at some time in the 12 months to June 2010.

Source: ABS 2009-10 Multipurpose Household Survey

The prevalence of OHS training across occupations tends to reflect the relative risks. OHS training was more common among the occupations with the highest rates of workplace injuries such as Technicians and Trades Workers (79%), Community and Personal Service Workers (78%), and Machinery Operators and Drivers (76%). The rate of formal OHS training was lower among lower skilled white collar occupations including Clerical and Administrative Workers (63%) and Sales Workers (66%). Men were more likely than women to receive OHS training across both white and blue collar occupation groups, indicating that even within occupation groups, men are more likely to do the kind of work for which OHS training is deemed important.

There were particularly high rates of OHS training in the Mining Sector (92%), along with the Electricity, Gas, Water and Waste Services industry (87%), Public Administration and Safety (84%) and Health Care and Social Assistance (84%) industries. The proportion of people in the Agriculture, Forestry and Fishing industry who had had formal OHS training was very low (52%), despite the relatively high injury rate. This may be due to the high proportion of self-employed people working in the sector, and could indicate that much of the OHS training in this sector is conducted on an informal basis.

Looking ahead

Over the past two decades successive governments at both the federal and state/territory level have made concerted efforts to reduce rates of workplace injuries and fatalities. The Australian Government's *National OHS Strategy 2002–2012* aimed to raise awareness of the importance of OHS, improve collection and analysis of workers' compensation data, and harmonise the states and territories' work health and safety legislation.¹² Initial indications suggest that the

focus on OHS may be paying dividends with increased rates of OHS training, and declining rates of both workplace fatalities and injuries. These trends will need to continue in coming years to meet the reduction targets.

Endnotes

1. Butterworth P, Leach LS, Strazdins L, Olesen SC, Rodgers B, and Broon DH, 2011, *The psychosocial quality of work determines whether employment has benefits for mental health: results from a longitudinal national household panel survey*, Occupational and Environmental Medicine, <www.oem.bmj.com>.
2. Safe Work Australia, 2009, *The cost of work-related injury & illness for Australian Employers, Workers and the Community*, <www.safeworkaustralia.gov.au>.
3. Warren JR, Hoonakker P, Carayon P, and Brand J, 2004, *Job characteristics as mediators in SES-health relationship*, Social Science & Medicine, 59: 1367-1378.
4. Stansfeld S, and Candy B, 2006, *Psychosocial work environment and mental health: a meta-analytic review*, Scandinavian Journal of Work and Health, 32: 443-462.
5. Hamilton M, Hamilton D, and Zderic T, 2007, *Role of low energy expenditure and sitting in obesity, metabolic syndrome, type 2 diabetes, and cardiovascular disease*, Diabetes, 56: 2655-2667.
6. The Types of Occurrences Classification System was developed by the Office of the Australian Safety and Compensation Council, now renamed Work Safe Australia.
7. For more information see ABS, 2004-05, *Self-assessed health in Australia: A snapshot, 2004-05*, cat. no. 4828.0.55.001, <www.abs.gov.au>.
8. Though the graph indicates that the injury rate has fallen among men aged 45 years and over, the difference is not statistically significant.
9. For more information see Safe Work Australia, 2011, *Compendium of workers' compensation statistics Australia 2008-09*, <www.safeworkaustralia.gov.au>.
10. Safe Work Australia, 2010, *Occupational Disease Indicators*, <www.safeworkaustralia.gov.au>.
11. While there was a fall in the rate of workers' compensation claims for respiratory diseases, hospital separation rates remained relatively stable.
12. Safe Work Australia, 2002, *National OHS Strategy 2002-2012*, <www.safeworkaustralia.gov.au>.

Sport and physical recreation

Sport is an important feature of the Australian lifestyle and plays a large part in the lives of many Australians. Participation in sport or physical recreation offers many benefits, ranging from simple enjoyment to improved health and the opportunity for social interaction.

Regular physical activity reduces the likelihood of a person developing many chronic diseases, and may also play a therapeutic role in relation to mental health disorders. Physical activity is important for young people in developing healthy bodies, but is also important for older people in maintaining quality of life and independence.¹

Participating in sport or physical recreation with others may also provide opportunities for social interaction, leading to stronger personal and community networks.

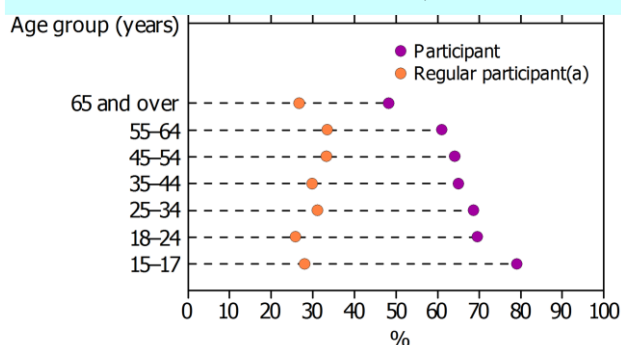
Due to the many known benefits of exercise, the Australian Government Department of Health and Ageing promotes the [National Physical Activity Guidelines for Adults](#), which advocate at least 30 minutes of moderate intensity physical activity on most, preferably all, days.

This article looks at the rates of participation in sport and physical recreation across Australia for people aged 15 years and over, by selected characteristics and by selected activities. The article also looks at Australians who had reported low or no exercise and who would therefore not be meeting the National Physical Activity Guidelines.

Who participates in sport and physical recreation?

A person's likelihood of having participated in sport or physical recreation may be related to many characteristics such as their sex, age, family situation, usual hours worked, country of birth or socioeconomic status.

Participation in sport or physical recreation within the last 12 months – 2009-10



(a) Participated more than twice a week in all 12 months.

Source: ABS [Participation in Sport and Physical Recreation, Australia, 2009-10](#) (cat. no. 4177.0); ABS 2009-10 Multipurpose Household Survey

Data sources and definitions

The main data source for this article is the participation in sport and physical recreation topic in the ABS 2009-10 Multipurpose Household Survey. The survey looked at people aged 15 years and over across Australia but excludes people living in very remote areas. This is expected to have only a minor impact on any aggregate estimates produced for individual states and territories, except for the Northern Territory where this group accounts for around 23% of the population.

A **participant or player** is a person who has played a sport or physically undertook an activity for exercise or recreation at least once in the 12 months prior to the survey. People who participated more than twice a week on average in each month over the 12 month period were considered to have participated **regularly**. People involved solely as a coach, teacher, instructor, referee, umpire, administrator or club committee member are excluded from the data.

Cycling includes BMXing and mountain biking.

Dancing includes ballet and boot scooting.

Swimming includes diving.

Dependent children are all people aged less than 15 years; and people aged 15-24 years who are full-time students, have a parent in the household and do not have a partner or child of their own in the household.

For people born overseas, **main English-speaking countries** are the United Kingdom, the Republic of Ireland, New Zealand, Canada, South Africa and the United States of America. Being from a non-main English-speaking country does not imply a lack of proficiency in English.

...age and sex

In 2009-10, 64% of Australians aged 15 years and over had participated in sport or physical recreation at least once within the last 12 months – down from 66% in 2005-06. Almost half (47%) of the people who had participated within the last 12 months (or 30% of all adults) had done so regularly (more than twice a week).

Rates of participation within the last 12 months varied across age groups. Participation was highest for 15-17 year olds (79%) and generally declined with increasing age, with a relatively large decline in participation among older people aged 65 years and over. Lower participation rates among older age groups could be expected given that disability rates increase with age.²

The same pattern was not evident for regular participation rates, with 18-24 year olds (26%) less likely to participate regularly than 55-64 year olds (34%). While older people were less

Income definitions

Equivalised household income. Equivalising adjusts actual household income to take into account the different needs of households of different size and composition. There are economic advantages associated with living with others, because many household resources can be shared.

Income quintiles are derived by ranking all the population from lowest to highest income and then dividing that population into five equal groups. The lowest quintile is made up of the 20% of the population with the lowest income. For more information about household income measures see ABS [Household Income and Income Distribution](#) (cat. no. 6523.0).

likely than younger people to have participated at all, those who did were more likely than younger people to participate regularly.

The decrease in overall participation (64% in 2009–10, 66% in 2005–06) was largely driven by a fall in female participation, from 66% in 2005–06 to 63% in 2009–10. In 2009–10, the participation rate was only slightly higher for men (65%) than for women (63%), although the reverse was true for regular participation (31% for women and 29% for men).

...socioeconomic status

Although not all-encompassing measures, income and educational attainment are good proxy indicators of an individual's socioeconomic status.

Access to financial resources may increase a person's ability to participate in sport or physical recreation where there are costs involved. People whose equivalised weekly household income was in the highest quintile reported a participation rate of 80%, whereas the participation rate for people in the lowest quintile was just over half this (45%).

Higher education can also lead to higher income and thereby indirectly increase a person's ability to meet the financial costs involved in participating in some sport or physical recreation. It may also provide people with a better understanding of the many benefits that such activities may offer, thereby directly increasing their willingness to participate. People who had attained a Bachelor degree or above were much more likely to have participated in sport or physical recreation than those whose highest attainment was Year 10 or below (77% compared with 49%). While many people whose highest attainment was Year 10 or below were aged 65 years and over, the participation rate for this group only increased to 52% when these older people were excluded.

Sport and social capital

Social capital is often defined as a resource founded on networks of mutual support, reciprocity and trust that may benefit health, education and employment outcomes for individuals while also fostering community strength and resilience.³ The associational nature of sport and sporting clubs is sometimes seen as a forum for the creation of social capital,⁴ with links evident between certain indicators of wellbeing and participation in sport and physical recreation.

According to the ABS 2006 General Social Survey (GSS), among people aged 18 years and over, those who participated in sport or physical recreation were more likely than others to be a volunteer (42% compared with 21% of non-participants), to be actively involved in a social group (75% compared with 43%), or actively involved in a civil or government group (23% compared with 11%).

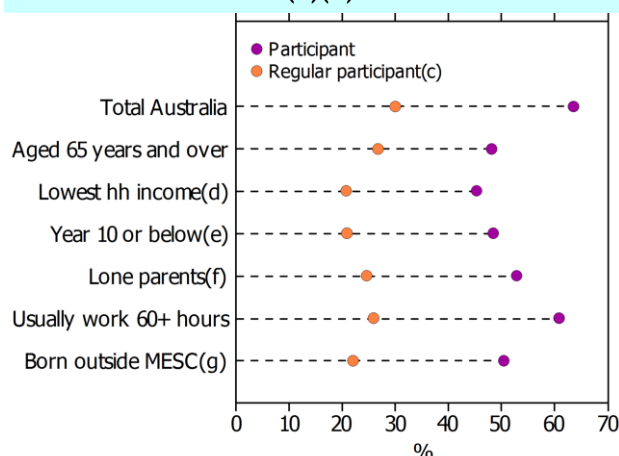
Data from the 2006 GSS also indicated that sport participants generally had more frequent contact with their family and friends, had a greater number of friends to confide in and had a greater ability to obtain support in times of crisis than non-participants.

For more information see ABS [Sport and Social Capital, Australia, 2006](#) (cat. no. 4917.0).

People involved in organised sport or physical recreation through non-playing roles (such as coaches and officials) may also experience the benefits of strengthened social capital. The ABS April 2010 Survey of Involvement in Organised Sport and Physical Activity showed that there were 1.6 million people who were involved in organised sport or physical recreation in a non-playing role.

For more information see ABS [Involvement in Organised Sport and Physical Activity, Australia, April 2010](#) (cat. no. 6285.0).

Participation in sport or physical recreation within last 12 months(a)(b) – 2009-10



- (a) People aged 15 years and over.
 (b) Characteristics displayed which had lower than average participation.
 (c) Participated more than twice a week in all 12 months.
 (d) In the lowest quintile of equivalised weekly household income.
 (e) People whose highest level of attainment was Year 10 or below.
 (f) Lone parents aged 15-49 years with dependent children.
 (g) People born outside main English-speaking countries.

