

Products, services and brands that are mentioned or appear in this publication are owned by and/or registered trademarks of their respective proprietors.

Suggested citation

VicHealth 2016, *VicHealth Indicators Survey 2015 Selected findings*, Victorian Health Promotion Foundation, Melbourne.

Contents

Foreword	4
Summary of key findings	5
Executive summary	10
1 Introduction and methods	14
2 Wellbeing and safety	27
3 Mental wellbeing	37
4 Physical activity and sedentary behaviour	48
5 Healthy eating	72
6 Alcohol	82
Appendix A: Indicator, indicator question, response frame, and score processing	90
Appendix B: List of demographic variables, report categories and source of demographic variables used in the VicHealth Indicators Survey 2015	97
Appendix C: VicHealth Indicators geographic classification concordances	99

Foreword

The VicHealth Indicators Survey is a local government area survey of approximately 23,000 adult Victorians conducted every four years on a wide range of factors known to influence individual and community wellbeing.

Reflecting the focus areas in VicHealth's Action Agenda for Health Promotion and historical collection of data to allow for trend analysis, the VicHealth Indicators Survey 2015 covers the following topic areas:

- subjective wellbeing
- perceptions of safety
- mental wellbeing
- gender equality in relationships
- physical activity
- sedentary behaviour at work
- healthy eating
- alcohol.

A comprehensive range of sociodemographic data was also gathered to enable an equity-oriented analysis.

VicHealth is proud to provide this information, which gives Victorians an important snapshot of the health and wellbeing of their communities. This data is invaluable to local councils developing Municipal Public Health and Wellbeing Plans, while also providing a window for communities across Victoria to assess their individual health and wellbeing with that of their local community, and identify ways they can live even healthier lives.

With the goal of improving health outcomes and reducing health inequalities in Victoria, data from this survey provides Victorians with tools to monitor and identify emerging trends and issues including:

- the prevalence and distribution of health and wellbeing in the general population
- trends and patterns in health and wellbeing across sociodemographic groups
- the relationship between lifestyle and health and wellbeing
- identifying potential areas for action to improve health and wellbeing.

Complemented by the Victorian Government's Victorian Population Health Survey, these two datasets give local government planners a comprehensive picture of health and wellbeing in their local area, and how this compares to the rest of Victoria.

VicHealth looks forward to working with local councils and others to use the Indicators Survey data in their local planning, leading to more Victorians with better health and wellbeing.



Jerril Rechter
CEO

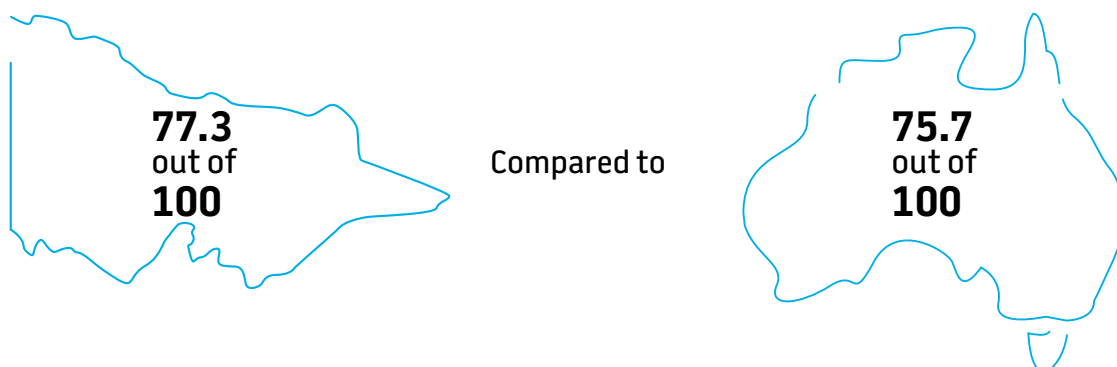


Summary of key findings

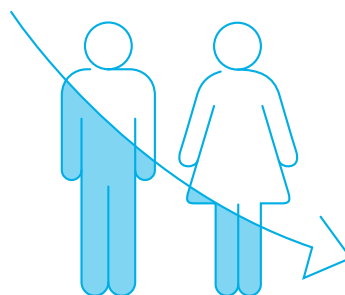
Subjective wellbeing and safety

Wellbeing

Victorians have a **higher** average wellbeing score than the Australian average.



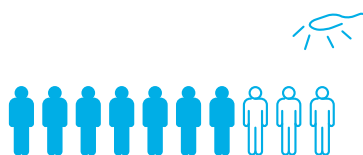
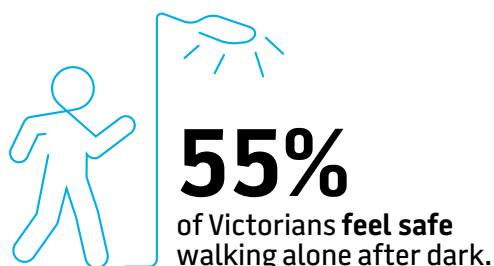
Victorians aged under 65 with a disability have the **lowest** wellbeing score.



Middle-aged Victorians (35–54) have a **lower** wellbeing score than other age groups.

Perception of safety

“ DO YOU FEEL SAFE WALKING ALONE AFTER DARK? ”



7 out of 10 men feel safe walking alone after dark



compared to 4 out of 10 women.

Mental wellbeing

Neighbourhood cohesion

“ PEOPLE AROUND HERE ARE WILLING TO HELP THEIR NEIGHBOURS ”



3 out of 4 Victorians agree



In inner metro areas, only two-thirds agree

“ PEOPLE IN THIS NEIGHBOURHOOD CAN BE TRUSTED ”



7 out of 10 Victorians agree

Most likely to agree



People aged over 75

Least likely to agree



People aged 25–34

“ THIS IS A CLOSE-KNIT COMMUNITY ”



Most likely to agree



Couples with dependent children

Least likely to agree



People living in group or share household

Support for gender equality in relationships



1 in 3 Victorians show **low support** for gender equality in relationships.

44% of men



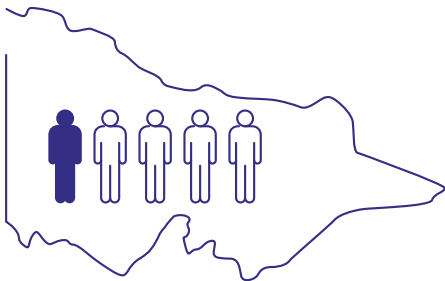
27% of women



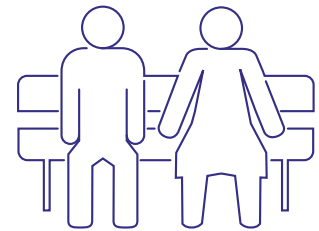
Half of men aged 18–34

Show **low support** for gender equality in relationships.

Physical activity



1 in 5 Victorians report doing **no physical activity** in a typical week.



ORGANISED PHYSICAL ACTIVITY:



People living in regional areas are **more likely** to take part in physical activity organised by a sports club or association

13.5%

than people living in the metro area

8.7%



People living in the most advantaged areas are **more likely** to take part in organised physical activity than people in the most disadvantaged areas.

11%
higher



NON-ORGANISED PHYSICAL ACTIVITY:

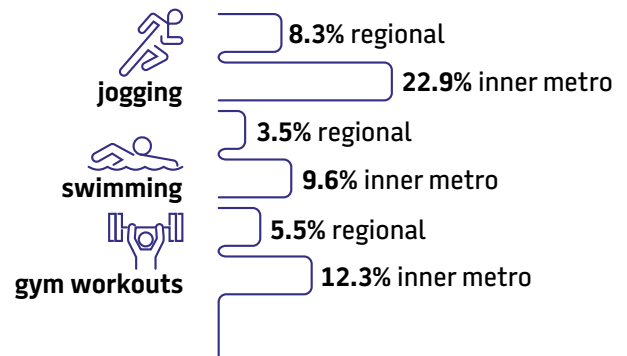


Younger adults (25–34) have higher rates of cycling, running and gym workouts than older adults.



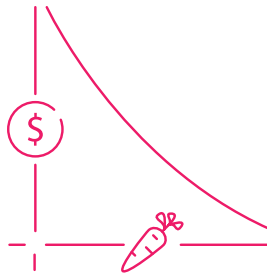
But older adults (65–74) have a **higher rate** of walking.

Victorians living in regional areas are **less likely** to take part in non-organised physical activity than people living in the inner metropolitan area.



Healthy eating

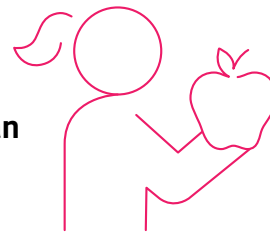
Victorians eat 2.2 serves of vegetables in a usual day, **less than half** of the recommended 5 serves.



Victorians with low household income eat fewer vegetables than Victorians in the highest income category.



Victorians eat **1.6 serves** of fruit in a usual day, **less than** the recommended 2 serves.



Women eat **more fruit** than men in a usual day.

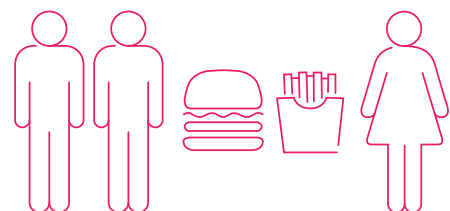


1 in 10 Victorians eat take-away meals **three or more** times per week.



People living in Melbourne are **twice as likely** to eat take-away meals three or more times per week as people living in regional Victoria.

Twice as many men than women eat take-away meals three or more times a week.



14.4% of males

vs

6.1% of females

Alcohol



Each month **3 in 10 Victorians** drink at levels that put them **at risk of short-term harm.**



Each month **1 in 5 young Victorians (18-24)** drink at levels that put them **at very high risk of short-term harm.**



Twice as many men than women drink at levels that put them **at risk of short-term harm** each month.



40%
of men

19%
of women



Half of all young people (18-24) think getting drunk to the point of losing balance every now and then is okay.

Executive summary

About this report

The VicHealth Indicators Survey 2015 is a Victorian community health and wellbeing survey. It collected information on a range of factors known to influence individual and community wellbeing.

This survey complements other major public health surveys conducted in Victoria, such as the Victorian Population Health Survey (VPHS), to provide an evidence base for prevention planning and health service provision in Victoria.

This report is divided into chapters by topic areas. Each chapter begins with an explanation of why the indicators were selected for inclusion in the survey. The analysis at a statewide level is presented, first by age and sex, then by demographic groups. Each chapter ends with a summary and conclusions.

Publications from the VicHealth Indicators Survey have been written primarily to assist local government with planning. For this reason, crude rates have been presented, rather than age-standardised rates, as they provide an indication of the actual situation. The findings will also be used to monitor VicHealth's progress, specifically the achievement of the three-year priorities and 10-year goals of the VicHealth Action Agenda for Health Promotion.

Other publications related to the Survey, such as LGA Profiles and Local Government Action Guides, provide area-level information to assist with local planning and will be available from the VicHealth website at www.vichealth.vic.gov.au/indicators.

What do the indicators tell us?

The indicators were selected and developed because they are measurable items that reveal specific attitudes and behaviours related to chronic disease risk at the population level. This report provides a snapshot of the situation in Victoria at a particular point in time (October to December 2015). When read in conjunction with the VPHS, this report will enable readers to gain a comprehensive picture of health and wellbeing in Victoria.

The VicHealth Indicators Survey 2015 includes 32 indicators across the areas of wellbeing, safety, mental wellbeing, gender equality in relationships, physical activity, healthy eating and alcohol. Several items in the VicHealth Indicators Survey 2015 were included in the Community Indicators Victoria Survey in 2007 and the VicHealth Indicators Survey 2011, allowing analysis of changes over time for these items.

In general, indicator data can provide social planners with the capability to identify and monitor emerging trends and issues, such as the prevalence and distribution of attitudes and behaviours in the general population, and in subgroups of the population.

An extensive range of sociodemographic markers were considered in the VicHealth Indicators Survey 2015. Analysis of the data showed a clear social gradient in health and wellbeing indicators, with disadvantaged groups generally having the least favourable outcomes for health and wellbeing. The exception was alcohol, where increased risk of short-term harm from alcohol was generally more prevalent among more advantaged population groups. These findings highlight the need to focus on health equity to ensure that all Victorians have a fair opportunity to attain their full health potential.

VicHealth's *About Fair Foundations and promoting health equity* resource provides information about strategies that can help reduce inequities – www.vichealth.vic.gov.au/fairfoundations. The VicHealth Indicators *Local Government Action Guides* provide evidence-based actions to help address inequities at a local level.

Methods

The VicHealth Indicators Survey is conducted approximately every four years. The survey was first undertaken in 2007 (as Community Indicators Victoria) and was repeated in 2011 and 2015.

Data were collected via telephone interviews between October and December 2015, achieving a total sample of 22,819 adults aged 18 and over. A sample size of approximately 300 was achieved in most of Victoria's 79 local government areas (LGAs), and a reduced sample size of 200 in the 10 least populous LGAs. The survey was conducted using a dual-frame survey design incorporating both landline and mobile sampling frames. This is a change from the 2007 and 2011 surveys, for which participants were chosen from a list of randomly generated landline telephone numbers only.

Wellbeing and safety

Indicators

- Subjective wellbeing (range 0–100)
- Satisfaction with life as a whole (range 0–10)
- Perceptions of safety – walking alone during day
- Perceptions of safety – walking alone after dark

The average wellbeing score for all Victorians was 77.3 out of 100 (95% confidence interval: 77.1, 77.6¹). There has been no significant change in subjective wellbeing between 2011 and 2015, however wellbeing was significantly higher in 2015 than in 2007 (76.6).² Victorians gave an average rating of 7.8 out of 10 (7.8, 7.8) for 'satisfaction with life as a whole'.

Females reported significantly higher subjective wellbeing than males, but there were no gender differences for life satisfaction rating. Older Victorians (those aged over 65) had higher wellbeing and life satisfaction scores than the Victorian average, while those aged 35–54 had lower scores.

The majority of Victorians (92.5% [92.0, 93.0]) reported feeling safe walking alone during the day, compared with only half of Victorians who felt safe walking alone at night (55.1% [54.2, 56.0]). Victorians were less likely to report feeling safe walking alone during the day in 2015, compared with 2007 and 2011, and less likely to report feeling safe walking alone after dark in 2015, compared with 2011.² Males were more likely to report feeling safe, compared with females, particularly for walking alone after dark. Older Victorians generally felt less safe, compared with all Victorians.

Higher social position was generally associated with higher subjective wellbeing and perceptions of safety. Victorians with higher education levels, higher annual household incomes, or those residing in the least disadvantaged areas, reported higher levels of wellbeing. Conversely, those who were unemployed, had lower annual household incomes, were from culturally and linguistically diverse backgrounds, or resided in the most disadvantaged areas in Victoria, reported lower levels.

Mental wellbeing

Indicators

- Resilience (range 0–8)
- Perceptions of neighbourhood – people are willing to help each other
- Perceptions of neighbourhood – this is a close-knit neighbourhood
- Perceptions of neighbourhood – people can be trusted
- Low gender equality in relationships score

Victorians had an average resilience score of 6.4 out of 8 (6.4, 6.4). There were no differences between males and females overall. Younger people (those aged 18–34) had significantly lower resilience scores than average, while older age groups (those aged 45–74) had significantly higher resilience scores. Victorians who were unemployed, had lower annual household incomes, were from culturally and linguistically diverse backgrounds, or resided in the most disadvantaged areas in Victoria, reported lower resilience.

With respect to perceptions of neighbourhood, three-quarters (74.1% [73.3, 75.0]) of Victorians agreed that people in their neighbourhood were willing to help each other out; seven out of 10 (71.9% [71.0, 72.7]) agreed that people in their neighbourhood could be trusted; and six out of 10 (61.0% [60.1, 61.9]) agreed that they lived in a close-knit neighbourhood. There were no differences in neighbourhood perceptions for gender overall; however, those aged 65 or over were more likely to report more positive perceptions of neighbourhood connection, and those younger than 35 were less likely. Generally, Victorians in the lowest annual household income category, those residing in capital cities and those in the most disadvantaged areas of Victoria were less likely to agree with these neighbourhood connection statements.

Just over one-third (35.7% [34.8, 36.6]) of Victorians held low levels of support for equal relationships between males and females (represented by a low gender equality in relationships score). A higher proportion of both males and of younger Victorians (those aged 34 or under) scored low on the gender equality in relationships indicator, while a lower proportion of Victorians aged 45 and over scored low on the gender equality in relationships indicator.

¹ Figures in brackets denote the lower and upper range of the relevant confidence interval. See page 22 for more on confidence intervals.

² Interpret with relative caution. See the 'Trends across time' section on page 23 for more information.

Physical activity and sedentary behaviour

Indicators

Physical activity frequency (30 minutes or more)

- 0 days per week
- 1–3 days per week
- 4 or more days per week

Organised physical activity

- Participation in any organised physical activity
- Organised by a fitness, leisure or indoor sports centre
- Organised by a sports club or association

Non-organised physical activity

- Participation in any non-organised physical activity
- Activity type: walking
- Activity type: jogging or running
- Activity type: cycling
- Activity type: gym or fitness
- Activity type: swimming
- Participates alone
- Participates with someone

Sedentary behaviour at work

- Time spent sitting on usual work day*

* For persons aged 18–64 who are working 35 or more hours per week.

Two in five (41.3% [40.4, 42.2]) Victorian adults reported doing 30 minutes or more physical activity on four or more days per week, and one in five (18.9%, [18.2, 19.6]) did not engage in any physical activity during the week. A larger proportion of younger Victorians (those aged 18–24) and a smaller proportion of older Victorians (those aged 75 or over) reported undertaking physical activity on four or more days in a typical week. A smaller proportion of younger Victorians (aged 18–34), and a larger proportion of older Victorians (aged 75 and over) reported no days of physical activity in a typical week.

Seven out of 10 (70.5% [69.7, 71.4]) Victorians participated in non-organised physical activity. The most common activity was walking (in which 51.2% participated). Nearly three out of 10 (28.7% [27.8, 29.5]) participated in organised sport, with the two most common organisations coordinating the activity being a sports club or association (9.8%) or a fitness, leisure or sports centre (9.2%).

Among females, there was a significantly lower rate of participation in physical activity (specifically non-organised physical activity), compared with males. This trend extended to almost all forms of non-organised sport, including jogging or running, cycling and attending a gym or fitness centre. Females were, however, more likely to engage in walking than males. Those with lower annual household incomes, those from culturally and linguistically diverse backgrounds, and those residing in the most disadvantaged areas of Victoria were more likely to report doing no physical activity. Those from culturally and linguistically diverse backgrounds, and those residing in outer metropolitan LGAs or in the most disadvantaged areas of Victoria were less likely to report doing physical activity on four or more days per week.

Victorians aged 18–64 who are working 35 or more hours per week spend an average of 4 hours and 29 minutes (4 hours and 24 minutes, 4 hours and 35 minutes) sitting during work hours each day. Time spent sitting is highest among university graduates, workers in the state's capital city and high income earners.

Healthy eating

Indicators

- Number of serves of vegetables per day
- Number of serves of fruit per day
- Eats take-away meals or snacks at least 3 times per week
- No water consumed per day
- Number of cups of water consumed per day

On average, Victorians consumed 2.2 (2.2, 2.3) serves of vegetables in a usual day and 1.6 (1.6, 1.6) serves of fruit. Females consumed a higher number of vegetable and fruit serves, and males consumed fewer vegetable and fruit serves, compared with the average. All Victorians, on average, consumed far less than the recommended five serves of vegetables daily. Those aged 18–24 consumed even fewer vegetables than the Victorian average, whereas those aged 55–64 consumed more serves of vegetables than the Victorian average.

Victorians from a non-English speaking background, those who were unemployed and those who lived in a disadvantaged area consumed fewer vegetables, compared with the population average.

One in 10 Victorians (10.2% [9.6, 10.8]) consumed take-away meals or snacks at least three times or more per week. A higher proportion of males consumed take away meals or snacks three or more times a week, compared with females (6.1% compared with 14.4%). Reported consumption of take-away meals and snacks was higher for younger age groups (22% of those aged 18–24) and lower for older age groups (2.0% of those aged 65–74). Prevalence was higher in certain groups, including those living in a share or group household, students, employed and unemployed persons, those from a non-English-speaking country and those living in inner metropolitan areas.

On average, Victorians consumed 5.4 (5.3, 5.4) cups of water in a usual day. Males consumed more cups of water compared with females. A small number of Victorians (3.1%) reported that they did not consume any water at all in a usual day. A significantly higher proportion of males, compared with females, did not consume any water. Older Victorians consumed fewer cups of water in a usual day compared with the average, and the proportion of those drinking no water increased with age. A notable pattern is present for occupational context, whereby those who were employed or who were students reported higher consumption, compared with those reporting home duties or being retired.

Alcohol

Indicators

- At risk of short-term harm each month (5 or more drinks)
- At very high risk of short-term harm each month (11 or more drinks)
- Alcohol culture – “getting drunk every now and then is okay”

The proportion of Victorians identified as being at risk of short-term harm from alcohol was 29.4% (28.5, 30.2), while nearly one in 10 (9.2% [8.6, 9.8]) Victorians was identified as being at very high risk. Compared with all Victorians, a significantly greater proportion of males were identified as being at risk, and at very high risk, of short-term harm.

A higher proportion of Victorians aged 18–34, and a lower proportion of those aged 55 or over, were identified as being at risk of short-term harm from alcohol, compared with all Victorians. (The same pattern was seen for very high risk.) Increased risk of short-term harm from alcohol was generally more prevalent among more advantaged population groups.

Over one-quarter (27.9% [27.0, 28.8]) of Victorians agree that getting drunk every now and then is okay. Compared with all Victorians, males were more likely to agree with this statement, and women less likely. Agreement with the statement decreased with age, from 49.6% of those aged 18–24 to 4.5% of those aged 75 or over. This attitude was more prevalent in certain groups, including those living in inner metropolitan areas, those living in a share or group household, those with higher annual household incomes, and those reporting their sexuality as something other than heterosexual.

1. Introduction and methods

The VicHealth Indicators Survey is a Victorian population-level survey conducted every four years. This survey is a resource for health and wellbeing planning, public health research and knowledge translation activities across Victoria. The survey was first undertaken in 2007 and was repeated in 2011 and 2015.

The World Health Organization defines health as “a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity” (WHO 1948). In line with this definition, the VicHealth Indicators Survey 2015 focused on behaviours and attitudes associated with chronic disease risk. It collected information on a range of factors known to influence individual and community wellbeing, such as life satisfaction; perceptions of safety and neighbourhood cohesion; physical activity levels and consumption of fruit, vegetables, water and alcohol; and attitudes related to gender equality in relationships.

The VicHealth Indicators Survey 2015 is based on a sample of 22,819 adults aged 18 years and over, who were randomly selected from households within each of the 79 local government areas (LGAs) in Victoria.

This survey provides a snapshot of the situation in Victoria at a particular point in time (October to December 2015). The aim of the survey is to provide information at both the state and local government level to assist with the development of Municipal Public Health and Wellbeing Plans, strategic planning and policy development, and to help community leaders make informed decisions and plan more effectively for the future. Additionally, data will be used to monitor VicHealth’s progress, specifically the achievement of the three-year priorities and 10-year goals of the *VicHealth Action Agenda for Health Promotion* (VicHealth 2013). The selection of survey items and indicators reflects these purposes and is closely aligned with VicHealth’s current priorities. As a result, the suite of indicators is substantially different from previous survey iterations. The selection of survey items and indicators was based on previous research and current best practice. Further detail is found in this chapter and the report appendices.

This survey complements other major public health surveys conducted in Victoria (for example, the Victorian Population Health Survey [VPHS]), to provide an evidence base for health promotion and illness prevention planning, and health service provision in Victoria. When read in conjunction with the VPHS, this report will give readers a comprehensive picture of factors related to health and wellbeing in Victoria.

Purpose of this report

The purpose of this report is to provide information at the Victorian state level. A breakdown of each indicator is provided by age and gender, as well as a statewide demographic analysis (see the ‘Structure of this report’ section on page 16 for a full list of demographic variables). Survey estimates are provided within the context of 95% confidence intervals (see page 22 for an explanation of confidence intervals).

The report is divided into five topic areas, each containing one or more indicators. A summary of the topic areas and their associated indicators is provided in Table 1.1. Background information and rationale for each indicator are presented at the beginning of each chapter. Appendix A contains a table listing each indicator, the underlying question, the question scoring process, and the score processing method.

Please note that while preventing tobacco use is an important area of work for VicHealth, data regarding smoking is not reported for this survey as it can be viewed in the VPHS 2014.

Table 1.1 Summary of topic areas and associated indicators included in the VicHealth Indicators Survey 2015

Topic area	Indicators
General wellbeing	<ul style="list-style-type: none"> • Subjective wellbeing (range 0–100) • Satisfaction with life as a whole (range 0–10) • Perceptions of safety – walking alone during day • Perceptions of safety – walking alone after dark
Mental wellbeing	<ul style="list-style-type: none"> • Resilience (range 0–8) • Perceptions of neighbourhood – people are willing to help each other • Perceptions of neighbourhood – this is a close-knit neighbourhood • Perceptions of neighbourhood – people can be trusted • Low gender equality in relationships score
Physical activity and sedentary behaviour	<p>Physical activity level</p> <ul style="list-style-type: none"> • 0 days per week • 1–3 days per week • 4 or more days per week <p>Organised physical activity</p> <ul style="list-style-type: none"> • Participation in any organised physical activity • Organised by a fitness, leisure or indoor sports centre • Organised by a sports club or association <p>Non-organised physical activity</p> <ul style="list-style-type: none"> • Participation in any non-organised physical activity • Activity type: walking • Activity type: jogging or running • Activity type: cycling • Activity type: gym or fitness • Activity type: swimming • Participates alone • Participates with someone <p>Sedentary behaviour at work</p> <ul style="list-style-type: none"> • Time spent sitting on usual work day*
Healthy eating	<ul style="list-style-type: none"> • Number of serves of vegetables per day** • Number of serves of fruit per day** • Eats take-away meals or snacks at least 3 times per week • No water consumed per day • Number of cups of water consumed per day
Alcohol	<ul style="list-style-type: none"> • At risk of short-term harm each month (5 or more drinks) • At very high risk of short-term harm each month (11 or more drinks) • Alcohol culture – “getting drunk every now and then is okay”

* For persons aged 18–64 years who are working 35 or more hours per week.