Source: ABS 2009-10 Multipurpose Household Survey

Football participation

While many Australians love their footy, across Australia the game of football comes in several different forms. The main variations are, in no particular order, outdoor soccer (also known as association football), indoor soccer, Australian Rules, rugby union, rugby league and touch football (a non-contact form of rugby league). In 2009–10, 1.2 million people aged 15 years and over (6.9%) participated in at least one form of football.

Of those who did play football, most had played outdoor soccer (33%), touch football (22%), indoor soccer (20%) or Australian Rules (20%). Around one in ten footballers had played rugby league (9.5%) and a similar amount had played rugby union (8.0%).

Men were more likely than women to have played football (11% compared with 2.6%).

Male footballers were likely to have played outdoor soccer (33%) or Australian Rules (23%). Of footballing women, the majority played touch football (44%), outdoor soccer (36%) or indoor soccer (23%).

Across Australia, soccer (both indoor and outdoor) had higher participation rates among people living in Major Cities than those in other areas, while rugby league, touch football and Australian Rules showed the opposite pattern, being more popular outside Major Cities.

The article 'Football: Four Games, One Name' from ABS [Perspectives on Sport, May 2009](#) (cat. no. 4156.0.55.001) takes a more in-depth look at football in Australia.

...family situation

For some people, family commitments may make it hard to find spare time to participate in sport or physical recreation, or they may be unable to find appropriate childcare. In 2009–10, of people aged 15–49 years, lone parents with dependent children (53%) and those in couple relationships with dependent children (66%) had lower rates of participation than people in couple relationships without dependent children (70%) and people who were neither a parent, nor in a couple relationship (72%).

...hours worked

The amount of time that people spend in the workplace may also impact upon the amount of time they are able and/or willing to spend participating in sport or physical recreation. The participation rate for people who usually worked 1–34 hours per week was 69%, higher than the participation rate for people who usually worked 60 hours or more in a week (61%).

People who usually worked 60 hours or more in a week were also less likely than those who usually worked 1–34 hours to have participated regularly, i.e. more than twice a week (26% compared with 35%).

Children's participation in organised sport

Participation in organised sport is an important part of a child's social development. As a subset of broader physical activity, participation in organised sport is also important for the development of motor coordination skills, teamwork and physical fitness. In recent years, increasing awareness of the incidence of childhood obesity has highlighted the desirability, on health grounds, for children to participate in regular activity.

An estimated 63% of children aged 5–14 years (1.7 million children) participated in at least one organised sport outside of school hours, in the 12 months to April 2009. Almost half of these children played two or more organised sports (30% overall). Participation was higher among boys (70%) than girls (56%).

In 2009, the most popular organised sport for children was swimming, with a participation rate of 19%. This was followed by outdoor soccer at 13% and Australian Rules football at 8.6%.

For more information see ABS [Children's Participation in Cultural and Leisure Activities, Australia, Apr 2009](#) (cat. no. 4901.0) and ABS [Research Paper: Children's Participation in Organised Sporting Activity, Oct 2009](#) (cat. no. 1351.0.55.028).

...country of birth

People born outside Australia but born within main English-speaking countries had comparable participation rates to people born in Australia (66% for each), although they were slightly more likely to have participated regularly (36% compared with 31%). People born outside main English-speaking countries had a much lower participation rate (50%) and only 22% participated regularly.

While participation rates of men and women were similar for people born in Australia and for those born in main English-speaking countries, there was a divide between the participation rates of men and women who were born outside main English-speaking countries (54% compared with 47%). For further analysis see the article 'Migrants and sport' in ABS [Perspectives on Sport, Dec 2009](#) (cat. no. 4156.0.55.001).

Whether met exercise guidelines

While in 2009–10 around two-thirds (64%) of Australians aged 15 years and over had participated in sport or physical recreation at least once, less than one-third (30%) participated more than twice a week.

In line with this, the ABS 2007–08 National Health Survey found that the majority of Australians aged 18 years and over had only a low level of exercise for fitness, recreation or sport in the two weeks prior to interview (36%), or were sedentary (i.e. very low, or no exercise – also 36%). Unless their physical activity levels were significantly boosted through occupational activities (such as

Aboriginal and Torres Strait Islander people and sport

According to the ABS 2008 National Aboriginal and Torres Strait Islander Social Survey, nearly one-third (30% or 99,000) of Aboriginal and Torres Strait Islander people aged 15 years and over had participated in some type of sport or physical activity in the 12 months prior to interview. Men had higher rates of participation (38% or 59,000) in sport or physical activity than women (23% or 40,000). The participation rate decreased with age for both men and women.

Almost half (47%) of Aboriginal and Torres Strait Islander children aged 4–14 years in 2008 had played organised sport. There was a noticeable difference between boys and girls, with over half of boys (51% or 37,000) and less than half of girls (43% or 29,000) participating in organised sport.

Almost half (45%) of Aboriginal and Torres Strait Islander people aged 15 years and over had attended a sporting event as a spectator.

For more information see 'Indigenous people's participation in sport and physical activities' in [ABS *Perspectives on Sport, June 2010*](#) (cat. no. 4156.0.55.001).

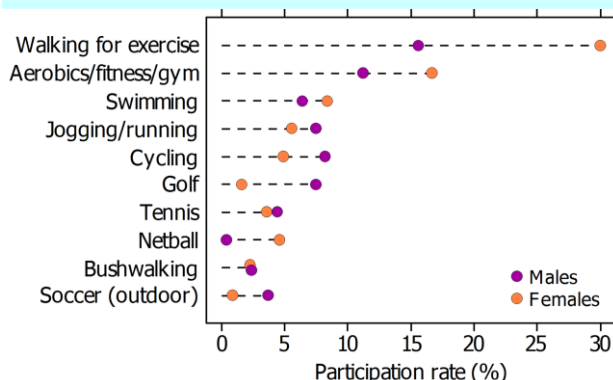
labouring) or household activities (such as housework and gardening), these people would not have achieved the minimum daily level of physical activity based on the [National Physical Activity Guidelines for Adults](#).

The proportion of Australian adults considered to have only a low or sedentary exercise level in 2007–08 (72%) was slightly higher than in 2001 (69%).

Most popular sports and physical recreation activities

Of all sports or physical recreation activities, walking for exercise had the highest level of participation (23%). Aerobics, fitness or gym was also a popular activity group (14%). Swimming (7.4%), cycling (6.5%) and jogging or running (6.5%) were the only other activities that were participated in by more than one in twenty Australians.

Sports and physical activities with the highest participation rates(a)(b) – 2009–10



(a) People aged 15 years and over.

(b) Proportion of people who undertook the activity at least once within the 12 months prior to survey.

Source: ABS [Participation in Sport and Physical Recreation, Australia, 2009–10](#) (cat. no. 4177.0)

Long-term conditions caused by sport or exercise injuries

Sport and physical recreation have obvious health benefits, but sports injuries do pose a risk for players. While many sports injuries such as cuts and bruises may not lead to long-term problems, arthritis and back pain are common long-term conditions that can be brought on by trauma to joints or the back experienced through sport or exercise injuries.

The ABS 2007–08 National Health Survey showed that there were 526,000 Australians aged 15 years and over who had a current long-term condition that was a result of a sporting or exercise injury. Of these 526,000 people, around three-quarters (73%) had a condition of the musculoskeletal system or connective tissue that had been caused by injury, including arthritis (28%), back pain (19%) and disc disorders (12%).

Around two-thirds (68%) of people with a long-term condition caused by a sports or exercise injury were men.

Participation in specific activities varied with the sex and age of participants.

...by sex

Both walking for exercise and aerobics, fitness or gym were more popular for women (30% and 17% respectively) than for men (16% and 11% respectively). There were other activities that were predominantly participated in by one or the other sex. Netball, for example, had a higher number of women than men participating (12 times as many women as men). On the reverse were golf and outdoor soccer. Golf had four and a half times as many men as women participating. Similarly, outdoor soccer had around four times as many men as women.

...by age

Overall, the most popular activity was walking for exercise (23%), however, this was not the case for people aged 15–17 years, where only 6.3% walked for exercise. People of this age group were more likely to have participated in aerobics, fitness or gym (12%). People aged 18–24 years also favoured aerobics, fitness or gym (20%) over walking for exercise (10%).

Among people aged 55–64 years and 45–54 years, walking for exercise was the most popular activity (34% and 30% respectively). Golf (7.2% for 55–64 year olds) and lawn bowls (4.7% for people aged 65 years and over) were two other activities that were more popular among older rather than younger age groups.

...recent changes

Of the ten most popular activities in 2009–10 in terms of participation, only two had grown in popularity since 2005–06. The participation rate in aerobics, fitness or gym increased from 13% to 14%, while jogging or running increased from 4.3% to 6.5%. Participation rates in cycling, netball and outdoor soccer showed no

Attendance and participation

While attendance at sporting events may not provide the same direct health benefits as participation, attendance may provide opportunities for community bonding and increased social capital.

In 2009–10, 43% of people aged 15 years and over had attended a sporting event in the last 12 months. The highest attendance rates were for Australian Rules (16%), horse racing (11%), rugby league (9%) and motor sports (8%). None of these top four spectator sports were ranked in the top ten sports or physical recreation activities in terms of participation, suggesting that there are differing factors motivating people to participate in some sports and/or attend others.

...who attends sporting events?

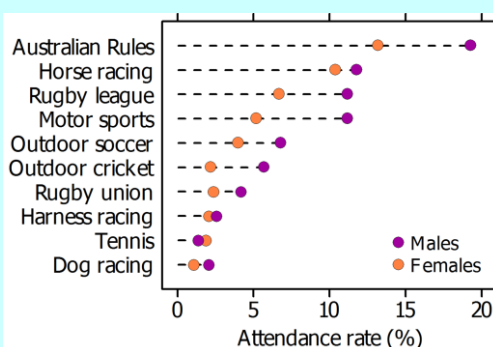
While total participation rates were similar between men and women, there was a large difference in attendance rates – 50% of men compared with 37% of women. This disparity was also the case for most of the top ten spectator sports, such as Australian Rules, rugby league and motor sports, although a slightly higher proportion of women than men attended tennis events.

Attendance rates showed a similar pattern to participation when looked at across age groups, being highest among 15–17 year olds (58%) and generally declining with age, being lowest for people aged 65 years and over (23%).

...attendance across Australia

The Northern Territory had the highest sports attendance rates (59%), although Victoria (50%), the ACT (49%) and South Australia (48%) also had relatively high rates of attendance.

Top 10 attendance sports(a) – 2009-10



(a) People aged 15 years and over.

Source: ABS [Spectator Attendance at Sporting Events, 2009-10](#) (cat. no. 4174.0)

significant change over the period (6.5%, 2.6% and 2.3% in 2009–10 respectively), while there had been slight decreases in the participation rates of the other popular activities.

Organised vs. non-organised activities

Many sports or physical recreation activities were organised by a club or association (such as a sporting or social club, church group, old scholars association or gymnasium). Such

organisation may provide improved access for participants to certain activities that involve teams, special equipment, venues and/or costs.

In 2009–10, 26% of Australians aged 15 years and over had participated in some form of organised sport or physical recreation. There was a slight difference by sex – 28% of men and 24% of women.

The types of organised sports or physical recreation activities that people participated in varied. In 2009–10, organised golf had the highest participation rate among men (3.7% of all men participated in organised golf).

Organised outdoor soccer, outdoor cricket, Australian Rules, lawn bowls, and aerobics, fitness or gym activities were other relatively common organised activities for men, with around 2% of men having participated in each. For women, the most popular organised activities were aerobics, fitness or gym (6.1% of all women), while netball (4.1%), dancing (2.0%) and yoga (1.8%) were also relatively common organised activities.

While many of the most popular activities such as walking for exercise, swimming, aerobics, fitness or gym and jogging or running may at times be organised, they are often easy to participate in informally. This would in part explain why around half (52%) of Australians aged 15 years and over had participated in any non-organised sport or physical recreation and why 37% had participated in only non-organised sport or physical recreation.

Participation across Australia

Participation rates varied across the country. The two territories had the highest participation rates, with 77% in the Australian Capital

Participation rates(a)(b) – 2009-10

	Participant %	Regular participant(c) %
New South Wales	62.7	28.2
Victoria	64.6	30.4
Queensland	62.1	30.7
South Australia	61.7	30.4
Western Australia	65.4	32.2
Tasmania	64.4	29.8
Northern Territory(d)	71.5	37.3
Australian Capital Territory	77.1	38.8
Australia	63.6	30.1

(a) People aged 15 years and over.