** For fruit and vegetable consumption under the NHMRC Australian Dietary Guidelines (2013), refer to the VPHS (DHHS 2016).

Structure of this report

Each topic area is reported as a chapter in the results section of this report. A chapter is made up of a general overview of the topic area, an explanation of the importance of each indicator and how it relates to health and wellbeing, and the survey results. The first part of the survey results section presents each indicator at a statewide level according to age and gender. Differences among age groups are analysed for males and females separately, then for all persons. Next, each chapter outlines a demographic analysis.

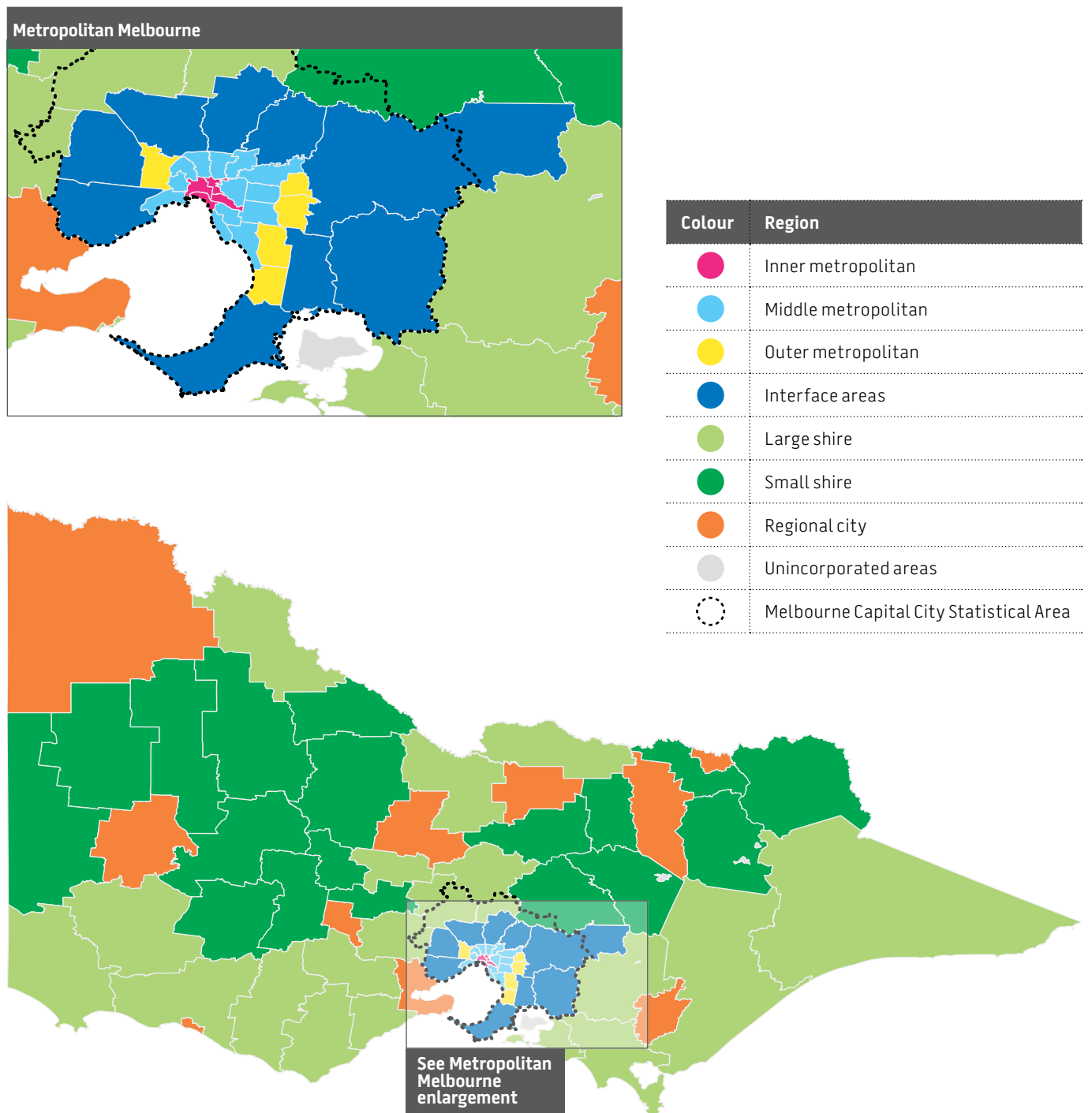
The demographic analysis includes the following (see also Appendix B):

- gender
- age
- education (highest level completed)
- current main activity (employed, unemployed, student, home duties, retired)
- main language spoken at home (English or other language)
- country of birth (Australian-born, English-speaking country, non-English-speaking country)
- self-reported disability (none, reported disability and under 65 years old, reported disability and over 65 years old)
- Aboriginal and/or Torres Strait Islander status (Aboriginal and/or Torres Strait Islander, non-Aboriginal and/or Torres Strait Islander)

- sexuality (heterosexual, other)
- annual income (the income category used for analysis differs depending on household structure: for couple households and households with children, household income was used; for single-person and share households, personal income was used)
- household structure (single person, couple, household with children [single parent or couple parent], share or group household)
- location (capital city, rest of state) and geographical region (LGAs are grouped into the following regions: metropolitan [inner, middle, outer], interface, regional city, large shire, small shire). In comparison to the VicHealth Indicators Survey 2011 the geographic classification for regions was broadened to align more closely with the Municipal Association of Victoria (MAV) geographic classification. This resulted in a finer segmentation of regional areas. See Figure 1.1 for a map of the two geographic classifications and Appendix C for concordance between geographic classification reported here and other classifications.
- Socio-Economic Indexes for Areas (SEIFA) score: Index of Relative Socio-economic Disadvantage (IRSD; presented as quintiles)
- internet access.

Each chapter ends with a summary and conclusions.

Figure 1.1 Summary of geographical regions used for data analysis



Methods

Data were collected for the VicHealth Indicators Survey through computer-assisted telephone interviews (CATI) on a representative sample of persons aged 18 years and over in Victoria. The Social Research Centre, a research organisation affiliated with the Australian National University and with a long track record of carrying out successful large scale surveys in Victoria, administered the survey on behalf of VicHealth. A dual-frame survey design was used incorporating both landline and mobile sampling frames. A total of 22,819 interviews were completed between October and December 2015. On average, each interview was 15.4 minutes in length.

The survey was approved by the Australian National University's Human Research Ethics Committee (Approval number 2015/556).

Design of survey

The indicators used in this survey are measurable items that quantify specific perceptions and behaviours related to health and the prevention of chronic disease. The survey design was guided by the survey objectives, which are specifically to:

- provide relevant indicators data to LGAs to inform their Municipal Health and Wellbeing Plans
- assist VicHealth, other government bodies and community groups to gain insights that will inform programs to build better health for Victorians
- support VicHealth project planning and monitoring of organisational progress, specifically the achievement of the three-year priorities and 10-year goals of the VicHealth Action Agenda for Health Promotion
- maintain time-series items included in the survey in 2007 and 2011. Two items, general wellbeing and perceptions of safety, were included in the 2015 survey in their original format to allow time-series analysis.
- complement other health surveys, particularly the VPHS.

Additional indicators were chosen based on consideration of whether:

- there was a clear evidence base for inclusion, based on public health significance and/or importance as a chronic disease risk factor
- they address a gap in existing population health datasets
- they provide data to assist VicHealth in its program and project planning.

To ensure their alignment with the goals of the *VicHealth Action Agenda for Health Promotion (2013–2023)*, most indicators are different from those used in previous VicHealth indicators surveys. The validity of the current survey items was established through cognitive testing, which determined whether respondents understood the questionnaire items in the manner they were intended. Based on these results, a number of questionnaire items were changed. Subsequent pilot testing confirmed that the survey questions were comprehensible and the survey maintained a suitable flow. A test-retest reliability study was undertaken for newly developed measures. All measures were found to be highly reliable.

Sample design

The VicHealth Indicators Survey 2015 included participants from every LGA in Victoria, with a sample size of approximately 300 in most LGAs, and a reduced sample size of 200 in the 10 least populous LGAs.¹ This sampling approach was used to obtain sufficient numbers to allow LGA-level analysis.

As the proportion of mobile-only residents has increased rapidly over the last decade (estimated to be 29.0% of adult Australians as at December 2014 [ACMA 2015]), it became necessary to conduct the survey using a dual-frame survey design incorporating both landline and mobile sampling frames. This was a change from the 2007 and 2011 surveys, where participants were chosen from a list of randomly generated landline telephone numbers only. In order to adequately represent the mobile-only population segment, the target for mobile interviews was set at 35% of all interviews. The number of mobile phone connections is not evenly distributed across LGAs, as both mobile phone coverage (percentage of population with a mobile phone) and total number of residents per LGA varies. Accordingly, it was expected that the number of mobile phone interviews would also vary by LGA (see Table 1.2). To ensure that every LGA would have a mix of landline and mobile interviews and thus each household within the LGA would have a chance of selection, a minimum quota of 30 landline interviews per LGA was set. As Table 1.2 shows, this resulted in slight oversampling in some instances.

Sample generation

Participants were generated from a list of randomly generated landline telephone numbers, as well as a list of randomly generated mobile telephone numbers.

Landline sample

All Victorian residential landline telephone numbers were considered in-scope. Accordingly, certain groups within the Victorian population were unable to be recruited into the landline sample for the survey. These groups included those living in facilities such as aged-care homes, prisons or hospitals, and homeless persons. Further, anyone who stated that they were unable to participate in a telephone survey, for health or other reasons, was excluded from the survey.

To establish the landline sample list, all available numbers within each telephone exchange across Victoria were generated and tested to determine if they were working telephone numbers. Based on the location of the exchange that generated the telephone number, an initial LGA selection and postcode was allocated to each sample record to guide sample loading and ensure that sufficient sample records were generated. The final allocation of LGA was based on postcode and locality information provided by the respondent during the interview process. Prior to the survey, a primary approach letter was mailed to each landline sample member where a full address match could be found. The generated landline sample member file was compared to commercial lists to identify valid numbers. Next, a matching service was used to identify names, addresses and telephone number combinations which remained current. The reference database was the online version of the *White Pages* directory.

¹ Ararat, Buloke, Hindmarsh, Loddon, Pyrenees, Queenscliffe, Strathbogie, Towong, West Wimmera and Yarriambiack.

Respondent selection within a household was done using the 'next birthday' method for those aged 18 years or older to ensure random selection of adult participants.

Mobile sample

For the mobile phone sample, all mobile numbers were considered in-scope provided the person answering the phone lived in Victoria and was aged 18 or older. Phone numbers were generated and tested, based on the known mobile phone prefixes, to determine if they were legitimate mobile numbers. In Australia, randomly generated mobile telephone numbers do not have geographic information attached to them, therefore many screening calls were potentially needed in order to identify Victorian residents. To increase the likelihood of reaching a Victorian respondent, a short message service (SMS) was sent to mobile sample members with the aim of informing the mobile owner of the survey and confirming whether they were a Victorian resident via return SMS, and increasing the proportion of mobile sample members who would answer a voice telephone call from a number that would otherwise remain 'unknown'. There was no additional respondent selection for mobile phone survey participants. The person answering the phone was selected, if in-scope.

A total of 64.6% of surveys was conducted via landline phones, while 35.4% of surveys were conducted via mobile phone. A summary of the estimated and actual sample achieved according to telephone response type in each LGA is provided in Table 1.2.

Table 1.2 Sample frame composition (actual versus estimated) by local government area

LGA	Estimated mobile sample distribution	Actual mobile sample distribution	Estimated landline distribution	Actual landline distribution	Total achieved interviews
Alpine (S)	11	15	289	285	300
Ararat (RC)	15	14	185	186	200
Ballarat (C)	147	141	153	159	300
Banyule (C)	180	173	120	127	300
Bass Coast (S)	35	46	265	254	300
Baw Baw (S)	53	67	247	233	300
Bayside (C)	138	149	162	151	300
Benalla (RC)	15	17	285	283	300
Boroondara (C)	253	276	47	30	306
Brimbank (C)	253	248	47	52	300
Buloke (S)	11	7	189	193	200
Campaspe (S)	34	49	266	251	300
Cardinia (S)	100	123	200	177	300
Casey (C)	308	343	30	30	373
Central Goldfields (S)	61	14	239	286	300
Colac-Otway (S)	24	23	276	277	300
Corangamite (S)	29	28	271	272	300
Darebin (C)	206	200	94	100	300
East Gippsland (S)	50	79	250	221	300
Frankston (C)	158	193	142	107	300
Gannawarra (S)	13	13	287	287	300
Glen Eira (C)	193	201	107	99	300
Glenelg (S)	26	17	274	283	300
Golden Plains (S)	18	27	282	273	300
Greater Bendigo (C)	138	165	162	135	300
Greater Dandenong (C)	212	173	88	127	300
Greater Geelong (C)	331	305	30	30	335
Greater Shepparton (C)	71	84	229	216	300
Hepburn (S)	21	19	279	281	300
Hindmarsh (S)	10	5	190	195	200
Hobsons Bay (C)	125	133	175	167	300
Horsham (RC)	31	26	269	274	300
Hume (C)	206	244	94	56	300
Indigo (S)	15	22	285	278	300
Kingston (C)	183	220	117	80	300
Knox (C)	243	204	57	96	300
Latrobe (C)	99	106	201	194	300
Loddon (S)	14	11	186	189	200
Macedon Ranges (S)	66	67	234	233	300
Manningham (C)	173	177	127	123	300

Table 1.2 Sample frame composition (actual versus estimated) by local government area

LGA	Estimated mobile sample distribution	Actual mobile sample distribution	Estimated landline distribution	Actual landline distribution	Total achieved interviews
Mansfield (S)	10	17	290	283	300
Maribyrnong (C)	119	132	181	168	300
Maroondah (C)	145	139	155	161	300
Melbourne (C)	275	263	30	37	300
Melton (S)	175	134	125	166	300
Mildura (RC)	69	79	231	221	300
Mitchell (S)	44	62	256	238	300
Moira (S)	40	42	260	258	300
Monash (C)	268	274	32	30	304
Moonee Valley (C)	194	142	106	158	300
Moorabool (S)	25	47	275	253	300
Moreland (C)	233	230	67	70	300
Mornington Peninsula (S)	187	224	113	76	300
Mount Alexander (S)	24	29	276	271	300
Moyne (S)	20	22	280	278	300
Murrindindi (S)	20	19	280	281	300
Nillumbik (S)	73	95	227	205	300
Northern Grampians (S)	14	17	286	283	300
Port Phillip (C)	160	134	140	166	300
Pyrenees (S)	9	8	191	192	200
Queenscliffe (B)	16	7	184	193	200
South Gippsland (S)	44	38	256	262	300
Southern Grampians (S)	19	31	281	269	300
Stonnington (C)	157	168	143	132	300
Strathbogie (S)	16	19	184	181	200
Surf Coast (S)	36	42	264	258	300
Swan Hill (RC)	21	18	279	282	300
Towong (S)	3	11	197	189	200
Wangaratta (RC)	31	33	269	267	300
Warrnambool (C)	34	42	266	258	300
Wellington (S)	69	67	231	233	300
West Wimmera (S)	4	6	196	194	200
Whitehorse (C)	278	245	30	55	300
Whittlesea (C)	231	204	69	96	300
Wodonga (RC)	51	43	249	257	300
Wyndham (C)	277	249	30	52	301
Yarra (C)	159	144	141	156	300
Yarra Ranges (S)	234	172	66	128	300
Yarriambiack (S)	10	10	190	190	200

LGA status types: (B) = Borough, (C) = Council, (RC) = Rural City, (S) = Shire

Data collection

Fieldwork was conducted over a total of six and a half weeks between October and December 2015. A total of 22,819 interviews were completed. On average, each interview was 15.4 minutes in length.

Survey strategies

A number of different strategies were used to boost participation in the survey, including:

- an extended call regime, where up to six calls were placed to establish contact with a given household, and a further nine calls (if needed) were placed to secure an interview with the selected household member. Call attempts were spread over different times and days of the week. No interviewing took place on public holidays
- interviews conducted in Italian, Greek, Mandarin, Cantonese, Vietnamese, Arabic, Spanish, Korean, Serbian and Croatian, in addition to English²
- soft refusal conversion activity, where initial contact with the household was identified as a refusal and the reason provided was 'just hung up', 'not interested' or 'too busy'. In this case participants were contacted a second time to ascertain willingness to participate.
- a 1800 number operated by the research company throughout the fieldwork period to handle interview logistics and general enquires relating to the survey.

Participation

The response rate, defined as the proportion of completed interviews divided by the sum of completed interviews and refusals, was 51.1% (57.5% for landline and 42.5% for mobiles).

Data processing and analysis

Survey item responses were recoded into indicator scores according to the rules outlined in Appendix A. Indicator scores correspond mostly, but not always, to a single survey item. For example, the gender equality in relationships indicator score is based on a processed combination of scores on two items.

The conversion rules between survey item scores and indicator scores followed either previously established procedures in the case of established scales, or established reporting practice in other surveys. A description of the rationale for each indicator is provided at the beginning of the relevant chapter.

Where survey items featured free response options instead of, or in addition to, a pre-coded response frame, additional response categories were created if a particular free response was reported multiple times. This type of code frame extension particularly applied to the physical activity module.

Survey data was analysed using the R statistical environment. Selected results were verified in STATA SE 14.

Crude rates vs age-standardised rates

This report (and additional products from the VicHealth Indicators Survey) have been written primarily for local councils to assist with planning. For this reason, crude rates have been presented, as they provide an indication of the actual situation. Crude rates are not appropriate for comparisons between geographic localities (for example, between individual LGAs), as estimates have not been age-standardised and differences may be due, in part, to differing age profiles within geographic localities. For example, regional LGAs tend to have older age profiles than LGAs in growth areas and inner-metropolitan Melbourne. For indicators that tend to show strong associations with age (for example, indicators relating to perceptions of neighbourhood), higher rates will be attributable partly to the age structure of the inhabitants.

Standard error

The standard error is a measure of the accuracy with which an estimate produced by sampling a population represents that population. The size of the standard error is affected by the extent of chance variation, which reduces as sample size increases. Standard errors are required to construct confidence intervals, which in turn identify the likely range of the true value of an estimate.

Relative standard error

The relative standard error (RSE) of an estimate provides an indication of how reliable the estimate is for general use. The RSE expresses the standard error as a fraction of the population estimate. RSEs were calculated for each estimate published in this report. Estimates with an RSE of 25% or less are generally accepted as being reliable. In this report, estimates with an RSE of between 25% and 50% have been highlighted as estimates to be interpreted with caution (marked in tables with a *). Estimates with RSEs of greater than 50% have not been reported because they are not considered reliable.

Confidence intervals

Similar to RSEs, confidence intervals allow gauging the reliability of an estimate. Where RSEs express the expected deviation in the form of a percentage, a confidence interval specifies a range of values that we would expect would contain the true value of an estimate, to a stated level of probability. A common confidence interval used in statistics is the 95% confidence interval. Confidence intervals of 95% have been calculated for each indicator estimate presented in this report. Lower and upper boundaries for 95% confidence intervals have been provided within tables, for example, 45.5% [44.5, 46.5]. Confidence intervals are best interpreted by saying that if we were to sample from the same population 100 times, we'd expect the population estimate to fall within the interval 95 times.

² Where the preferred language of interview at household screening or respondent selection was identified as Italian, Greek, Mandarin, Cantonese, Vietnamese, Arabic, Spanish, Korean, Serbian or Croatian, a call-back was arranged for a bilingual interviewer to conduct the interview. An appropriate bilingual interviewer read from the translated questionnaire and recorded responses directly into the standard English-language computer-assisted telephone interview (CATI) script. In cases where a language was identified as one of the most frequently requested and there were no bilingual interviewers available at the Social Research Centre, a translating and interpreting service was engaged to complete the interview. In total, 589 interviews in languages other than English were undertaken across the entire sample (2.6% of all interviews).

Statistical significance

Statistical significance is an indication of the likelihood that a difference between figures is not due to chance. Statistically significant differences between groups were deemed to exist when confidence intervals of estimates did not overlap. To determine statistical significance, estimates for one group of the population (for example, those with a university education) were compared with the estimate for all survey respondents. Non-overlapping confidence intervals around mean scores or sample proportions between groups suggest that a true difference between the groups exists and were denoted as statistically significant differences. For comparisons within subgroups, such as males only, the subgroup value (e.g. males aged 18–24) was compared with the total estimate for that subgroup (all males). This approach is consistent with that used in other population health surveys, such as the VPHS.

Statistical significance is affected by the level of variability in the measured construct or variable and reflected in the width of the confidence intervals. High levels of variability across people are more likely to camouflage a true difference between groups of people than low levels of variability. This effect reduces with increased sample size.

The reporting of differences between categories is noted only when such differences are statistically significant, based on non-overlap of the 95% confidence intervals.

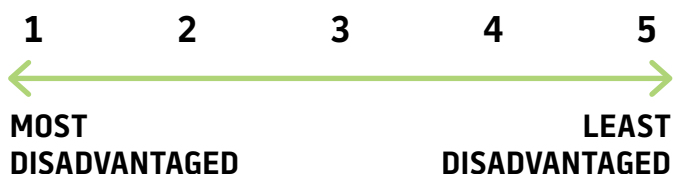
Trends across time

Data that were collected in an identical manner in the 2007,³ 2011 and 2015 surveys were included in time-series analyses. These items were:

- subjective wellbeing
- perceptions of safety – walking alone during the day
- perceptions of safety – walking alone after dark.

Note that the VicHealth Indicators Survey 2015 was the first in the series of surveys that employed a dual-frame approach. The 2007 and 2011 data collection used a landline only sampling frame. There are three ways of addressing such methodological change to allow for comparison across the three time points of the surveys.

Figure 1.2 Index of Relative Socio-economic Disadvantage: interpretation of quintiles



The first option is to reset the time series with the onset of a new sampling method and thus not compare data collected through different sampling methods. Not reporting previous time series data averts the risk of coverage errors, that is, errors associated with the uneven distribution of landline coverage at different points in time, but sacrifices useful historical data potentially showing important trends.

The second option is to employ a backcasting technique on earlier data in the time series, an approach that has previously been assessed in the context of population health surveys in Australia (Barr, Ferguson & Steel 2014). Whether backcasting is necessary depends on the prevalence differences between mobile only and other households for each indicator. If differences in scores between the mobile-only portion of the sampling frame and the residual are less than 50% and if there is no significant difference between the sampling frames on the particular indicator, then backcasting is unlikely to result in substantial changes (Barr, Ferguson & Steel 2014).

The third option is to report the unaltered time-series data, which was the approach taken here. The time-series values reported here for 2007 and 2011 are therefore identical to values reported at the time. As differences for the time-series items between the 2015 survey results and previous results were small, backcasting was not essential. Given the changes in landline coverage over the last decade, the respective sampling frames were the most appropriate at the points in time when the surveys were conducted and thus are more likely to represent the population accurately.

Measuring disadvantage

The Index of Relative Socio-economic Disadvantage (IRSD) has been used in this report. IRSD is one of the indices provided as part of the Australian Bureau of Statistics' Socio-Economic Index for Areas (SEIFA) range of products. The IRSD is derived from Census variables related to disadvantage, such as low income, low educational attainment, unemployment, and dwellings without motor vehicles. The index is a general socioeconomic index that summarises a wide range of information about the economic and social resources of people and households within an area. Because this index focuses on disadvantage, only measures of relative disadvantage are included. This means that, unlike the other indexes, a high score (or quintile) reflects a relative lack of disadvantage rather than relative advantage, as shown in Figure 1.2. IRSD is the preferable index for these survey results as it highlights the relationship between broad disadvantage and health behaviours.

³ 2007 results were collected and published by the McCaughey VicHealth Community Wellbeing Unit at the Melbourne School of Population and Global Health, University of Melbourne. The results have been published at www.communityindicators.net.au/civ_survey_2007.

A **low score** indicates relatively greater disadvantage in general. For example, an area could have a low score if there are (among other things) many households with low income, many people with no academic or training qualifications, or many people in low-skilled occupations. A **high score** indicates a relative lack of disadvantage in general. For example, an area may have a high score if there are (among other things) few households with low incomes, few people with no qualifications or few people in low-skilled occupations.

Survey weighting

The weighting approach for the VicHealth Indicators Survey 2015 used a population weight comprising age and gender structure within each LGA, and telephone status.

Several weighting approaches were examined and considered for use in the analysis of the survey, including age and gender structure within each LGA; age and gender structure within each LGA plus telephone status; and age and gender structure within each LGA, plus telephone status, birthplace and education. The addition of birthplace and education has been shown to reduce the bias in weighted estimates obtained from dual-frame surveys of the general population (Social Research Centre 2012). However, following an evaluation of the impact of this approach on the effective base at the state level, the inclusion of birthplace and education was considered inappropriate for use in VicHealth Indicators Survey 2015 as it introduced too much variance to the estimates, thereby degrading their quality.

Profile of survey respondents

The final call distribution resulted in a good approximation of phone type coverage in Victoria. As seen in Table 1.3, landline-only users were slightly oversampled, while mobile-only users were undersampled compared to the expected distribution. The total sample size for each type of phone user (mobile only, landline only, dual user) was robust.

The unweighted respondent profile was compared against Australian Bureau of Statistics (ABS) population data to determine representativeness. As can be seen in Table 1.4, the survey sample had a higher proportion of females and older people, compared with the actual population.

Survey weighting was applied to the data prior to analysis to ensure representativeness at both the LGA and state level.

Strengths and limitations of this survey

In general, all telephone surveys have strengths and limitations.

Strengths include the capacity to:

- obtain data from large samples quickly and more cost-effectively than other methods of data collection (for example, in-person interviews or mailed questionnaires), maintaining a high level of quality control
- include individuals with low levels of literacy
- achieve high participation rates, due to callback and appointment scheduling systems.

Limitations include:

- sample bias due to household telephone status.

There are a number of additional strengths in the design of the VicHealth Indicators Survey 2015. The limitation of sample bias due to telephone status is partially addressed through the dual-frame approach. Data showing the difference in profile of respondents between the mobile and landline sample frame (see Table 1.4) supports the use of a dual-frame design to minimise bias associated with restricting the survey participation to those with landlines. In addition, the large sample size of this survey ensured that there is a representative sample for each LGA to enable local planning.