(b) Proportion of people who undertook the activity at least once within the 12 months prior to survey.

(c) Participated more than twice a week in all 12 months.

(d) Refers to mainly urban areas only.

Source: ABS [Participation in Sport and Physical Recreation, Australia, 2009-10](#) (cat. no. 4177.0); ABS 2009-10 Multipurpose Household Survey

Territory and 72% in the Northern Territory, while participation rates in the states ranged from 62% in South Australia and Queensland to 65% in Western Australia and Victoria. Regular participation, while lower, showed a similar pattern (i.e. being higher in the territories than the states). The relative popularity of certain activities changed between each state and territory and also between Major Cities and other areas.

...different activities for different states

Walking for exercise was the most popular activity for participants across all states and territories. Other activities popular nationally (aerobics, fitness or gym, jogging or running, swimming and cycling) also tended to remain popular in each jurisdiction. However, the varying preferences and/or differing demographic make-ups of the populations in each state or territory did appear to influence the relative popularity of some activities, with some standing out as being more popular within certain borders. The following discussion focuses on activities where at least 1% of the national population aged 15 years

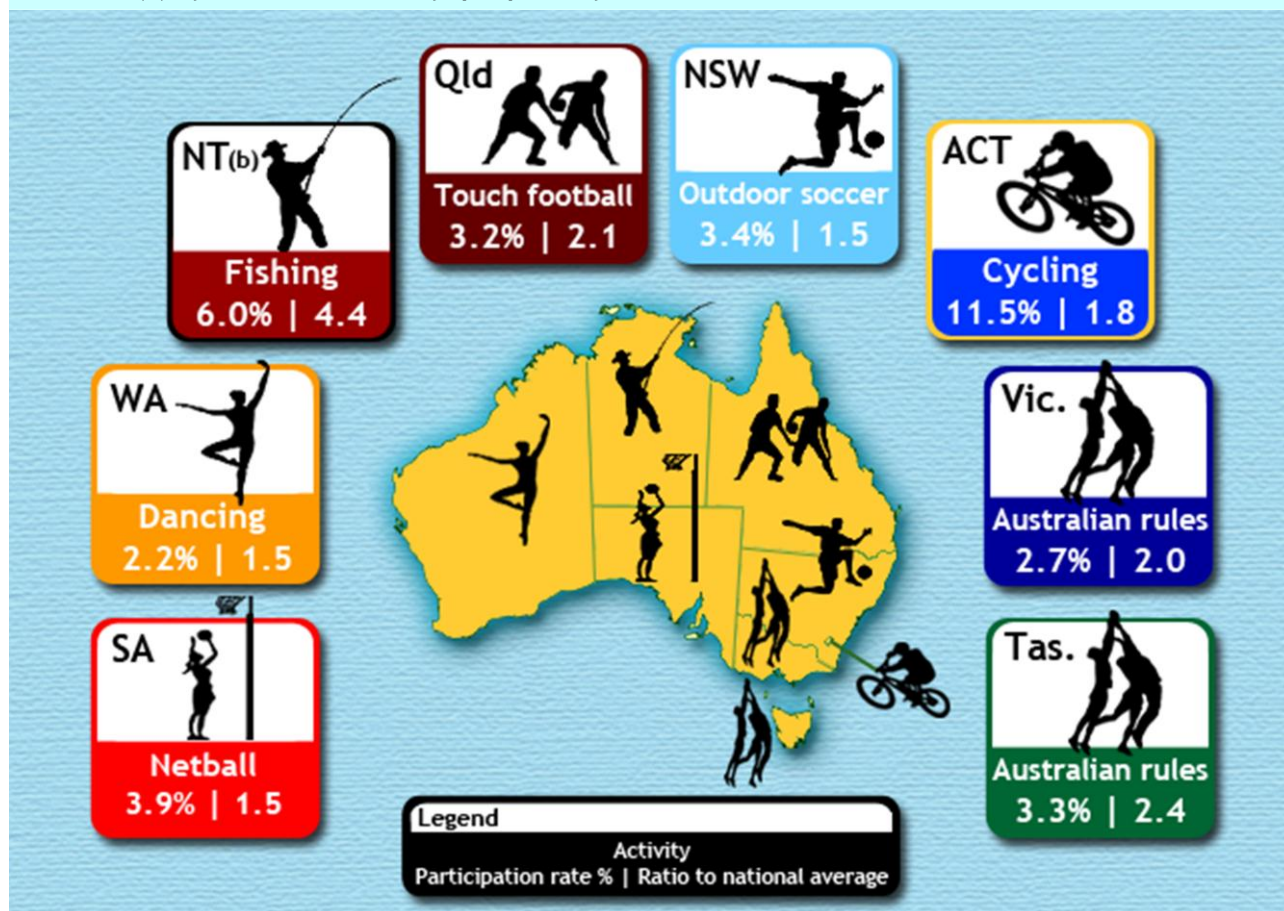
and over participated.

While walking for exercise was the most popular activity within all states and territories, the rate of participation in Tasmania was 1.3 times as high as the national average. Aerobics, fitness or gym was the second most popular activity group across most jurisdictions, with the highest participation rate in the Australian Capital Territory (1.4 times as high as the national average).

Participation in the different football codes showed strong variation across the country, with Australian Rules football having relatively high participation rates in both Tasmania (2.4 times as high as the national average) and Victoria (2.0 times). Touch football had high relative participation in Queensland (2.1 times as high as the national average) and Victoria (2.0 times). Touch football had high relative participation in Queensland (2.1 times as high as the national average), while outdoor soccer had strong relative participation in the Australian Capital Territory (1.4 times as high) and New South Wales (1.5 times).

Other activities for which participation rates varied across the country include cycling, netball, dancing, fishing and bushwalking. Participation in cycling within both the

Participation rates and ratio to national average of selected sports or physical recreation activities(a) by state and territory, people 15 years and over – 2009-10



(a) Activities with the highest relative participation rate compared with the national average, where the national participation rate was at least 1%.

(b) Refers to mainly urban areas only.

Source: ABS 2009-10 Multipurpose Household Survey

Major Cities

Major Cities are Sydney, Newcastle, Wollongong, Tweed Heads and the Tweed Coast, Melbourne and Geelong, Brisbane, most of the Gold Coast and much of the Sunshine Coast, Adelaide, Perth, and Canberra and Queanbeyan.

Hobart and Darwin are not included in the Major Cities group. For further information about Remoteness Areas see Chapter 8 of ABS [Australian Standard Geographical Classification \(ASGC\), July 2006](#) (cat. no. 1216.0).

Australian Capital Territory and the Northern Territory was 1.8 times as high as the national average. Netball was popular in South Australia (1.5 times as high) and dancing in Western Australia (1.5 times). Fishing was common in the Northern Territory (4.4 times as high) and Queensland (1.5 times), while bushwalking was popular in Tasmania (2.1 times).

...Major Cities vs. the rest

In 2009–10, there was no statistically significant difference in the sport or physical recreation participation rates between people living in Major Cities of Australia and those living in areas outside the Major Cities (64% compared with 62%). However, people who lived in Major Cities were slightly less likely than people who lived elsewhere to have participated in organised sport or physical recreation (25% compared with 28%). There were also differences in the types of activities that these people participated in.

Certain activities were more popular among people who lived in Major Cities compared with those who lived outside Major Cities. For example, the participation rate in indoor soccer was over twice (2.3 times) as high and the rate in outdoor soccer was almost twice (1.9 times) as high in Major Cities as in areas outside Major Cities. Participation rates were also higher in both jogging or running and basketball (1.7 times for both) and aerobics, fitness or gym (1.5 times). The differences in some of these activities would in part be explained by the varying availability of certain sports facilities such as indoor sports centres or commercial gymnasiums.⁵

Some other activities were more common among people living in areas outside Major Cities. For example, participation in horse riding, equestrian activities or polo was more than three times (3.7 times) as high in areas outside Major Cities, than in Major Cities. Participation in fishing and lawn bowls were both around two and a half times as high in areas outside Major Cities (2.6 and 2.4 times respectively), touch football was almost twice (1.9 times) as high, while Australian Rules was around one and a half (1.6) times as high.

Looking forward

The majority of Australians participate in some form of sport or physical recreation at least once in any given year. Depending on a person's circumstances or characteristics, they may be more or less likely to have participated. The activities in which they participate also vary.

Although most Australians do participate, of concern is that less than one-third (30%) did so more than twice a week in 2009–10 and that the majority of Australians had only low or sedentary exercise levels (72% in 2007–08).

Many Australians would not be achieving the exercise levels recommended by the National Physical Activity Guidelines.

Improved Health and Physical Education (HPE) in schools may be a way to improve this situation, initially among children, but with potential flow on effects for adult participation as these children age. HPE will be included in the development of the Australian Curriculum for all school students as a core learning requirement until the end of Year 10. The objective will be to maximise the number of school hours that students participate in quality physical education and sport.⁶

Each state and territory, through their sport and/or health departments, along with their institutes or academies of sport, has an important role to play in promoting sport and physical activity within their jurisdiction. At the national level, the Australian Sports Commission (ASC) has a wide range of programs in place to meet its key objective of securing an 'effective national sports system that supports improved participation in quality sport activity by Australians'. Achieving this objective will take the ASC one step closer to achieving their mission of 'enriching the lives of all Australians through sports'.⁷

Endnotes

- 1 International Platform on Sport & Development, 2011, [The Health Benefits of Sport and Physical Activity](#), International Platform on Sport & Development, Bienne, <www.sportanddev.org>.
- 2 Australian Bureau of Statistics, 2010, [Disability, Ageing and Carers, Australia: Summary of Findings, 2009](#), cat. no. 4430.0, ABS, Canberra, <www.abs.gov.au>.
- 3 Australian Bureau of Statistics, 2006, [Aspects of Social Capital, Australia 2006](#), cat. no. 4911.0, ABS, Canberra, <www.abs.gov.au>.
- 4 Tonts, T., 2005, 'Competitive Sport and Social Capital in Rural Australia', in *Journal of Rural Studies*, vol. 21, pp. 137–149.
- 5 National Rural Health Alliance, 2011, [Fact Sheet 26: Physical Activity in Rural Australia](#), National Rural Health Alliance, Canberra, <nrha.ruralhealth.org.au>.
- 6 Ministerial Council for Education, Early Childhood Development and Youth Affairs, 2010, [Third MCEECDYA Meeting: Communiqué](#), MCEECDYA, Sydney, <www.mceecdya.edu.au>.
- 7 Australian Sports Commission, 2010, [What is the ASC?](#), Australian Sports Commission, Canberra, <www.ausport.gov.au>.

Culture and the arts

Culture and the arts are an important part of the Australian lifestyle. They provide a means for meeting and connecting with people, promoting a positive community identity and enabling people to feel socially included. By being part of a socially inclusive society, Australians have the opportunity to feel valued, and are more likely to participate in employment, education and training, and voluntary work.¹

Culture and the arts come in many forms of venues and events. Libraries assist with learning and education, art galleries and museums with conservation, and cinemas with relaxation and escapism.²

Cultural industries also contribute to the Australian economy through employment and trade, and assist with fostering creativity and innovation. Trade in cultural goods and services, both within Australia and internationally, encourage cultural diversity and economic development, and also provide an opportunity for the exchange of ideas.³

The value we place on culture and the arts can be shown through attendance rates, the time Australians devote to culture and the arts and how much money is spent on them. This article examines these aspects for people aged 15 years and over. For children's involvement in cultural activities see ABS [Children's Participation in Cultural and Leisure Activities](#) (cat. no. 4901.0).

Data sources and definitions

The main data source for this article is the attendance at cultural venues and events topic in the ABS 2009–10 Multipurpose Household Survey (MPHS).

The MPHS looked at people aged 15 years and over across Australia but excludes people living in very remote areas. This is expected to have only a minor impact on any aggregate estimates that are produced for individual states and territories, except in the Northern Territory where this group accounts for around 23% of the population.

Culture. There are two common definitions of culture, one describing our way of life and shared values, such as youth culture or urban culture. The other definition equates culture with the arts, such as film, visual arts, literature and music. For this article the focus will be on aspects of culture which are expressed through the arts.

Selected cultural venues and events include: art galleries, museums, zoos and aquariums, botanic gardens, libraries, classical and popular music concerts, theatre and dance performances, musicals and operas, cinemas and archives. Other venues and events are not separately identified.

Dependent children refers to all people aged less than 15 years and people aged 15–24 years who are full-time students, have a parent in the household, and do not have a partner or child of their own in the household.

Attendance

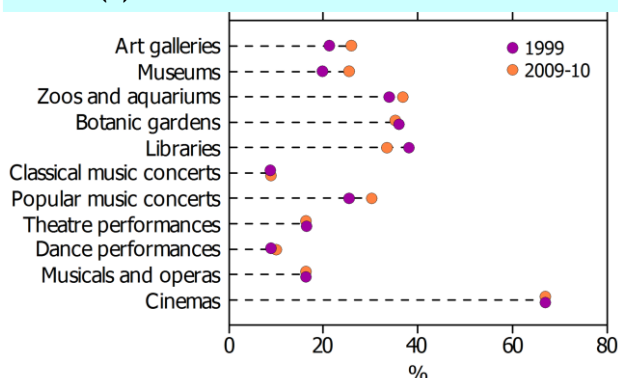
During 2009–10, nearly nine in ten Australians (86% or 15 million people) aged 15 years and over attended at least one selected cultural venue or event. This is similar to the rate 10 years ago.

In 2009–10, the most popular cultural event and venue attended by people aged 15 years and over was the cinema, with 67% or 11.7 million Australians attending. Attending zoos and aquariums (37%), botanic gardens (35%) and libraries (34%) were the next most popular venues or events.

...frequency of visits

Nearly half (46%) of those who attended libraries went 11 times or more during 2009–10. Of the people who went to the cinema, 23% went 6–10 times and 15% went 11–20 times. However, people attending museums, and zoos and aquariums were more likely to have attended these venues only once (52% and 48% respectively).

Attendance at selected cultural venues and events(a)



(a) People aged 15 years and over.

Source: ABS 2010 [Attendance at Selected Cultural Venues and Events, Australia, 2009-10](#) (cat. no. 4114.0)

Who attends cultural venues and events?

Personal characteristics can influence what cultural venues and events people attend, and the number of times they attend. Where people live can limit what is available for them to attend, and their age and whether they are partnered or have children may influence what type of events they attend. In addition, a person's or family's income may influence what they can afford to attend.

...younger or older people?

During 2009–10, attendance at cultural venues and events was generally higher for younger age groups, with attendance rates declining with age.⁴

Younger people (aged 15–17 years) were more likely than older people to attend the cinema (93%), libraries (40%), and popular music concerts (38%), whilst older people (aged 55 years and over) were nearly twice as likely to attend classical music concerts (13% compared with 7% for those aged 15–17 years).

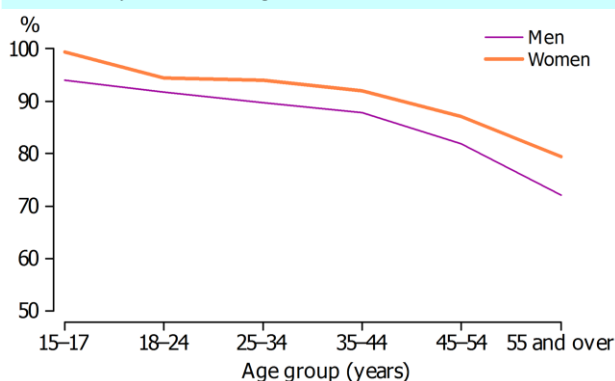
However, 15–17 year olds were just as likely to attend art galleries and theatre performances as older people (both 27% for art galleries and 19% compared with 17% for theatre performances).

...men or women?

In 2009–10, women were more likely to go to a cultural venue or event, with 88% of women having attended at least one cultural venue or event compared with 83% of men.

The cinema was the most popular venue or event to attend by both men and women (64% and 70% respectively), followed by concerts or other performing arts events (47% for men and 58% for women), then zoos and aquariums (34% for men and 40% for women). Attendance at archives was the least popular venue or event for both men and women (3.2% and 3.8% respectively).

Attendance(a) rates at cultural venues and events by sex and age – 2009–10



(a) Total attending at least one venue or event.

Source: ABS 2010 *Attendance at Selected Cultural Venues and Events, Australia, 2009–10* (cat. no. 4114.0)

Aboriginal and Torres Strait Islander culture and the arts

Aboriginal and Torres Strait Islander cultures are some of the oldest cultural histories in the world, going back at least 50,000 years.⁵

Aboriginal and Torres Strait Islander communities keep their cultural heritage alive by passing their knowledge of arts, rituals and performances from one generation to another, speaking and teaching languages, and protecting cultural materials, sacred and significant sites, and objects.⁵

Cultural activities include arts and crafts, music, dance or theatre, and writing or telling stories. In 2008, around 92,000 Aboriginal and Torres Strait Islander people aged 15 years and over (28%) participated in one or more of these activities. Of these selected activities, arts and crafts were the most popular (17%), followed by writing or story-telling (15%) and music, dance or theatre (11%).

Participation in selected cultural activities was higher for those Indigenous persons aged 15 years and over living in very remote areas (38% overall) compared with those living in non-remote areas (25%).

For further information see ABS *Arts and Culture in Australia: A Statistical Overview, 2010* (cat. no. 4172.0).

...where were they born?

Attending cultural venues or events is one way all Australians are able to engage with the broader Australian community in which they live and generate a shared sense of belonging.¹

In 2009–10, people born overseas were less likely to attend cultural venues or events than Australian born residents (83% compared with 87%). Attendance rates were higher across most activities for people born in Australia; however, overseas born Australians had higher attendance at botanic gardens and classical music concerts (38% and 11% compared with 34% and 8% for Australian born).

People born in Australia or non-main English-speaking countries were less likely to attend cultural venues or events than people born in main English-speaking countries such as the UK and Canada (87% and 78% compared with 91%).

...where they live?

In 2009–10, people from the Australian Capital Territory and Northern Territory were the most likely to attend a cultural venue or event (93% and 91% respectively), while people living in

Main English-speaking countries

For people born overseas, main English-speaking countries are the United Kingdom, the Republic of Ireland, New Zealand, Canada, South Africa and the United States of America. Being from a non-main English-speaking country does not imply a lack of proficiency in English.

New South Wales and Tasmania had lower rates of attendance (83% and 84% respectively).

Attendance rates were generally higher across all selected venues or events for people living in capital cities compared with those living outside capital cities. Of the people living in capital cities, 87% had attended at least one cultural venue or event during 2009–10, compared with 83% of people living outside of capital cities.

...household type?

People living in households which include dependent children were more likely to have attended cultural activities than people living in households without dependent children.

In 2009–10, 91% of people (aged 15 years and over) in households with dependent children had attended cultural venues or events, whilst 83% of people in couple only households had attended. People living alone were also less likely to have attended a cultural venue or event during the 12 months to June 2010 (78%). However, this varies with age, with 91% of young people (aged 18–24) who lived by themselves attending at least one venue or event compared with 72% of those aged 55 years and over.

Of the people who attended cultural venues or events, those in households with dependent children were more likely to attend cinemas (82%) and zoos and aquariums (51%). Conversely, people in couple only and lone person households were more likely to attend art galleries (33% and 35% respectively), classical music concerts (both 14%), and botanic gardens (45% and 43% respectively).

Attendance(a) at cultural venues or events by states and territories – 2009–10(b)

	%
New South Wales	83.2
Victoria	87.2
Queensland	87.0
South Australia	87.6
Western Australia	86.2
Tasmania	83.9
Northern Territory(c)	91.4
Australian Capital Territory	93.0
Australia	85.8

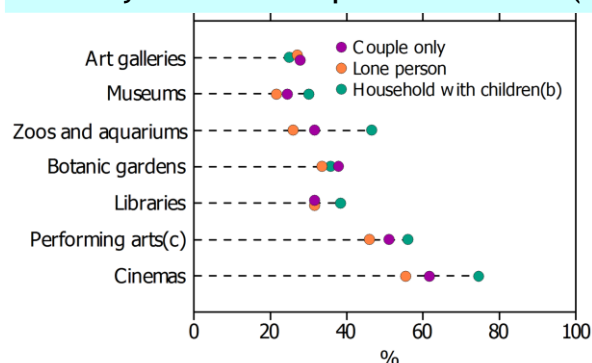
(a) Total attending at least one venue or event.

(b) People aged 15 years and over.

(c) Refers to mainly urban areas only.

Source: ABS 2010 [Attendance at Selected Cultural Venues and Events, Australia, 2009–10](#) (cat. no. 4114.0)

Attendance at selected cultural venues and events by household composition – 2009–10(a)



(a) People aged 15 years and over.

(b) People living in households which include dependent children.

(c) People attending at least one performing arts event such as classical music concert, dance performances or musical and operas during the 12 month period.

Source: ABS 2010 [Attendance at Selected Cultural Venues and Events, Australia, 2009–10](#) (cat. no. 4114.0)

...household income?

There is a relationship between the level of household income and attendance at cultural activities.

In 2009–10, people in the lowest equivalised gross household income quintile were less likely to attend a cultural venue or event than those in the highest quintile (72% compared with 94%).

The most popular cultural venues and events for people in the lowest income quintile were generally the same as for those in the highest quintile.

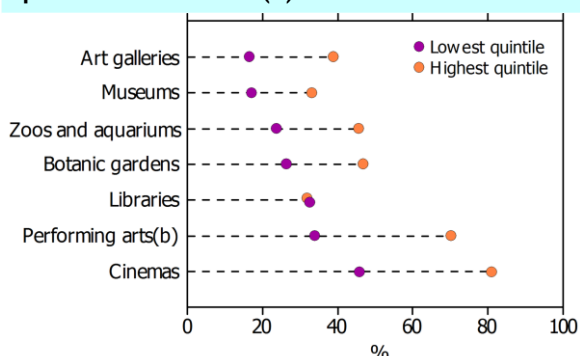
However, the proportion of people attending who were in the lowest quintile was significantly lower than those in the highest quintile. Attending cinemas was the most popular activity for both groups (46% for the lowest and 81% for the highest quintile), whilst performing arts events were also popular (34% for the lowest and 70% for the highest quintile).

Income definitions

Equivalised household income. Equivalising adjusts actual household income to take into account the different needs of households of different size and composition. There are economic advantages associated with living with others, because many household resources can be shared.

Income quintiles are derived by ranking all the population from lowest to highest income and then dividing that population into five equal groups. The lowest quintile is made up of the 20% of the population with the lowest income. For more information about household income measures see ABS [Household Income and Income Distribution](#) (cat. no. 6523.0).

Attendance at selected cultural venues or events by equivalised gross household income quintiles – 2009-10(a)



(a) People aged 15 years and over.

(b) People attending at least one performing arts event such as classical music concert, dance performances or musical and operas during the 12 month period.

Source: ABS 2010 [Attendance at Selected Cultural Venues and Events, Australia, 2009-10](#) (cat. no. 4114.0)

How much do households spend?

According to the ABS 2003-04 Household Expenditure Survey, the total household expenditure on cultural goods and services was \$14,694m, equivalent to an average of \$36.40 per household per week.^{6,7}

The most popular goods and services to spend money on was literature (\$3,400m), of which \$2,618m was spent on books and newspapers. Household payments on pay TV fees accounted for \$1,084m per year of the Broadcasting, electronic media and film category, and televisions and home entertainment systems (\$1,913m per year) were the main contributors to the 'other culture' category.⁶

Working and volunteering in culture and the arts

...working

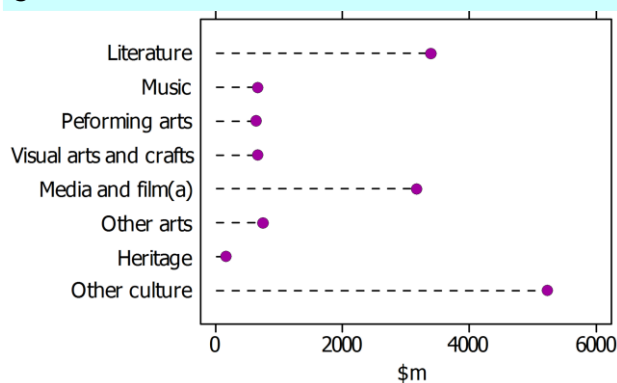
In 2009-10, 210,000 people worked in a cultural occupation (in their main job) such as a musician or library assistant, accounting for around 1.9% of all employed people. This was similar to 1999-2000, when cultural occupations accounted for 2.0% of all employed people.