Table 1.3: Distribution of telephone status by sample frame

		2015 VHI Survey		Benchmark*
		N	%	%
	Base:	22,819	100	-
Mobile sample frame	Mobile only	2,902	13	25
	Dual user	5,180	23	67
Landline sample frame	Dual user	12,349	54	
	Landline only	2,388	10	8

* Benchmark data: ABS National Health Survey & ACMA, 2015

Table 1.4 Summary of VicHealth Indicators Survey 2015 respondent profile by sample frame

		Base	Total	Landline	Mobile	Benchmark*
		N	%	%	%	%
Base:		22,819	22,819	14,737	8,082	-
Gender	Male	9,351	41	36	49	49
	Female	13,422	59	63	51	51
Age group	18–24 years	1,218	5	2	11	13
	25–34 years	1,969	9	3	19	20
	35–44 years	2,631	12	8	17	18
	45–54 years	3,698	16	15	19	17
	55–64 years	4,841	21	23	18	14
	65–74 years	4,883	21	27	12	10
	75+ years	3,523	15	22	3	9
Location	Capital city	9,903	43	26	75	75
	Rest of state	12,916	57	74	25	25
Country of birth	Australian-born	17,553	77	83	66	67
	Overseas-born	5,266	23	17	34	33
Aboriginal and/or Torres Strait Islander status	Aboriginal and/or Torres Strait Islander	190	1	1	1	1
	Non-Aboriginal and/or Torres Strait Islander	22,532	99	99	99	99
Educational attainment	At least Bachelor degree	6,654	31	25	41	25
	Less than Bachelor degree	15,830	69	32	32	75

* Benchmark data: Education, Aboriginal and Torres Strait Islander status, and birthplace – 2011 Census (ABS 2011) / age, gender and location – 2014 ERP (ABS 2015)

Table 1.5 Physical activity levels for males and females in Victoria

	Physical activity – 0 days per week			Physical activity – 1 to 3 days per week			Physical activity – 4 or more days per week		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	18.9	18.2	19.6	38.9	38.0	39.8	41.3	40.4	42.2
Gender									
Male	16.9	15.9	17.9	38.8	37.4	40.1	43.5	42.2	44.9
Female	20.9	19.8	21.9	39.1	37.8	40.4	39.1	37.9	40.4

How to interpret the tables

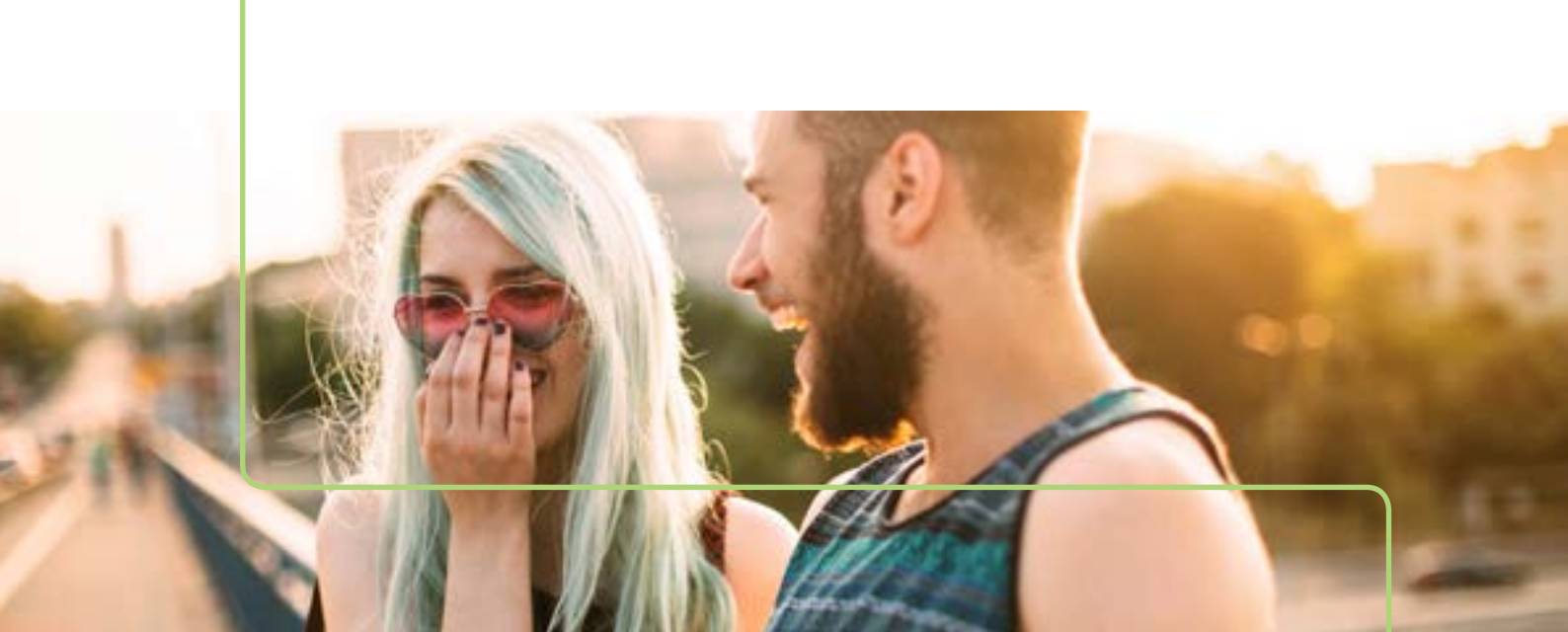
Individual estimates for Victoria are shown with upper and lower 95% confidence intervals. Where subgroups of the population are presented (for example, males and females), the estimates have been compared with the total Victorian estimate. The significance of differences in estimates has been determined by comparing the 95% confidence intervals of the estimates. Statistically significant differences exist where there are non-overlapping confidence intervals. (See page 22 for an explanation of confidence intervals and pages 22–23 for further information on statistical significance.)

If the estimate of a subpopulation is coloured in blue or green, this indicates a statistically significant difference to the Victorian average (see Table 1.5 for an example).

- The colour blue indicates the estimate is less favourable than the Victorian average. (For example, the proportion of females doing four days of physical activity per week is 39.1% and this is lower than the state estimate of 41.3%, and therefore less favourable.)
- The colour green indicates the estimate is more favourable than the Victorian average. (For example, the proportion of males doing zero days of physical activity per week is 16.9% and this is lower than the state estimate of 18.9%, and therefore more favourable.)

References

- Australian Bureau of Statistics (ABS) 2011, 'Census TableBuilder', viewed 12 February 2016, <www.abs.gov.au/websitedbs/censushome.nsf/home/tablebuilder?opendocument&navpos=240>.
- Australian Bureau of Statistics (ABS) 2015, 'Estimated resident population', viewed 12 February 2016, <http://stat.abs.gov.au/Index.aspx?DataSetCode=ABS_ANNUAL_ERP_LGA2014>.
- Australian Communications and Media Authority (ACMA) 2015, *Australians get mobile*, ACMA, Melbourne, viewed 24 May 2016, <www.acma.gov.au/theACMA/engage-blogs/engageblogs/Research-snapshots/Australians-get-mobile>.
- Barr, ML, Ferguson, RA & Steel, DG 2014, 'Inclusion of mobile telephone numbers into an ongoing population health survey in New South Wales, Australia, using an overlapping dual-frame design: Impact on the time series', *BMC Research Notes*, 7, pp. 1–10.
- Department of Health and Human Services (DHHS) 2016, *Victorian population health survey 2014: Modifiable risk factors contributing to chronic disease*, State Government of Victoria, Melbourne.
- National Health and Medical Research Council (NHMRC) 2013, *Australian dietary guidelines*, NHMRC, Canberra.
- Pennay, D 2012, *Review of the integrated public number database*, Social Research Centre, Melbourne.
- Social Research Centre 2012, *Dual-frame omnibus survey: Technical and methodological summary report: Internal report*, Social Research Centre, North Melbourne, viewed 24 July 2015, <www.srcentre.com.au/docs/event-workshop-july-2012/dual-frame-omnibus-technical-report-%28pennay%29.pdf>.
- VicHealth 2013, *VicHealth action agenda for health promotion*, Victorian Health Promotion Foundation, Melbourne.
- World Health Organization (WHO) 1948, *Preamble to the constitution of the World Health Organization as adopted by the International Health Conference*, World Health Organization, New York.



2. Wellbeing and safety

The wellbeing and safety indicators were measured in the two previous indicators surveys, in 2007 and 2011. The topics are reported together here as both provide important overarching indicators of community health and wellbeing (IWBG 2013, Stafford et al. 2007, Baum et al. 2009).

Wellbeing

Our individual responses to life challenges, transitions and disruptions are shaped by our physical, psychological and social capacity to adapt and restore to a balanced state of wellbeing (Dodge et al. 2012). From a psychological perspective, the 'homeostasis theory of wellbeing' considers the personal factors that maintain and regulate wellbeing, and the external factors that influence our ability to cope with stress and support wellbeing (Cummins 2010). Although subjective wellbeing refers to individuals' perceptions of the quality of their lives, lifestyle factors and demographic circumstances also have predictive influences. For example, people who find a good work-life balance and stay healthy by eating well and exercising regularly generally report higher levels of wellbeing (ABS 2001, Mead & Cummins 2010). Conversely, people living in rental accommodation, remote regions and areas with high cost of living, long commute times and a high population density generally report lower levels of subjective wellbeing (Mead & Cummins 2010).

Wellbeing can be measured objectively (e.g. Gross Domestic Product, household income and disability-adjusted life years) or subjectively (e.g. life satisfaction and quality of life surveys). Earlier conceptualisations of wellbeing focused on objective measures, though the focus is now shifting towards subjective measures of wellbeing, given the weak correlation between objective criteria and people's reported feelings of wellbeing (Cummins et al. 2015).

Subjective wellbeing considers an individual's experience of their life, as well as a comparison of their life circumstances with social norms and values (Friedli 2009). The International Wellbeing Group (IWBG, 2013) identify seven dimensions of life that contribute to subjective wellbeing: standard of living, health, achieving in life, relationships, safety, community, and future security (IWBG 2013). These domains align with the contributors to wellbeing that Friedli (2009) identified, and highlight social connections (personal and community), economic considerations and a sense of purpose as core elements of overall life satisfaction.

Safety

Neighbourhood safety and security are important determinants of people's health and wellbeing. When individuals feel safe within their communities, they are more likely to connect with friends, engage with other community members and experience greater levels of trust and social connection (Baum et al. 2009). Areas of socioeconomic disadvantage are reported to have higher rates of social disorder, such as graffiti, drug use or dealing, theft, burglary and violent crime (ABS 2010). When individuals perceive their neighbourhoods to be unsafe, they experience higher levels of anxiety and interactions between members of the community become more limited, placing them at risk of social isolation and mental illness (Cubbin et al. 2008). The importance of social connections and trust for mental wellbeing are explored in more detail in the 'Mental wellbeing' chapter (page 37).

2. WELLBEING AND SAFETY

Neighbourhood safety also influences our physical health and wellbeing by altering how people use, and interact with, the built environment, local amenities, parks and community facilities (Stafford et al. 2007). People are more likely to be physically active when they live in neighbourhoods with better amenities for exercise (such as parks and walking or jogging paths); with less litter, vandalism and graffiti; and with street layouts that promote pedestrian access and walkability (Giles-Corti & Donovan 2002). People who perceive their neighbourhoods to be unsafe often limit their use of local infrastructure and restrict their involvement in outdoor activities (such as walking, cycling and jogging) (Stafford et al. 2007). A fear of crime is associated with reduced active transport and increased car use – which places residents at risk of being less physically active (Ross 1993) and increases their risk of cardiovascular disease, obesity, diabetes and mental illness (Warburton et al. 2006). The importance of physical activity for health and other factors that influence it are explored in more detail in the ‘Physical activity and sedentary behaviour’ chapter (page 48).

VicHealth Indicators: Wellbeing and safety

- Subjective wellbeing (range 0–100)
- Satisfaction with life as a whole (range 0–10)
- Perceptions of safety – walking alone during day
- Perceptions of safety – walking alone after dark

Wellbeing

Two wellbeing indicators are presented in this report. The first indicator is ‘subjective wellbeing’, which is assessed through the Personal Wellbeing Index (PWI) (Cummins et al. 2003). The index includes ratings across seven domains: standard of living, health, achievements in life, community connection, personal relationships, safety, and future security. Each domain is included because it contributes some unique explanation to general life satisfaction. The average scores on all seven domains are combined into a PWI score presented on a scale with a range of 0 (completely dissatisfied) to 100 (completely satisfied). The index was used in the 2007 indicators survey – known as Community Indicators Victoria¹ – and the VicHealth Indicators Survey 2011.

The PWI is the principal indicator of the Australian Unity Wellbeing Index, which uses cumulative data gathered since 2001 to establish Australian psychometric properties and normative Australian reference data. The average Personal Wellbeing Index (PWI) score for Australians is estimated to be around 75 and has varied little over time, consistently falling between the narrow band of 73.9 and 76.7 (Australian Unity Wellbeing Index, 2015). Typically, individual scores vary significantly but are usually between 55 and 95 points. Personal wellbeing scores below 50 can be an indicator of depression (Cummins et al. 2003).