More men than women worked in cultural occupations in 2009-10 (55% and 45% respectively), with men more likely to be employed full time (63%) than women (37%).

The average number of hours worked by men and women employed full time in cultural occupations was similar (42 and 40 hours respectively), as was hours for men and women employed part time (15 and 16 hours respectively).

The economic importance of culture and the arts extends beyond the employment of people in cultural occupations. Employment is also

Annual household expenditure on cultural goods and services – 2003-04



(a) Includes broadcasting and electronic media.

Source: ABS 2003-04 Household Expenditure Survey

generated for people in non-cultural occupations within cultural industries, such as a cleaner in a library.⁶ In 2009-10, around 101,000 people were employed in non-cultural occupations within cultural industries.

...volunteering

According to the 2006 Voluntary Work Survey, around 207,000 people (aged 18 years and over) volunteered for arts and heritage organisations. Of these, more than a third (39%) were aged 55 years and over, and 63% were women.

The frequency of voluntary work for arts and heritage organisations varied, with half (50%) of people having volunteered at least once a week, 12% once a fortnight, and 18% having volunteered at least once a month. In 2006, 30.6 million hours were volunteered for arts and heritage organisations.

Cultural trade

The Australian cultural industry not only creates goods and services for domestic consumption, but also for export to the world market.

Australia's cultural trade covers such goods as films, books and music, whilst services incorporate cultural tourism, heritage services, and other audio visual and related services.

Cultural trade can be divided into two areas; cultural imports and exports, and cultural outputs. Whilst the import and export of cultural goods and services is an absolute measurement of what has been bought or sold between Australia and other countries, cultural output is a measure of the significance of an industry to the Australian economy and the value of its output compared with those of other industries.⁶

...cultural goods

Australia continues to import more cultural goods than it exports.⁸

During the year 2009-10, Australian cultural imports totalled \$2,436.6m or 1.2% of all goods

Government funding of culture and the arts

Government funding supports arts and cultural venues and events such as libraries and museums, in addition to individuals, such as musicians. The funding for culture and the arts is distributed in the form of direct funding, subsidies and grants.⁶

The Commonwealth, state and territory, and local governments contributed \$6,772.5m for funding cultural activities in 2008–09. This was an increase of 7.8% from 2007–08 (\$6,281.1m).⁹

Environmental heritage, which includes botanic gardens, and national and state parks, received the largest funding for culture and the arts during 2008–09 (\$1,604m or 24% of total Commonwealth and state and territory funding). Radio and television received \$1,392.8m, representing a further 21% of funding.⁹

imported into Australia. Over the same period exports of Australian cultural goods totalled \$539.8m, or 0.3% of all goods exported from Australia.

The value of imports of cultural goods as a percentage of total goods imported has more than halved since 2000–01, from 2.6% of all goods imported into Australia. The value of exports of cultural goods has decreased slightly in the same period (from 0.4% of all Australian exports).¹⁰

...cultural services

In 2008–09, the cultural services provided by Australia (\$163m) to the rest of the world were one eighth the value of cultural services provided to Australia (\$1,329m). Cultural services provided by Australia are of comparatively low value in the international trade in services (0.3%). Of all services provided to Australia from overseas in 2008–09, 2.4% were cultural services.

The cultural service traded of highest value was television royalties, where services worth \$837m were provided to Australia and \$88m provided by Australia.

...output of cultural industries

In 2006–07, Australian production of cultural goods and services totalled \$45,890m. Publishing (except for internet and music)

accounted for 31% of cultural production, followed by broadcasting accounting for a further 20%, then printing (including recorded media) with 19%.¹⁰

After taking into account the costs of producing cultural goods and services, the industry value added for cultural goods and services in 2006–07 was \$21,618m, which is similar to that of the value added of telecommunication services (\$18,207m).^{11,12}

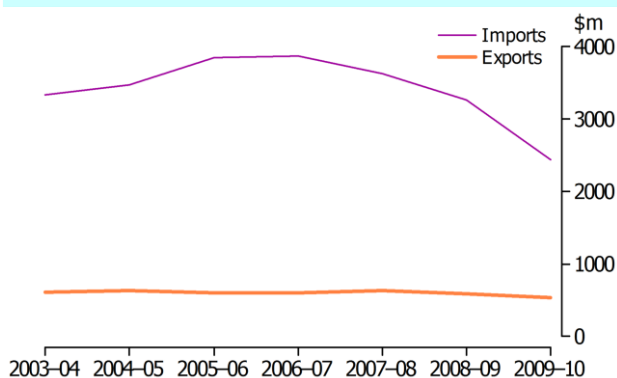
Looking ahead

Social inclusion strategies aim to encourage social, civic and economic participation within communities. The networks developed through involvement in cultural activities and organisations may benefit health, education and employment outcomes for individuals while fostering community strength and resilience.

Endnotes

- 1 Department of Education, Employment and Workplace Relations, 2011, Social Inclusion, viewed 20 April 2011, <www.socialinclusion.gov.au>.
- 2 Arts Research Monitor, March 2008, *Social effects of Culture: Exploratory Statistical Evidence*, 2011, viewed 20 April 2011 <<http://www.hillstrategies.com/index.php>>.
- 3 UN Educational, Scientific and Cultural Organization, *Culture: Creative Industries* viewed 20 April 2011, <www.unesco.org>.
- 4 Australian Bureau of Statistics, 2010, *Attendance at Selected Cultural Venues and Events, Australia, 2009-10*, cat. no. 4114.0, ABS, Canberra, <www.abs.gov.au>.
- 5 Australian Government, 2011, *Australian Indigenous cultural heritage*, viewed 12 May 2011, <<http://australia.gov.au>>.
- 6 Australian Bureau of Statistics, 2010, *Arts and Culture in Australia: A Statistical Overview, 2010*, cat. no. 4172.0, ABS, Canberra, <www.abs.gov.au>.
- 7 Australian Bureau of Statistics expenditure data for 2009-10 will be available later in 2011.
- 8 Australian Bureau of Statistics, 2011, *International Trade in Goods and Services, Australia, Mar 2011*, cat. no. 5368.0, ABS, Canberra, <www.abs.gov.au>.
- 9 Australian Bureau of Statistics, 2010, *Cultural Funding by Government, Australia, 2008-09*, cat. no. 4183.0, ABS, Canberra, <www.abs.gov.au>.
- 10 Australian Bureau of Statistics, July 2003, Culture and recreation news, Jul 2003, *Cultural Trade in Goods and Services*, cat. no. 4147.4.55.001, ABS, Canberra, <www.abs.gov.au>.
- 11 Australian Bureau of Statistics, 2010, *Australian National Accounts: Input-Output Tables – electronic publication, Final release 2006-07 tables*, cat. no. 5209.0.55.001, ABS, Canberra, <www.abs.gov.au>.
- 12 For this article cultural industries include; publishing (except for internet and music publishing); motion picture and sound recording; broadcasting (except internet); library and other information services; heritage, creative and performing arts; and printing (including the reproduction of recorded media).

Total trade in cultural goods



Source: ABS 2010 *Arts and Culture in Australia: A Statistical Overview 2010* (cat. no. 4172.0)

Online @ home

As computers have become more affordable over time, the number of Australian households using computers and accessing the internet has significantly increased. In 2008–09, nearly three-quarters of households had internet access, up from one in six a decade earlier. This growth, coupled with advancements in mobile internet technologies, has seen internet use change. Information technology (IT) is increasingly becoming an important part of the way we work, conduct our finances, communicate, learn and are entertained.

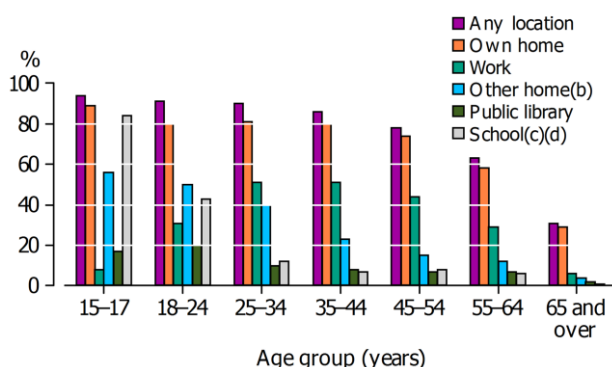
This article explores how we use and access the internet in our daily lives. The analysis presented in this article mainly focuses on use of the internet at home by persons aged 15 years and over. For information on children's IT use see '[Children of the digital revolution](#)' in *Australian Social Trends*, June 2011.

Who's online?

In 2008–09, three-quarters (74%) of people aged 15 years and over had used the internet in the previous 12 months. Whether people used the internet, and where they used it, both varied with age. Much lower rates of internet use were reported among older age groups (31% for people 65 years and over).

Home was the most common location of access, with two-thirds (68%) of people accessing from this location. This was the case across most age groups, and particularly for older groups, with relatively few people 65 years and over accessing the internet from locations outside the home.

Internet use by location of access(a) – 2008–09



(a) More than one site may be nominated.

(b) Refers to the homes of friends, relatives and/or neighbours.

(c) Refers to internet access from an educational institution.

(d) The estimate for the 65 and over age group has a relative standard error of 25% to 50% and should be used with caution.

Source: ABS [Household Use of Information Technology, Australia, 2008–09](#) (cat. no. 8146.0)

Data sources and definitions

The data presented in this article mainly comes from the household use of information technology topic in the ABS 2008–09 Multipurpose Household Survey (MPHS). The MPHS excludes people living in Very Remote areas. This is expected to have only a minor impact on any aggregate estimates that are produced for individual states and territories, except in the Northern Territory where this group accounts for around 23% of the population.

Internet access generally refers to the availability of internet connections via lines, points, ports, and modem to subscribers to access the internet. **Access** is also used in the broader sense when referring to peoples' internet use via computers and other web-capable devices.

Equivalised household income. Equivalising adjusts actual household income to take into account the different needs of households of different size and composition. There are economic advantages associated with living with others, because many household resources can be shared.

Income quintiles are derived by ranking all the population from lowest to highest income and then dividing that population into five equal groups. The lowest quintile is made up of the 20% of the population with the lowest income. For more information about household income measures see [ABS Household Income and Income Distribution](#) (cat. no. 6523.0).

Remoteness Area (RA) is a geographical structure which intends to classify areas sharing common characteristics of remoteness into broad geographical regions (Remoteness Areas). In this article, Remoteness Areas have been grouped as follows:

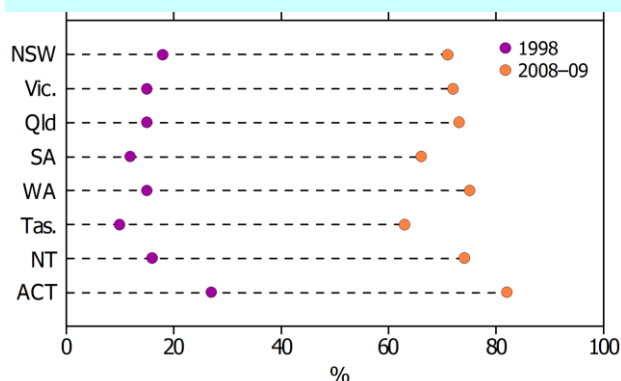
- Major Cities (of Australia).
- Regional (Inner Regional Australia plus Outer Regional Australia).
- Remote (Australia, Excluding Very Remote).

For further information about Remoteness Areas see Chapter 8 of ABS [Australian Standard Geographical Classification \(ASGC\), July 2010](#) (cat. no. 1216.0).