The second indicator is general life satisfaction, which is captured by asking about participants’ ‘satisfaction with life as a whole’. General life satisfaction measures how people evaluate their life as a whole, rather than their current feelings. When asked to rate their general satisfaction with life on a scale from 0 to 10, Australians gave it an average rating of 7.3, higher than the OECD average of 6.5 (OECD 2015).

Perception of safety

Two indicators relating to perceptions of safety are presented: perception of safety while walking alone during the day, and perception of safety while walking alone after dark. The indicators were measured on a 5-point Likert Scale ranging from ‘Very safe’ to ‘Very unsafe’. The question was first used in the ABS General Social Survey and was included in the indicators surveys in 2007 and 2011. The ‘perception of safety while walking alone after dark’ question has also been used in the Victorian Population Health Survey as a measure of trust and social cohesion.

The base for this indicator comprises all survey participants, including those who selected ‘Don’t know’, refused to respond, or advised that the scenario wasn’t applicable to them. This is a departure from the methodology adopted in previous indicators surveys. However, it was decided that these respondents should be included, as it mirrors the analysis undertaken by the Australian Bureau of Statistics, who also use these survey items in the General Safety Survey. Therefore, results should not be directly compared with previously published indicators reports. A comparison over time is presented in this report based on recalculated data from 2007 and 2011 surveys results.

Subjective wellbeing

Age and gender analysis

The average wellbeing score for all Victorians was 77.3 out of 100. The average wellbeing score for females (77.9) was significantly higher than for males (76.7). Similarly, those aged 65–74 and 75 and over had higher wellbeing scores (at 79.6 and 80.9, respectively), compared with the Victorian average, while those aged 35–44 and 45–54 had lower wellbeing scores (at 76.0 and 76.2, respectively), compared with the average.

Males aged 65–74 and 75 and over had higher wellbeing scores (at 79.1 and 80.1, respectively), compared with males overall. Males aged 45–54 had a lower wellbeing score (at 75.4), compared with males overall.

Females aged 65–74 and 75 and over had higher wellbeing scores (at 80.1 and 81.6, respectively) compared with females overall. Females aged 35–44 had a lower wellbeing score (at 76.5), compared with females overall.

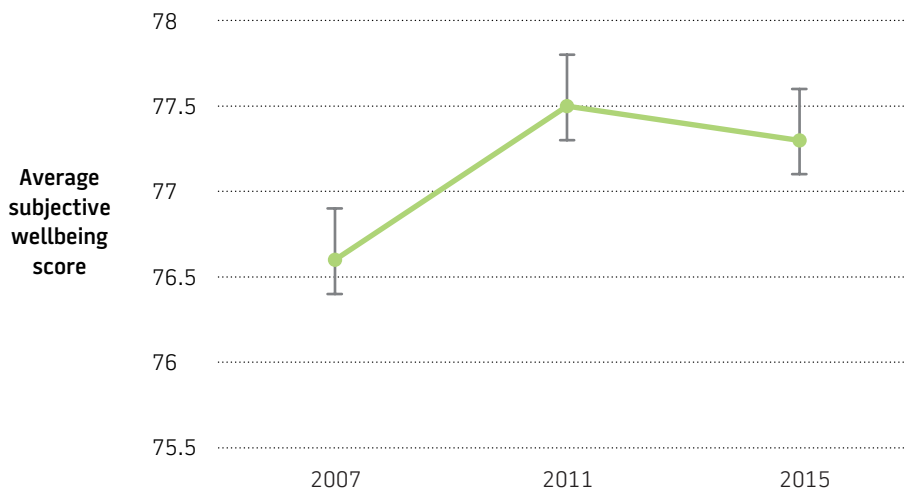
There has been no significant change in subjective wellbeing for Victorians between the 2011 survey (77.5 [77.3, 77.8]) and the 2015 survey (77.3 [77.1, 77.6]). However, the subjective wellbeing score for Victorians in the 2015 and 2011 surveys was significantly higher than in the 2007 survey (76.6 [76.4, 76.9]).² See Figure 2.1.

¹ Please note that 2007 results were collected and published by the McCaughey VicHealth Community Wellbeing Unit at the Melbourne School of Population and Global Health, University of Melbourne. The results are available at www.communityindicators.net.au/civ_survey_2007.

² Interpret with relative caution. See the ‘Trends across time’ section on page 23 for more information.

2. WELLBEING AND SAFETY

Figure 2.1 Average subjective wellbeing scores for all Victorians across indicator surveys



Note that (a) error bars are 95% confidence intervals, (b) the scale of the ordinate axis only shows a fraction of the full score range (0–100) for greater visual clarity.

Table 2.1 Average wellbeing score, by age and gender

Age group (years)	Subjective wellbeing [range 0–100]								
	Males			Females			Persons		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI
18–24	77.8	76.7	78.9	77.9	77.0	78.9	77.9	77.1	78.6
25–34	76.1	75.2	77.1	78.0	77.3	78.8	77.1	76.5	77.7
35–44	75.4	74.5	76.4	76.5	75.7	77.3	76.0	75.4	76.6
45–54	75.4	74.6	76.1	76.9	76.2	77.7	76.2	75.6	76.7
55–64	76.3	75.5	77.2	77.0	76.2	77.9	76.7	76.1	77.3
65–74	79.1	78.3	79.9	80.1	79.2	81.0	79.6	79.0	80.2
75+	80.1	78.9	81.2	81.6	80.4	82.7	80.9	80.1	81.7
TOTAL	76.7	76.3	77.1	77.9	77.6	78.3	77.3	77.1	77.6

Table 2.2 Average life satisfaction score, by age and gender

Age group (years)	Satisfaction with life as a whole [range 0–10]								
	Males			Females			Persons		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI
18–24	7.7	7.5	7.8	7.8	7.7	8.0	7.7	7.7	7.8
25–34	7.7	7.6	7.8	7.8	7.7	7.9	7.7	7.7	7.8
35–44	7.6	7.5	7.7	7.8	7.7	7.9	7.7	7.6	7.8
45–54	7.6	7.5	7.7	7.8	7.7	7.9	7.7	7.6	7.8
55–64	7.7	7.6	7.8	7.8	7.7	7.9	7.7	7.7	7.8
65–74	8.1	8.0	8.2	8.1	8.0	8.2	8.1	8.0	8.2
75+	8.3	8.2	8.4	8.2	8.1	8.3	8.2	8.1	8.3
TOTAL	7.7	7.7	7.8	7.9	7.8	7.9	7.8	7.8	7.8

2. WELLBEING AND SAFETY

Other demographic analysis

Demographic groups with significantly **higher** wellbeing scores, compared with Victorians overall (score of 77.3), were those:

- with university qualifications (78.4)
- who were retired (79.9)
- with no reported disability (79.0)
- with a household annual income of \$100,000 or more (79.9)
- living in couple households (79.7), in households with dependent or non-dependent children (77.9) or, more specifically, in couple households with dependent children (78.7)
- living in large shire (79.0) or small shire (79.8) geographic regions
- living outside the capital city (78.5)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (78.8).

Compared with all Victorians (score of 77.3), demographic groups with **lower** wellbeing scores were those:

- with TAFE, Certificate or Diploma qualifications (76.2)
- who were unemployed (70.7)
- mainly speaking a language other than English at home (76.1)
- from a non-English-speaking country (76.4)
- with a reported disability (scores of 68.6 for those aged under 65 and 75.9 for those over 65)
- who were Aboriginal and/or Torres Strait Islander (73.0)
- whose sexuality was reported as something other than heterosexual (73.6)
- with a household annual income less than \$20,000 (71.6) or \$20,000–\$39,999 (75.5)
- living in single-person households (73.7), single parent households with dependent children (71.5) or in share or group households (74.9)
- living in outer metropolitan geographic regions (75.4)
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (75.8).

Satisfaction with life as a whole

Age and gender analysis

In the VicHealth Indicators Survey 2015, Victorians gave an average rating for 'life satisfaction as a whole' of 7.8 out of 10. There were no significant gender differences for life satisfaction when compared to the Victorian average.

Older Victorians had, on average, a significantly higher life satisfaction rating (with a score of 8.1 for those aged 65–74 and 8.2 for those aged 75 and over) compared with all Victorians. Conversely, those aged 35–44 and 45–54 had lower life satisfaction ratings on average (with scores of 7.7 for both groups). This pattern was found for both males and females.

Other demographic analysis

Demographic groups with significantly **higher** life satisfaction scores, compared with Victorians overall (score of 7.8), were those:

- with university qualifications (7.9)
- who were retired (8.2)
- with no reported disability (8.0)
- with a household annual income of \$100,000 or more (8.0)
- living in couple households (8.1) or in couple parent households with dependent children (8.0)
- living in large shire (7.9) or small shire (8.0) geographic regions
- living outside the capital city (7.9)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (7.9).

Compared with all Victorians (score of 7.8), demographic groups with **lower** life satisfaction scores were those:

- with TAFE, Certificate or Diploma qualifications (7.7)
- who were unemployed (7.0)
- under 65 with a reported disability (6.8)
- whose sexuality was reported as something other than heterosexual (7.4)
- with a household annual income less than \$20,000 (7.2) or \$20,000–\$39,999 (7.7)
- living in single-person households (7.5), single parent households with dependent children (7.2) or in share or group households (7.5)
- living in outer metropolitan geographic regions (7.7)
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (7.7).

There was no difference observed in satisfaction with life as a whole by language spoken at home or by country of birth.

Perceptions of safety – walking alone during the day and at night

Age and gender analysis

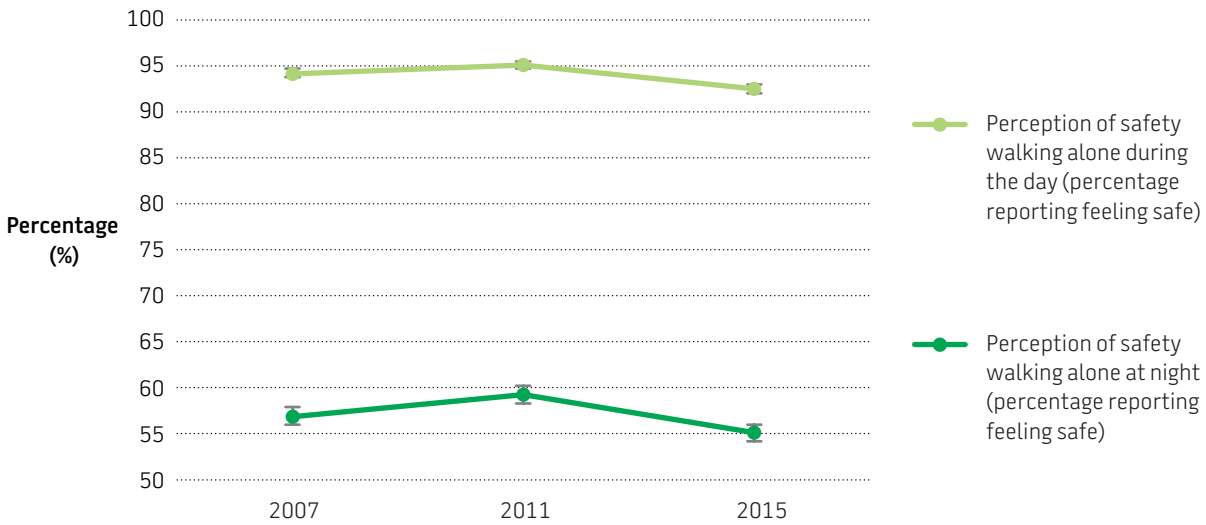
There are marked differences between males and females, and between day and night, in Victorians' feelings of safety. Overall, the proportion of Victorians who reported feeling safe walking alone during the day (92.5% [92.0, 93.0]) was much higher than the proportion who felt safe walking alone at night (55.1% [54.2, 56.0]).

In 2015, Victorians were less likely to report feelings of safety walking alone during the day, compared with the proportion reporting this in 2007 (94.2% [93.8, 94.7]) or in 2011 (95.1% [94.7, 95.5]). In regard to feelings of safety when walking alone after dark, in 2015 and 2007 (56.9% [56.0, 57.9]), Victorians were less likely to report feelings of safety walking alone at night, compared with 2011 (59.3% [58.3, 60.2]). These differences are statistically significant. There was no statistically significant difference between 2015 (55.1% [54.2, 56.0]) and 2007 survey results (56.9% [56.0, 57.9]).³ See Figure 2.2.

³ Interpret with relative caution. See the 'Trends across time' section on page 23 for more information.

2. WELLBEING AND SAFETY

Figure 2.2 Percentage of all Victorians across VicHealth indicator surveys reporting (1) feeling safe walking alone during the day and (2) reporting feeling safe walking alone at night



Note that (a) error bars are 95% confidence intervals, (b) the scale of the ordinate axis only shows half of the full range (0–100) for greater visual clarity.

Males were more likely to report feelings of safety, both during the day (95.4%) and at night (73.8%), compared with the average for all Victorians. There were substantial differences between males and females for feelings of safety in walking alone, both during the day and after dark: the proportion of females reporting that they felt safe walking alone during the day was 89.7% and at night just 37.2%. This latter finding is half the score recorded for males.