Work was the second most popular location for accessing the internet (35%), particularly amongst the 25–34 and 35–44 age groups (both with 51%). People aged 15–17 years, and those aged 65 years and over, demonstrated significantly lower rates of access from the workplace (8% and 6% respectively).

A neighbour's, friend's or relative's house was the third most common location (25%). Younger people were more likely to access the internet from other people's homes than older people, with 56% of 15–17 year olds, 50% of 18–24 year olds and 40% of 25–34 year olds doing so.

Household internet access by states and territories



Source: ABS [Household Use of Information Technology, Australia, 2008-09](#) (cat. no. 8146.0)

More than eight in ten (84%) people aged 15–17 accessed the internet from an educational institution, followed by less than half (43%) of 18–24 year olds. These age groups also had the highest rates of internet use from a public library (17% and 20% respectively).

Household internet access

The popularity of homes as a venue for people to use the internet was reflected in the rates of households with internet access. In 2008–09, nearly six million Australian households (72%) had internet access, a sizeable increase from around one million (16%) in 1998.

While rates of home internet access have increased across all states and territories over the past decade, access rates do vary according to where people live. In 2008–09, households in the Australian Capital Territory were most likely to have internet access (82%) and those in Tasmania were least likely (63%). Households in Major Cities (75%) had higher rates of access than those in Regional (64%) and Remote Areas (62%).

Households with the highest rates of home internet access included those with children and those with higher levels of equivalised gross household income. In 2008–09, more than four in five (86%) households with children under 15 years of age had an internet connection compared with two-thirds (66%) of those without children. Nine in ten (90%) households with income in the highest equivalised income quintile had internet access, closely followed by 84% of households in the fourth quintile. In comparison, two-fifths (40%) of households in the lowest income quintile had home internet access.

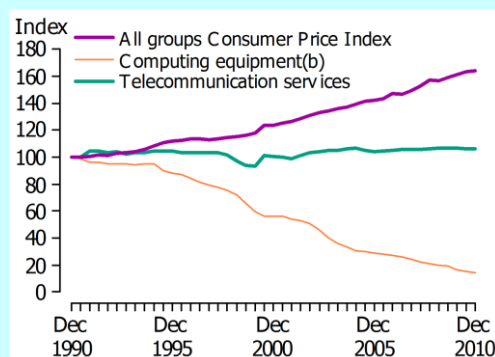
...broadband or dial up?

An estimated five million Australian households had a broadband internet connection in 2008–09, representing close to two-thirds (62%) of all households and 86% of

How has the price of IT changed?

The rising rate of internet access in Australia can largely be attributed to the greater affordability of IT equipment and internet services. According to the ABS Consumer Price Index (CPI), in comparison to the increase in overall prices as measured by the CPI basket of consumer goods and services (or the All Groups CPI), the prices of Telecommunication services have increased at a lower rate and Audio, visual and computing equipment have recorded falls over the past two decades.

Indices of price change(a)



(a) 1989/90 = 100.

(b) Audio visual and computing equipment.

Source: ABS [Consumer Price Index, Australia, Dec 2010](#) (cat. no. 6401.0)

households with internet access. Around 12% of households with internet access used dial-up connections.

As the majority of households with internet access used a broadband connection, the patterns for internet and broadband access were similar. Households in Major Cities had the highest rates of broadband internet access. Nearly nine in ten households in Major Cities (88%) with internet access had a broadband connection compared with 80% of households in Regional areas and 81% of households in Remote areas. Across the states and territories, broadband internet access rates also varied, with the highest rates for households in the Australian Capital Territory (91%), and Tasmania amongst the lowest with 78%.

Business internet use

According to the ABS Business Characteristics Survey, in June 2009 90% of Australian businesses had internet access, up from 29% in 1997–98. During this time, the proportion of businesses with a web presence (i.e. a website or presence on another entity's website, excluding online directories) also increased from 6% to 42% in 2008–09.

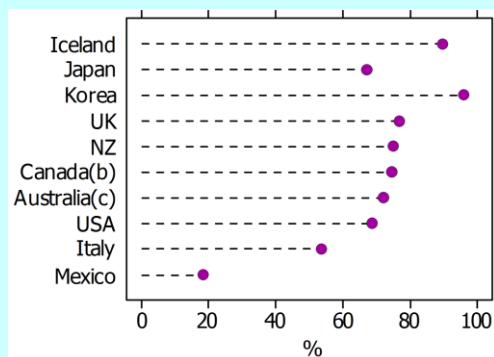
In Australia, internet income generated from online transactions for goods and/or services increased from \$81 billion in 2007–08 to \$123 billion in 2008–09. Smaller employers (with 0–4 employees) generated the least internet income (\$10 billion). Larger businesses (with over 200 employees) generated \$56 billion in internet income.

International Comparisons



In 2009, the Republic of Korea (South) had the highest proportion of households with internet access (96%), whilst Mexico had the lowest (18%). Australia, New Zealand, Canada, and the United Kingdom all had relatively similar levels of household internet access (ranging from 72% to 77%).

Households with internet access, selected OECD countries – 2009(a)



(a) Or closest year of available data.

(b) Data for 2008.

(c) Data for 2008-09.

Source: ABS [Household Use of Information Technology, Australia, 2008-09](#) (cat. no. 8146.0); [OECD Key Information and Communication Technology \(ICT\) Indicators](#), www.oecd.org

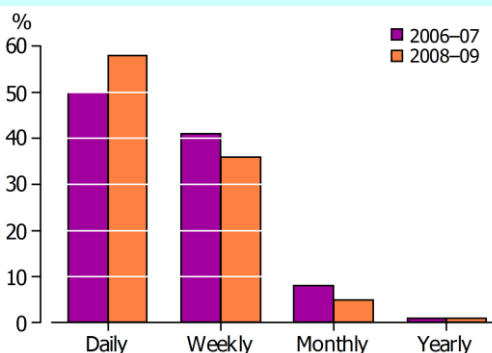
While broadband is the most common type of household internet connection, increasing numbers of Australians are also accessing the internet via other technologies. According to data from the ABS Internet Activity Survey, at the end of December 2010 there were 8.2 million mobile handset subscribers in Australia, a 21% increase from June of that year.¹ The volume of data downloaded via mobile handsets also increased substantially from 717 terabytes during the quarter ending June 2010 to 4,029 terabytes during the quarter ended December of the same year.¹

How often are we online?

In 2008–09, there were almost 11.6 million (68%) Australians aged 15 years and over who accessed the internet at home. Over nine in ten (94%) were using the internet at least once a week, with over half (58%) of these people accessing the internet daily, up from 50% in 2006–07. Due to a greater proportion of people accessing the internet on a daily basis, the proportion of people accessing the internet weekly and monthly decreased (to 36% and 5% respectively).

Young people were the age group most likely to access the internet on a daily basis. Nearly seven in ten (69%) 18–24 year olds who accessed the internet at home used the internet daily. Rates were similar among 25–34 year olds

Frequency of internet use at home(a)(b)



(a) Persons 15 years and over.

(b) Excludes 'don't know' category.

Source: ABS [Household Use of Information Technology, Australia, 2006-07; 2008-09](#) (cat. no. 8146.0)

(65%), while around half of people in older age groups accessed the internet daily (52% amongst 35–54 year olds and 53% for those aged 55 years and over).

Higher levels of non-school qualifications were also associated with more frequent internet use. Among those accessing the internet at home with a non-school qualification, people with a Bachelor degree or above were most likely to use the internet daily (68%), followed by 59% of those with an Advanced diploma or diploma. Half (50%) of people with a Certificate I, II, III or IV accessed the internet daily.

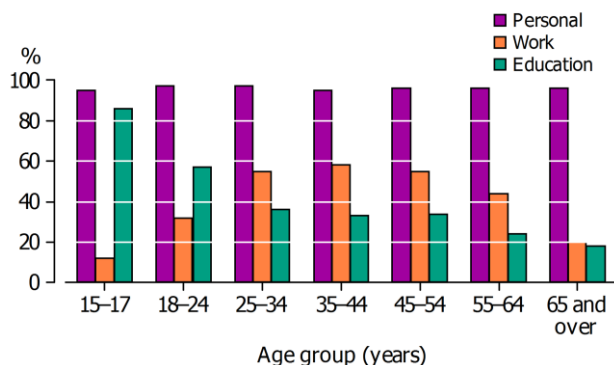
As noted previously, whether households have internet access appears to be associated with income. However, once households have internet access, income then does not appear to be strongly associated with how frequently it is used at home. There were similar rates of daily internet use among people with equivalised gross household income in the highest (64%) and lowest income quintiles (59%). Those in the second (53%) and third income quintile (56%) had some of the lowest rates of daily internet access.

Online learning

The Australian Government's 2008 [Digital Education Revolution \(DER\)](#) is seeing a number of students in Years 9–12 issued with laptops under the [National Secondary Schools Computer Fund](#), with the goal of achieving a computer to student ratio of 1:1 by 31 December 2011.² To be implemented over seven years³, the DER seeks to achieve more equal access to information for all students, as well as increasing teacher and student IT proficiency.

Online learning environments allow more people access to education, as well as granting flexibility that traditional educational institutions may not.⁴ According to Open Universities Australia, in 2009, the nation's online education sector generated approximately \$2.74 billion in revenue in 2009.⁵ In the same year, Open Universities Australia alone had more than 49,000 student enrolments, 32% greater than in 2008.

Purpose of internet use at home(a) – 2008-09



(a) More than one purpose could be nominated.

Source: ABS [Household Use of Information Technology, Australia, 2008-09](#) (cat. no. 8146.0)

What do we do online?

While there are many reasons people use the internet, including for work and education, most use it for personal reasons, such as emailing, banking, gaming, preparing job applications and online shopping. In 2008-09, the majority (96%) of people aged 15 years and over who accessed the internet at home did so for personal reasons, making it the most common purpose for internet use across all age groups. Nearly half (46%) used the internet for work purposes, while around four in ten (39%) used it for education or study purposes.

Of those who accessed the internet from home, young people were more likely than older age groups to use the internet for education purposes, with 66% of 15-24 year olds using the internet for this reason. Higher rates of internet use for education and study by young people reflects the greater likelihood of these age groups being engaged in secondary or tertiary education, as well as the increasing importance of online learning tools in the delivery of education.

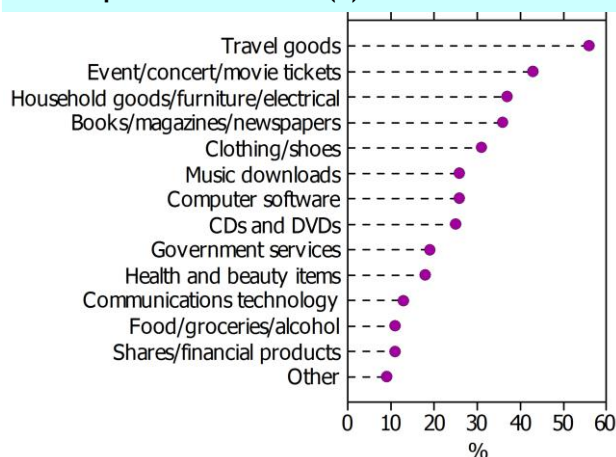
People aged 25-54 years had the highest rates of using the internet for work purposes, with lower rates reported in younger and older age groups.

Although the proportion of people using the internet for voluntary and community purposes was relatively low across the board, the rate tended to increase with age, with people aged 55-64 years and those aged 65 years and over amongst the age groups most likely to use the internet for this reason (both with 15%).

...online shopping

Many Australians use the internet to shop online. In 2009, the domestic online retail sales for all sectors of the economy were estimated to have totalled between \$19 and \$24 billion.⁶

Online purchases – 2009(a)



(a) Proportion of all respondents who purchased goods or services in the 6 months to November.

Source: ACMA, 2010, [Australia in the digital economy: Consumer engagement with e-commerce](#), <www.acma.gov.au>.

In 2008-09, nearly two-thirds (64%) of Australian internet users aged 15 years and over used the internet for making online purchases, up from 61% in 2006-07.