Compared with all Victorians, older people also felt less safe:

- 84.3% of those aged 75 and over reported feeling safe walking alone during the day
- 32.5% of those aged 75 and over, and 47.7% of those aged 65–74, reported feeling safe walking alone after dark.

Those aged 45–54 were more likely (at 94.2%) to report feelings of safety walking alone during the day. Similarly, those aged 35–44 and 45–54 were more likely (at 60.2% and 60.9% respectively) to report feelings of safety walking alone in their local area after dark.

For males, older age groups were less likely to report feeling safe, compared with all males. Nine out of 10 (91.3%) males aged 75 and over reported feeling safe walking alone during the day and approximately two-thirds (67.8%) of males aged 65–74, and 53.3% of those aged 75 and over, reported feeling safe walking alone after dark.

For females, a higher proportion of those aged 35–54 reported feeling safe walking alone both during the day (92.5% of those aged 35–44 and 92.5% of those aged 45–54) and at night (42.6% of those aged 35–44 and 42.2% of those aged 45–54), compared with all females. A higher proportion of older females reported feeling less safe, than all females, both walking alone during the day (78.9% of females aged 75 and over) and at night (28.6% of females aged 65–74 and 17.0% of females aged 75 and over), compared with all females.

To some extent, these age-related findings are due to the higher proportion of older respondents (and to a lesser degree, females) reporting they are never alone in this situation (almost half of those aged 75 and over reported they were never alone walking after dark, compared with just 1.4% of those aged 18–24). However, it is not known if these age groups are never alone in these situations due to not feeling safe or for other reasons.

2. WELLBEING AND SAFETY

Table 2.3 Proportion of Victorians who feel safe walking alone in their local area during the day, by age and gender

Age group (years)	Perceptions of safety – walking alone during day								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	94.3	91.7	96.2	89.4	86.3	92.0	91.9	90.0	93.6
25–34	96.3	94.7	97.5	90.4	88.2	92.3	93.3	92.0	94.5
35–44	95.6	93.9	97.0	92.5	90.6	94.1	94.0	92.8	95.1
45–54	95.9	94.4	97.1	92.5	90.9	93.9	94.2	93.1	95.1
55–64	96.7	95.4	97.7	91.1	89.2	92.7	93.8	92.6	94.8
65–74	95.4	93.9	96.7	87.9	85.5	90.0	91.5	90.1	92.8
75+	91.3	87.9	94.0	78.9	75.4	82.2	84.3	81.8	86.5
TOTAL	95.4	94.8	96.0	89.7	88.9	90.5	92.5	92.0	93.0

Table 2.4 Proportion of Victorians who feel safe walking alone in their local area at night, by age and gender

Age group (years)	Perceptions of safety – walking alone after dark								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	72.5	68.4	76.3	36.4	32.2	40.8	54.9	51.8	58.0
25–34	74.0	70.8	77.1	41.8	38.4	45.2	57.9	55.5	60.3
35–44	78.2	75.1	81.0	42.6	39.6	45.7	60.2	57.9	62.5
45–54	80.4	77.8	82.8	42.2	39.4	44.9	60.9	58.9	63.0
55–64	76.1	73.3	78.8	39.2	36.4	42.1	57.2	55.1	59.3
65–74	67.8	64.7	70.8	28.6	25.8	31.6	47.7	45.5	50.0
75+	53.3	48.7	57.8	17.0	14.3	19.9	32.5	29.9	35.3
TOTAL	73.8	72.6	75.0	37.2	36.0	38.4	55.1	54.2	56.0

Other demographic analysis

Safety walking around during the day

Compared with Victorians overall (92.5% felt safe walking alone during the day), demographic groups that were **more** likely to report feelings of safety walking alone in their local area during the day were those:

- with university qualifications (95.5%)
- who were employed (94.8%)
- with no reported disability (93.8%)
- with a household annual income of \$80,000–\$99,999 (95.8%) or \$100,000 or more (96.2%)
- living in couple parent households with dependent children (94.2%)
- living in inner (94.9%) or middle (94.2%) metropolitan geographic regions
- living in large shire (94.2%) or small shire (96.3%) geographic regions
- living outside the capital city (94.2%)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (95.8%).

Compared with Victorians overall (92.5% felt safe walking alone during the day), demographic groups **less** likely to report feelings of safety when walking alone in their local area during the day were those:

- who had completed some high school or less (86.3%)
- who were retired (88.5%)
- mainly speaking a language other than English at home (90.2%)
- from a non-English-speaking country (90.8%)
- with a reported disability (89.5% of those aged under 65 and 83.7% of those over 65)
- with a household annual income of less than \$20,000 (89.3%) or \$20,000–\$39,999 (87.2%)
- living in single-person households (90.5%)
- living in outer metropolitan (88.4%) or interface (89.9%) geographic regions
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (89.2%) or a SEIFA score of 2 (90.3%).

2. WELLBEING AND SAFETY

Safety walking around after dark

Compared with Victorians overall (55.1% felt safe walking at night), demographic groups that were **more** likely to report feelings of safety walking alone in their local area after dark were those:

- with university qualifications (61.0%)
- who were employed (62.0%) or unemployed (64.7%)
- from an English-speaking country (60.6%)
- with no reported disability (57.8%)
- with a household annual income of \$80,000–\$99,999 (62.1%) or \$100,000 or more (67.9%)
- living in households with children (58.2%) or in couple parent households with dependent children (59.4%)
- living in inner metropolitan (64.8%) or middle metropolitan (58.7%) geographic regions
- living in large shire (63.7%) or small shire (70.1%) geographic regions
- living outside the capital city (58.2%)
- with internet access at home (57.5%)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (64.8%).

Compared with Victorians overall (55.1% felt safe walking at night), demographic groups that were **less** likely to report feelings of safety walking alone in their local area after dark were those:

- who had completed some high school or less (40.7%)
- who reported their main activity as ‘home duties’ (41.2%) or who were retired (39.2%)
- mainly speaking a language other than English at home (50.8%)
- from a non-English-speaking country (51.2%)
- with a reported disability (50.2% of those aged under 65 and 34.6% of those over 65)
- with a household annual income of less than \$20,000 (46.2%) or \$20,000–\$39,999 (41.7%)
- living in single-person households (46.5%) or single parent households with dependent children (46.2%)
- living in outer metropolitan (42.6%) or interface (50.3%) geographic regions
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (46.6%), a SEIFA score of 2 (49.5%) or a SEIFA score of 3 (52.0%).

Table 2.5 Summary of wellbeing and safety indicators, by demographic

	Subjective wellbeing [range 0–100]			Satisfaction with life as a whole [range 0–10]			Perceptions of safety – walking alone during day			Perceptions of safety – walking alone after dark		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	77.3	77.1	77.6	7.8	7.8	7.8	92.5	92.0	93.0	55.1	54.2	56.0
Gender												
Male	76.7	76.3	77.1	7.7	7.7	7.8	95.4	94.8	96.0	73.8	72.6	75.0
Female	77.9	77.6	78.3	7.9	7.8	7.9	89.7	88.9	90.5	37.2	36.0	38.4
Age												
18–24	77.9	77.1	78.6	7.7	7.7	7.8	91.9	90.0	93.6	54.9	51.8	58.0
25–34	77.1	76.5	77.7	7.7	7.7	7.8	93.3	92.0	94.5	57.9	55.5	60.3
35–44	76.0	75.4	76.6	7.7	7.6	7.8	94.0	92.8	95.1	60.2	57.9	62.5
45–54	76.2	75.6	76.7	7.7	7.6	7.8	94.2	93.1	95.1	60.9	58.9	63.0
55–64	76.7	76.1	77.3	7.7	7.7	7.8	93.8	92.6	94.8	57.2	55.1	59.3
65–74	79.6	79.0	80.2	8.1	8.0	8.2	91.5	90.1	92.8	47.7	45.5	50.0
75+	80.9	80.1	81.7	8.2	8.1	8.3	84.3	81.8	86.5	32.5	29.9	35.3
Education												
Some high school or less	76.8	76.1	77.5	7.8	7.7	7.9	86.3	84.7	87.9	40.7	38.5	42.8
Completed high school	77.3	76.6	78.0	7.8	7.7	7.9	91.3	89.6	92.8	53.8	51.0	56.5
TAFE/Certificate/Diploma	76.2	75.7	76.7	7.7	7.6	7.7	92.8	91.9	93.7	57.1	55.4	58.7
University	78.4	78.0	78.7	7.9	7.9	8.0	95.5	94.8	96.1	61.0	59.4	62.5
Main activity												
Employed	77.7	77.4	78.0	7.8	7.8	7.9	94.8	94.2	95.3	62.0	60.8	63.1
Unemployed	70.7	68.8	72.5	7.0	6.7	7.2	93.5	90.2	96.0	64.7	58.9	70.1
Student	77.7	76.7	78.6	7.7	7.6	7.8	91.2	88.4	93.5	54.0	49.7	58.2
Home duties	78.5	77.4	79.5	7.9	7.8	8.0	90.2	87.7	92.4	41.2	37.3	45.2
Retired	79.9	79.4	80.4	8.2	8.1	8.2	88.5	87.1	89.8	39.2	37.4	41.0
Main language spoken at home												
English	77.7	77.5	78.0	7.8	7.8	7.9	93.3	92.8	93.8	56.7	55.7	57.7
Other	76.1	75.6	76.7	7.7	7.6	7.8	90.2	89.0	91.4	50.8	48.7	52.8
Country of birth												
Australian born	77.6	77.3	77.9	7.8	7.8	7.8	93.0	92.4	93.6	56.0	54.9	57.1
English-speaking country	77.9	77.2	78.7	7.9	7.8	8.0	94.0	92.3	95.4	60.6	57.4	63.7
Non-English speaking country	76.4	75.9	76.9	7.8	7.7	7.9	90.8	89.6	91.9	51.2	49.1	53.2

2. WELLBEING AND SAFETY

Table 2.5 Summary of wellbeing and safety indicators, by demographic

	Subjective wellbeing [range 0–100]			Satisfaction with life as a whole [range 0–10]			Perceptions of safety – walking alone during day			Perceptions of safety – walking alone after dark		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	77.3	77.1	77.6	7.8	7.8	7.8	92.5	92.0	93.0	55.1	54.2	56.0
Self-reported disability												
Reported disability – under 65 years	68.6	67.8	69.5	6.8	6.7	6.9	89.5	87.8	91.0	50.2	47.7	52.7
Reported disability – over 65 years	75.9	75.0	76.9	7.8	7.7	7.9	83.7	81.3	85.9	34.6	31.9	37.4
No disability reported	79.0	78.7	79.2	8.0	7.9	8.0	93.8	93.3	94.4	57.8	56.7	58.8
Aboriginal and/or Torres Strait Islander status												
Aboriginal and/or Torres Strait Islander	73.0	69.5	76.4	7.5	7.1	7.8	86.1	76.3	92.9	48.7	38.4	59.1
Non-Aboriginal and/or Torres Strait Islander	77.4	77.1	77.6	7.8	7.8	7.8	92.6	92.1	93.1	55.2	54.3	56.1
Sexuality												
Heterosexual	77.5	77.3	77.8	7.8	7.8	7.9	92.7	92.2	93.2	55.4	54.4	56.3
Other	73.6	72.4	74.9	7.4	7.2	7.5	91.0	88.1	93.4	55.8	51.3	60.2
Income												
Less than \$20,000	71.6	70.2	72.9	7.2	7.1	7.4	89.3	86.5	91.6	46.2	42.3	50.2
\$20,000–\$39,999	75.5	74.8	76.2	7.7	7.6	7.7	87.2	85.7	88.7	41.7	39.7	43.8
\$40,000–\$59,999	76.4	75.8	77.1	7.7	7.6	7.8	93.6	92.2	94.8	57.3	54.7	59.9
\$60,000–\$79,999	77.5	76.8	78.1	7.8	7.8	7.9	94.3	92.7	95.6	56.5	53.6	59.4
\$80,000–\$99,999	77.8	77.1	78.5	7.8	7.8	7.9	95.8	94.3	96.9	62.1	59.1	65.2
\$100,000 or more	79.9	79.6	80.3	8.0	8.0	8.1	96.2	95.4	96.9	67.9	66.1	69.7
Household structure												
Single person household	73.7	72.9	74.5	7.5	7.4	7.6	90.5	89.0	91.8	46.5	44.1	48.9
Couple household	79.7	79.3	80.1	8.1	8.1	8.2	92.2	91.2	93.1	54.4	52.7	56.1
Household with children	77.9	77.6	78.3	7.9	7.8	7.9	93.6	92.8	94.3	58.2	56.7	59.6
– Single parent with dependent children	71.5	70.0	73.0	7.2	7.0	7.4	92.2	88.6	94.9	46.2	40.7	51.8
– Couple parent with dependent children	78.7	78.3	79.1	8.0	7.9	8.0	94.2	93.2	95.0	59.4	57.6	61.2
Share or group household	74.9	74.0	75.8	7.5	7.4	7.6	93.1	91.4	94.6	58.4	55.2	61.5
Geography												
Metropolitan	76.8	76.4	77.1	7.8	7.7	7.8	92.9	92.2	93.6	55.7	54.3	57.0
– Inner metro	77.4	76.6	78.1	7.8	7.7	7.9	94.9	93.2	96.2	64.8	61.6	68.0
– Middle metro	77.2	76.8	77.6	7.8	7.7	7.8	94.2	93.4	95.0	58.7	57.0	60.4
– Outer metro	75.4	74.6	76.2	7.7	7.6	7.8	88.4	86.4	90.1	42.6	39.7	45.5
Interface	77.2	76.6	77.7	7.8	7.7	7.9	89.9	88.5	91.1	50.3	48.1	52.4
Regional city	78.0	77.3	78.6	7.9	7.8	8.0	93.8	92.6	94.9	52.0	49.5	54.5
Large shire	79.0	78.5	79.5	7.9	7.9	8.0	94.2	93.4	95.0	63.7	62.0	65.4
Small shire	79.8	79.2	80.3	8.0	7.9	8.0	96.3	95.6	97.0	70.1	68.3	71.8
Location												
Capital city	76.9	76.7	77.2	7.8	7.7	7.8	92.0	91.4	92.6	54.2	53.1	55.3
Rest of state	78.5	78.1	78.9	7.9	7.8	8.0	94.2	93.5	94.9	58.2	56.7	59.7
Internet at home												
Yes	77.5	77.3	77.7	7.8	7.8	7.8	93.5	93.0	94.0	57.5	56.6	58.5
SEIFA (index of disadvantage)												
1 – Low (most disadvantaged)	75.8	75.2	76.5	7.7	7.6	7.7	89.2	87.7	90.6	46.6	44.5	48.7
2	76.7	76.1	77.3	7.8	7.7	7.9	90.3	88.9	91.7	49.5	47.3	51.7
3	76.7	76.1	77.3	7.8	7.7	7.9	91.7	90.4	92.8	52.0	49.8	54.1
4	77.7	77.2	78.3	7.8	7.8	7.9	93.8	92.6	94.8	57.2	55.0	59.4
5 – High (least disadvantaged)	78.8	78.4	79.2	7.9	7.9	8.0	95.8	95.0	96.5	64.8	63.1	66.6