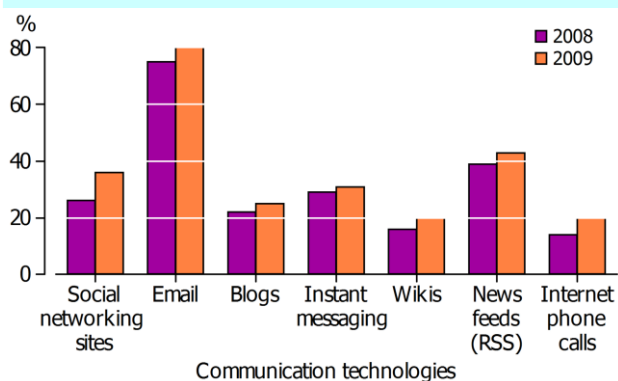
Australians purchase a range of goods and services online. According to the Australian Communications and Media Authority (ACMA), the most popular online purchases (in the 6 months to November 2009) were travel goods, with 56% of respondents who had participated in online shopping having made such a purchase.⁷ Entertainment events, concerts and movie tickets followed, with 43% having purchased these goods.⁷ The most common reasons given for making online purchases were the convenience (74%), lower prices (38%) and a wider availability of products and services (16%).

Men were reported to be more likely to make online purchases than women (74% and 65% respectively). Differences were also observed between age groups, with people aged 25-34 years (82%) and 35-44 years (79%) dominating online purchases. Of those aged 25-34 years, 15% had purchased 16 or more goods or services online in the 6 month research period, with 18% of 35-44 year olds doing the same. Over half (54%) of Australian internet shoppers spent less than \$1,000 online in the 6 months prior to November 2009.

...social networking

More Australians are taking advantage of the communications technologies available online. The Australian Government Information Management Office (AGIMO) reported an increase in the take up of social networking technologies amongst internet users (aged 18 years and over) between 2008 and 2009.⁸ Social networking sites grew in popularity, with 36%

Use of online communication technologies(a)



(a) Persons 18 years and over.

Source: AGIMO, 2009, *Interacting with Government*, <www.finance.gov.au>

of users accessing these sites in 2009, up from 26% in 2008. Over this period, there were also increases in usage of blogs (from 22% to 25%) and news feeds (from 39% to 43%). Younger people were more likely to engage in social networking than those in older age groups. The average age of social networkers was 35 years, whilst those who didn't use social networking sites had an average age of 53 years.⁸

Looking ahead

IT has become an important part of the way we work, communicate, do business and are entertained. The decreasing cost of IT has seen increasing numbers of Australian households embrace IT and this trend is expected to continue with advancements in internet and mobile technologies. For example, the rollout of the Australian Government's National Broadband Network is expected improve broadband access to Australian businesses and households, and in doing so support improved service delivery across areas such as education and health.⁹

Endnotes

- 1 Australian Bureau of Statistics, 2011, *Internet Activity, Australia, Dec 2010*, cat. no. 8153.0, ABS, Canberra, <www.abs.gov.au>.
- 2 Department of Education, Employment and Workplace Relations, 2010, *National Secondary Schools Computer Fund Overview*, DEEWR, Canberra, <www.deewr.gov.au>.
- 3 The Auditor General, 2011, *Audit Report No. 30, 2010–11 Performance Audit: Digital Education Revolution Program – National Secondary Schools Computer Fund*, Australian National Audit Office, Canberra, <www.anao.gov.au>.
- 4 Clark-Ibanez, M. & Scott, L. 2008, 'Learning to teach online', *Teaching Sociology*, vol. 36, no. 34, p. 37.
- 5 Open Universities Australia, 2010, *Open Universities Australia Annual Report 2009*, Open Universities Australia, Victoria, p. 10,11,17, <www.open.edu.au>.
- 6 Department of Broadband, Communications and the Digital Economy, 2010, *The future of Australian retail*, DBCDE, Canberra, <www.digitalbusiness.gov.au>.

- 7 Australian Communications and Media Authority, 2010, *Australia in the digital economy: Consumer engagement with e-commerce*, ACMA, Sydney, p. 12-13, <www.acma.gov.au>.
- 8 Australian Government Information Management Office, 2009, *Interacting with Government*, AGIMO, Canberra, p. 12, 14, <www.finance.gov.au>.
- 9 Access Economics, 2010, *Australian Business Expectations for the National Broadband Network*, Access Economics, Canberra, p. 13, <www.accesseconomics.com.au>.

Children of the digital revolution

Information technology (IT) is rapidly changing and being integrated into many areas of Australian life. Children in the 21st century are considered by many to be the digital generation: IT savvy children who have never known life without a computer or the internet. They use IT frequently and in a variety of ways; as a source of information, entertainment and social communication.

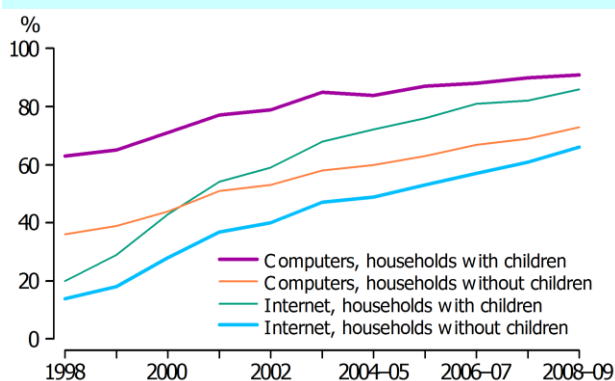
As IT continues to embed itself within homes and schools, how children use and access computers and the internet is of interest to parents, government policy makers and the broader community.

This article explores children's computer and internet use, their online activities and whether they are safe online and protected from security threats. A companion article on household use of IT '[Online @ home](#)' is also available in *Australian Social Trends*, June 2011.

IT access for households with children

Homes are an important place for children to access computers and the internet. In 2008–09, home IT access continued to be significantly higher for households with children (aged less than 15 years) than households without children. Nine in ten households (91%) with children had access to a home computer, much higher than households without children (73%).

Households with access to a computer or the internet at home(a)(b)(c)



(a) Children refers to persons aged less than 15 years.

(b) 1998 to 2003, data are for January to December.

(c) 2004-05 to 2008-09, data are for July to June.

Source: ABS [Household Use of Information Technology, Australia, 2008-09](#) (cat. no. 8146.0)

Data Source and Definitions

This article mainly uses data from the ABS 2009 and 2006 Children's Participation in Cultural and Leisure Activities Survey (CPCLA) and the household use of information technology topic in the ABS 2008–09 Multipurpose Household Survey (MPHS). Both the CPCLA and MPHS exclude people living in Very Remote Areas of Australia. This is expected to have only a minor impact on any aggregate estimates that are produced for individual states and territories, except in the Northern Territory where this group accounts for around 28% of all children.

Internet access is the availability of lines, points, ports and modem to subscribers to access the internet. Internet access by a child includes situations where a parent is present teaching the child or where the parent is operating the mouse or keyboard under the child's direction. It excludes situations where the child is only observing the parent accessing the internet.

Internet use refers to the use of the internet in the 12 months prior to interview in April 2009. It includes access via computers, mobile devices, set-top boxes connected to either an analogue or digital television and game machines.

In this article, an **internet user** refers to a child who had used the internet in the 12 months prior to April 2009.

A **child** refers to any person aged 0–14 years when discussing households with children, or 5–14 years when discussing the child.

A **parent** refers to any legal guardian of a child.

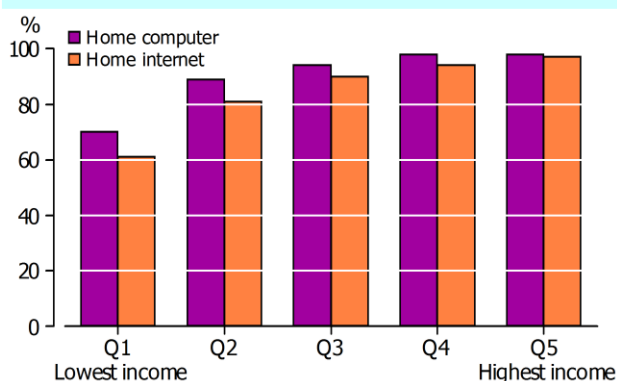
Equivalised household income. Equivalising adjusts actual household income to take into account the different needs of households of different size and composition. There are economic advantages associated with living with others, because many household resources can be shared.

Income quintiles are derived by ranking all the population from lowest to highest income and then dividing that population into five equal groups. The lowest quintile is made up of the 20% of the population with the lowest income. For more information about household income measures see [ABS Household Income and Income Distribution](#) (cat. no. 6523.0).

Of all households with children aged less than 15 years, 86% had home internet access, compared with two-thirds (66%) of households without children.

Broadband internet was more likely to be accessed by households with children than households without children. Of all households with internet access, 89% of households with children aged less than 15 years reported having broadband, compared with 84% of households without children.

Home IT access for households with children, by equivalised gross household income quintiles – 2008-09(a)



(a) Children refers to persons aged less than 15 years.

Source: ABS 2008-09 Multipurpose Household Survey

...household income

Household income had an impact on whether households with children aged less than 15 years had access to a computer or the internet at home.

In 2008–09, households with children whose equivalised gross household income was in the highest quintile were more likely than households with children in the lowest quintile to have a home computer and home internet access. Nearly all households (98%) in the highest quintile had a home computer, compared with 70% of households in the lowest quintile. Nearly all households (97%) in the highest quintile reported having home internet access, compared with 61% of households in the lowest quintile. In the highest quintile, 95% of households with internet access reported having broadband connection, higher than households in the lowest quintile who also had internet access (84%).

Definitions

For people born overseas, *main English-speaking countries* are Canada, Republic of Ireland, New Zealand, South Africa, the United Kingdom and the United States of America. Being from a non-main English-speaking country does not imply a lack of proficiency in English.

Remoteness Area (RA) is a geographical structure which intends to classify areas sharing common characteristics of remoteness into broad geographical regions (Remoteness Areas). In this article, Remoteness Areas have been grouped as follows:

- Major Cities (of Australia).
- Inner Regional (areas of Australia).
- Outer Regional (areas of Australia).
- Remote Areas (of Australia. Excludes Very Remote Areas).

For further information about Remoteness Areas see Chapter 8 of ABS [Australian Standard Geographical Classification \(ASGC\), July 2010](#) (cat. no. 1216.0).

IT use by Aboriginal and Torres Strait Islander children

In 2008, 114,000 Aboriginal and Torres Strait Islander children aged 5–14 years (90%) had used a computer. Over nine in ten (91%) who used a computer had accessed it from a school. Many had also accessed a computer in their homes (62%) or at a neighbour's, friend's or relative's house (18%). Aboriginal and Torres Strait Islander children mostly used the computer for school work (86%), playing games (72%) and other hobbies or non-school activities (32%).

Around 88,000 Aboriginal and Torres Strait Islander children (69%) used the internet, often accessing the internet from more than one site. School was the most popular location; 84% of Aboriginal and Torres Strait Islander children who used the internet accessed the internet from school, 58% from their homes and 21% from a neighbour's, friend's or relative's house.

The most popular online activities identified by Aboriginal and Torres Strait Islander children were education, leisure and social communication. Of all internet users, 77% used the internet for education or study, 59% for entertainment, leisure or online browsing, and 26% for emailing and talking or communicating with people.

Source: ABS 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

So who uses the internet?

In the 12 months prior to April 2009, an estimated 2.2 million children (79%) aged 5–14 years reported accessing the internet, up from 65% in 2006. In 2009, rates of internet use were similar for boys and girls (80% and 79% respectively). The proportion of children using the internet increased with age; 60% of 5–8 year olds used the internet, increasing to 96% of 12–14 year olds.

Children often accessed the internet from more than one location. In 2009, the home was the most popular location where 92% of child internet users reported accessing the internet. Just over 86% accessed the internet from schools while 45% accessed the internet from other locations, such as public libraries or internet cafes.

According to the Australian Communication and Media Authority (ACMA), in 2007, one in six children (17%) in both the 8–11 year and 12–14 year age groups had a computer in their bedroom. One in ten children had internet access in their bedroom (9% for 8–11 year olds and 11% for 12–14 year olds).¹

Some children were more likely than others to use the internet. Factors such as a child's country of birth, family and where they lived may be associated with their use of the internet.

...country of birth

Internet use was similar between Australian-born and overseas-born children. In 2009, 79% of Australian-born children, 80% of children born in main English-speaking

countries and 81% of children born outside main English-speaking countries reported that they had used the internet.

...family

Children from couple families were slightly more likely than children from one-parent families to use the internet. In 2009, 80% of children from couple families reported that they had used the internet, compared with 77% of children from one-parent families.

A higher proportion of children with employed parents used the internet than children of parents who were not employed. In couple families, a higher proportion of children used the internet when both parents were employed (84%), than if just one parent was employed (76%) or if both parents were not employed (67%). In one-parent families where the parent was employed, 82% of children used the internet, compared with 69% of children in households where the parent was not employed.

...geographical location

Internet use was similar across the states and territories. Around eight in ten children in most states and territories had accessed the internet.

Internet access differed according to remoteness. Four in five children (81%) in Major Cities reported that they had used the internet, compared with 70% of children living in Remote Areas.

How children use the internet

How children used the internet tended to change with age. At a young age, children treated the internet more as a source of entertainment. As children became older, they began to see the internet more as an arena for information and socialising.

Children who used the internet – 2009(a)(b)

State or territory	'000	%
NSW	709.2	79.9
Vic.	533.6	80.7
Qld	448.8	78.7
SA	151.7	78.6
WA	220.9	79.0
Tas.	48.9	76.3
NT(c)	17.1	69.6
ACT	32.8	78.3

(a) Children refers to persons aged less than 15 years.

(b) For the 12 months prior to April 2009.

(c) Refers to mainly urban areas only.

Source: ABS [Children's Participation in Cultural and Leisure Activities, Australia, April 2009](#) (cat. no. 4901.0)

Mobile Phone Usage

Mobile phones are a tool for communication as well as a source for information. With new technology that means the internet can be accessed remotely, mobile phones bridge the domains of communication and information technology.

The ABS 2008-09 Children's Participation in Cultural and Leisure Activities Survey collected data on children's mobile phone ownership and usage for the first time.

In 2009, an estimated 841,000 children, almost a third (31%) of all children, owned a mobile phone. Ownership increased with age; three-quarters (76%) of 12-14 year olds owned a mobile phone, compared with 2% of 5-8 year olds.

Children mainly used their mobile phones to contact family (60%) rather than friends (36%). Only 4% of children had used their mobile phone to access the internet.

Tasmania had the highest proportion of children who owned a mobile phone (41%), while in the Northern Territory, 27% of children had mobile phones. All other states and territories had similar rates of mobile phone ownership, at around 30%. Mobile phone ownership was also similar across Remoteness Areas.

A higher proportion of children from one-parent families than couple families owned a mobile phone (38% and 29% respectively).

Source: ABS [Children's Participation in Cultural and Leisure Activities, Australia, April 2009](#) (cat. no. 4901.0)

Older boys preferred interactive role-playing games where they could communicate with others online, as well as accessing audio-visual content (such as YouTube) and visiting news, sport and weather websites. Older girls preferred other online social activities, such as emailing, instant messaging (through services such as MSN messenger), and social networking (through sites such as Facebook, Twitter and MySpace).

...for education

In the 12 months prior to April 2009, the most popular use for the internet was educational activities. The vast majority (85%) of children who used the internet at home used it for educational purposes, up from 82% in 2006.

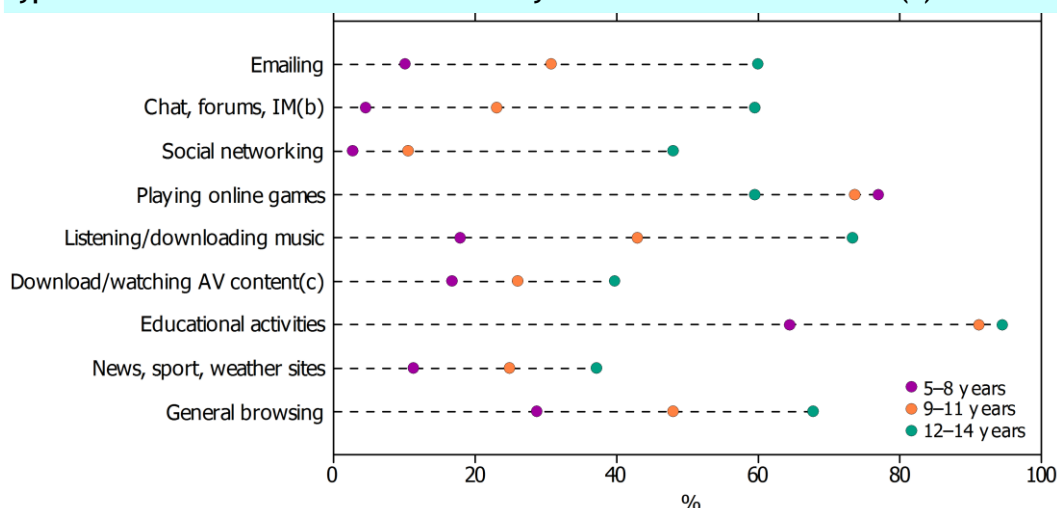
A higher proportion of girls than boys used the internet for educational activities (87% and 82% respectively).

Educational activities were most popular among older children. In 2009, 94% of children aged 12-14 years and 91% of children aged 9-11 years used the internet at home for school work or other educational activities, compared with 64% of 5-8 year olds.

...to play games

Playing online games was the second most popular use of the internet, significantly increasing in recent years from just over half (51%) of all children who accessed the internet

Type of internet activities done at home by child internet users – 2009(a)



(a) Refers to activities children had identified doing in the 12 months prior to April 2009.

(b) IM refers to instant messaging.

(c) AV refers to audio-visual content (TV programs, videos and movies).

Source: ABS [Children's Participation in Cultural and Leisure Activities, Australia, April 2009](#) (cat. no. 4901.0)

at home in 2006, to more than two-thirds (69%) of children in 2009.

Playing online games was more popular with boys than girls; 78% of boys played online games compared with 60% of girls.

Online gaming was most prevalent amongst younger children. Over three-quarters (77%) of 5–8 year olds played online games, compared with 59% of 12–14 year olds. Younger children preferred one-player problem-solving games, while older children (especially boys) preferred interactive role-playing games.²

...for social networking

In recent years, social media has increased in popularity. In 2009, more than one in five children (22%) visited or used social networking websites. Social networking was more popular with girls, with just over a quarter (26%) of girls accessing social networking sites, compared with 19% of boys. The age group with the highest proportion of social network users was the 12–14 year age group, with nearly half (48%) using these sites. This was markedly different to the usage of younger children, with only 11% of children aged 9–11 years and 3% of children aged 5–8 years engaging in online social networking.

...for music

Listening to or downloading music was also popular; in 2009, nearly half of all children (47%) used the internet for this purpose, doubling the rate in 2006 (23%). In 2009, half of all girls (49%) listened to or downloaded music, slightly higher than the rate for boys (45%). This was also more popular with older children, with nearly three-quarters (73%) of 12–14 year olds listening to or downloading music compared with 18% of 5–8 year olds.

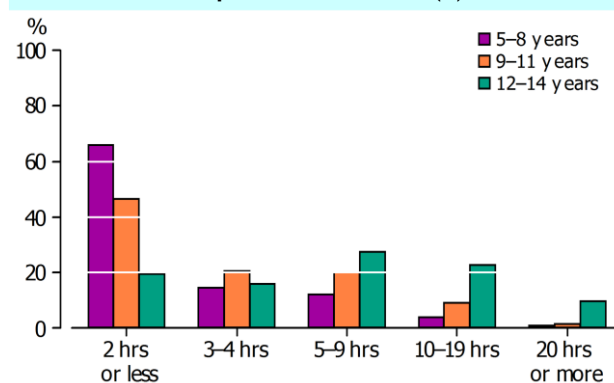
...hours online

In 2009, two in five children (42%) who used the internet at home reported that they spent two hours or less online at home per week, while 17% spent 3–4 hours online, 21% spent 5–9 hours online and 13% spent 10–19 hours online.

Time spent online tended to increase with age. Of children aged 5–8 years, two-thirds (66%) spent two hours or less online per week, compared with 20% of children aged 12–14 years. A third (33%) of children aged 12–14 years spent 10 hours or more online per week, compared with 5% of children aged 5–8 years old.

According to ACMA, in 2007, child internet users aged 8–11 years spent an average of 30 minutes online per day, with five minutes of that time spent on internet/computer based educational activities. In comparison, children

Number of hours child internet users spent online at home per week – 2009(a)



(a) For the 12 months prior to April 2009.

Source: ABS 2009 Children's Participation in Cultural and Leisure Activities Survey

aged 12–14 years spent an average of one hour and 32 minutes online per day, 16 minutes of which was spent on internet/computer based educational activities.³

Online safety and security

The internet is a vast resource of information, education and entertainment. Yet community concern exists surrounding whether the internet exposes children to a number of online safety and security risks.^{4,5}

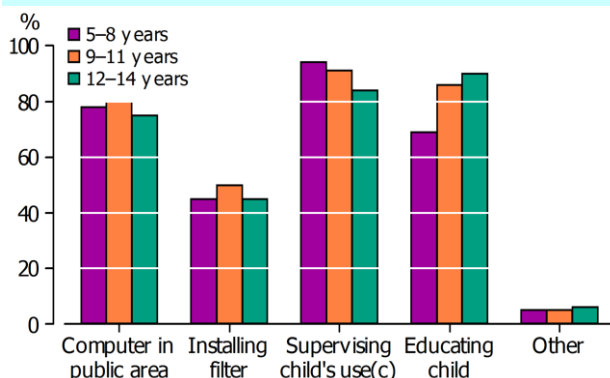
...online safety and security threats

An estimated 72,000 children (or 3% of all children who used the internet at any location between April 2008 and April 2009) had experienced one or more personal safety or security problems online at some time in their life. Of the most recent threats experienced by these children, the most common were accessing inappropriate material, having strangers ask for or gain access to personal information, or experiencing online bullying or threatening behaviour.

...strategies to keep children safe

In 2009, nearly all children who used the internet (98%) lived in households where parents had put in place strategies aimed at protecting their online safety and security.

Actions taken by parents for personal online safety and security at home – 2009(a)(b)



(a) For the 12 months prior to April 2009.

(b) Figures are a proportion of all children who used the internet in this time period.

(c) Refers to parents supervising and/or monitoring a child's use of the internet.

Source: ABS *Household Use of Information Technology, Australia, 2008-09* (cat. no. 8146.0)

Parents used a variety of methods to protect children, the most popular actions including supervising and monitoring their child's internet use (89% of all children who used the internet), educating their child about the safe and appropriate use of the internet (83%) and placing the computer in a public area of the house (77%). Many parents used a combination of these approaches.

The strategies implemented by parents in part depended upon the age of the child. Parents of children aged 5–8 years and 9–11 years favoured supervising and monitoring their child's computer usage (94% and 91% respectively), while parents of children aged 12–14 years (90%) preferred to educate their child about the proper use of the internet.

Looking ahead

Information technology is constantly changing. Recent developments in smart phone technology (such as iPhones and Android devices) and gaming consoles (such as the Xbox, PlayStation and Wii) allow internet access to expand beyond the boundaries of computers and the home. With portable devices, users can access the internet whenever or wherever they like. Access and use of information technology by children is likely to continue to become easier and more convenient.

Endnotes

- 1 Australian Communications and Media Authority, 2009, *Use of electronic media and communications: Early childhood to teenage years*, viewed 20 May 2011, <www.acma.gov.au>.
- 2 Australian Communication and Media Authority, 2009, *Click and Connect: Young Australians' use of online social media*, 01: Qualitative Research report, viewed 20 May 2011, <www.acma.gov.au>.
- 3 Australian Communications and Media Authority, 2008, *Internet use and social networking by young people*, No. 1: Media and Communications in Australian Families series, viewed 5 April 2011, <www.acma.gov.au>.
- 4 Raising children network, 2011, *Internet safety*, viewed at 22 March 2011, <www.raisingchildren.net.au>.
- 5 Department of Broadband, Communications and the Digital Economy, 2011, *Cybersafety plan*, viewed 14 April 2011, <www.dbcde.gov.au>.

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