No data = Relative standard error above 50%, estimate not reported

Summary and conclusion

The average wellbeing score for all Victorians was 77.3 out of 100, with no significant change in subjective wellbeing for Victorians between 2011 and 2015. This is consistent with the results for the Australian population reported by the Australian Unity Wellbeing Index (2015). However there was an increase in subjective wellbeing between 2007 and 2011 and this increase has been sustained in 2015.

Females, people aged 65 and over, couple households, small-town residents and those with a high household income reported higher levels of wellbeing, compared with the Victorian average. People who were unemployed, single, middle-aged (aged 35–54), of non-English-speaking background, Aboriginal and/or Torres Strait Islander, reported a sexuality other than heterosexual, have a disability or have a low household income reported lower wellbeing scores and lower life satisfaction, compared with Victorians overall.

The average life satisfaction reported by Victorians in this survey was 7.8, which is above the overall OECD international average (6.5). Older Victorians had, on average, a significantly higher life satisfaction rating, with a score of 8.1 for those aged 65–74 and 8.2 for those aged 75 and over, compared with all Victorians. This is consistent with measures of life satisfaction captured in other Western countries where older people report higher scores, following a slight ‘slump’ in middle age (ONS 2015). However, there are groups in Victoria who report significantly less life satisfaction than the Victorian average including the middle aged, unemployed, disabled, people with a sexuality other than heterosexual, low income earners, single person, single parent and group households, people living in outer metropolitan areas and those who are most disadvantaged according to SEIFA.

The majority of Victorians reported feeling safe walking alone during the day (92.5%), compared with only half of the population (55.1%) who felt safe walking alone after dark. This striking disparity in the perception of safety is likely to be related to significant differences between males and females across Victoria. Males were more likely than females to report feeling safe during both the day and at night, but the difference between proportions of males to females agreeing they felt safe during the day was only 5.7% (95.4% of males felt safe, 89.7% of females felt safe), compared with a difference of 36.6% for feeling safe after dark (73.8% of males, 37.2% of females).

Victorians’ feelings of safety walking alone during the day appear to have been similar in 2007 and 2011 but have slightly declined in 2015, although it is important to note that results indicate that more than nine out of 10 Victorians feel safe walking alone during the day. In regard to walking alone after dark, the proportion of Victorians who feel safe slightly increased from 2007 to 2011 but returned back to 2007 levels in 2015. Overall slightly more than half the population report safe walking alone after dark since 2007.

The 2015 survey has identified demographic groups who report lower feelings of safety in their local area, including people who are single, retired, living with a disability, from a non-English-speaking background, those with low household income, the most socioeconomically disadvantaged and people who live in an outer metropolitan region.

Overall, the survey results show changes in general wellbeing and perceptions of safety over time. However, these findings need to be interpreted with caution given the amendment to survey design in 2015. Particular groups had results significantly lower than the state average across all four wellbeing and safety domains: people with a disability, low income earners, residents of outer metropolitan Melbourne and the most socioeconomically disadvantaged. These results indicate that a social gradient in general wellbeing and perceptions of safety exists between advantaged and disadvantaged communities in Victoria.

VicHealth guides providing evidence-informed actions that can help improve perceptions of safety and other factors related to general wellbeing are available at www.vichealth.vic.gov.au/localgovernmentguides.

References

- Australian Bureau of Statistics (ABS) 2001, ‘Chapter 4: Health - defining health’ in *Measuring wellbeing: Frameworks for Australian social statistics, 2001*, ABS cat. no. 4160.0, ABS, Canberra.
- Australian Bureau of Statistics (ABS) 2010, *Australian social trends: Who’s afraid? Feelings of personal safety*, ABS cat. no. 4102.0, ABS, Canberra.
- Australian Unity Wellbeing Index 2015. What makes us happy? (3rd ed.). Deakin University: Geelong, Australia, viewed on 10 May 2016, <www.acqol.com.au/reports/survey-reports/what-makes-us-happy-3rd-edition.pdf>.
- Baum, FE, Ziersch, AM, Zhang, G & Osborne, K 2009, ‘Do perceived neighbourhood cohesion and safety contribute to neighbourhood differences in health?’, *Health & Place*, vol. 15, no. 4, pp. 925–34.
- Cubbin, C, Pedregon, V, Egerter, S & Braveman, P 2008, *Where we live matters for our health: Neighborhoods and health. Issue brief 3: Neighbourhoods and health*, Robert Wood Johnson Foundation, San Francisco.
- Cummins, R 2010, ‘Subjective wellbeing, homeostatically protected mood and depression: A synthesis’, *Journal of Happiness Studies*, vol. 11, issue 1, pp. 1–17.
- Cummins, RA, 2014. ‘Australia, quality of life’. *Encyclopedia of quality of life and well-being research*, pp. 303–309.
- Cummins, RA, Eckersley, R, Pallant, J, Van Vugt, J & Misajon, R 2003, ‘Developing a national index of subjective wellbeing: The Australian Unity Wellbeing Index’, *Social Indicators Research*, vol. 64, no. 2, pp. 159–90.
- Cummins, RA, Mpofu, E & Machina, M 2015, ‘Quality of community life indicators’. In E. Mpofu (ed.), *Community oriented health services: Practices across disciplines*, Springer, New York pp. 165–81.

2. WELLBEING AND SAFETY

Dodge, R, Daly, AP, Huyton, J & Sanders, L 2012, 'The challenge of defining wellbeing', *International Journal of Wellbeing*, vol. 2, no. 3, pp. 222–35.

Friedli, L 2009, *Mental health, resilience and inequalities*, World Health Organization, WHO Regional Office for Europe, Copenhagen.

Giles-Corti, B & Donovan, R 2002, 'The relative influence of individual, social and physical environment determinants of physical activity', *Social Science & Medicine*, vol. 54, no. 12, pp. 1793–1812.

International Wellbeing Group (IWBG) 2013, *Personal Wellbeing Index: User manual*, 5th edn, Australian Centre on Quality of Life, Deakin University, Deakin University, Melbourne.

Mead, R & Cummins, R 2010, *What makes us happy? Ten years of the Australian Unity Wellbeing Index*, Australian Unity, Deakin University, Melbourne.

Office for National Statistics (ONS) 2015, *Measuring national well-being: Insights into loneliness, older people and well-being, 2015*, viewed 6 October 2016, <www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/measuringnationalwellbeing/2015-10-01>.

Organisation for Economic Co-operation and Development (OECD) 2015, *How's life? 2015: Measuring well-being*, OECD Publishing, Paris, viewed on 23 May 2016, <www.oecd.org/statistics/how-s-life-23089679.htm>.

Ross, CE 1993, 'Fear of victimization and health', *Journal of Quantitative Criminology*, vol. 9, issue 2, pp. 2159–75.

Stafford, M, Chandola, T & Marmot, M 2007, 'Association between fear of crime and mental health and physical functioning', *American Journal of Public Health*, vol. 97, no. 11, pp. 2076–81.

Warburton, DE, Nicol, CW & Bredin, SS 2006, 'Health benefits of physical activity: The evidence', *Canadian Medical Association Journal*, vol. 174, no. 6, pp. 801–09.



3. Mental wellbeing

Mental health and wellbeing are fundamental to our individual and collective ability as humans to think, emote, interact with each other, earn a living and enjoy life. They directly underpin the core human and social values of independence of thought and action, happiness, friendship and solidarity (WHO 2014).

Mental wellbeing has been defined as:

“... a state of wellbeing in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community” (WHO 2014).

Higher levels of mental wellbeing are associated with increased learning, creativity and productivity, more pro-social behaviours, positive social relationships and improved physical health and greater life expectancy (Barry 2009; Huppert & So 2013).

Conversely, mental illness is defined as:

“... disturbances of mood or thought that can affect behaviour and distress the person or those around them, so the person often has trouble functioning normally. They include anxiety disorders, depression, psychosis and schizophrenia” (AIHW 2016).

While mental wellbeing and mental illness are considered to be distinct concepts, many factors that promote mental wellbeing are also factors that may protect against mental illness (Bryant et al. 2015, Burns et al. 2011). These factors include resilience, social connection and cohesion and participation in respectful and equal relationships.

Resilience

Resilience is a fundamental component of mental wellbeing that enables people to cope with adversity and to reach their full potential (Friedli 2009). It is described as a person’s capacity to successfully overcome significant challenges or negative outcomes and restore their previous level of function (Weinberg et al. 2016), thus avoiding mental ill-health.

It is generally believed that resilience develops over time, and is important because it provides people with the resources to handle the stresses involved in life transitions and builds the capacity of those at risk of mental illness to better manage it. Resilience is a dynamic quality that evolves through the interaction between people, families, communities and their environment. Its presence in high levels is associated with a lower risk of mental health problems and higher levels of mental wellbeing (Friedli 2009).

Factors that have been shown to facilitate resilience at the individual level include temperament, self-esteem, self-efficacy, confidence, social skills, emotion regulation and problem solving. At the family/friends level, factors include secure attachment, family environment, quality of parenting, safety and economic security, and respectful relationships, among others. At the broader community and organisation level, factors include connections to clubs, schools and religious groups, opportunities for social and economic participation, and safe, cohesive and connected communities (Reavley et al. 2015, Tollit et al. 2015). These factors are all believed to contribute to the development and maintenance of social capital.

Social capital

Social capital is an overarching term that refers to social connections and all the benefits they generate. It includes the concepts of trust, social connection and social cohesion (Office for National Statistics 2016).

In relation to neighbourhoods, these elements of social capital are interconnected and have implications for mental wellbeing. Emerging research evidence suggests that neighbourhood cohesion impacts on mental health and wellbeing (Elliott et al. 2014). The perception of being part of a cohesive neighbourhood can also counteract adverse health effects resulting from local socioeconomic disadvantage (Robinette et al. 2013), although this association may vary according to context (Kawachi 2006).

Mutual trust and solidarity among neighbours determines how much people are willing to cooperate and help one another (Coleman 1990, Putnam 1993), and is a core component of social capital. The perception of a neighbourhood being 'close-knit' (held tightly together through social and cultural ties) indicates high levels of neighbourhood trust and social cohesion (Strahilevitz 2003). People who are connected and actively engaged in their local communities are more likely to feel positive about their neighbourhood, and vice versa. Neighbours who trust one another are more likely to work more effectively together for the collective advantage and, generally, to have higher life satisfaction (Office for National Statistics 2016).

Factors that could influence how a person feels about their neighbourhood include the physical, human and cultural characteristics of a place, as well as socioeconomic factors, age, ethnicity and the shared norms and values of the community. For example, in the UK, ethnicity, geography and socioeconomic status have all been found to have an impact on a person's feeling of trust and belonging and on their willingness to help within their neighbourhood (Siegler 2014).

More broadly, living in communities that provide access to affordable housing, healthcare, education, stable employment and social connectedness can significantly improve our mental wellbeing (Reavley et al. 2015, Tollit et al. 2015). Social connections to clubs, schools, faith and interest groups have a positive influence on wellbeing, social cohesion and social capital (Friedli 2009, Mead & Cummins 2010).

Gender equality within relationships

The ability to participate in equal and respectful relationships is an important contributing factor to mental health and wellbeing (UN Women 2015; Webster 2016). Conversely, intimate partner violence is detrimental to physical and mental health (Webster 2016).

Male intimate partner violence contributes more to the disease burden for women aged 18 to 44 years than any other well-known risk factors like tobacco use, high cholesterol or use of illicit drugs (Webster 2016). Throughout Australia, two in five women (40.8%) have experienced physical and/or sexual violence from men known to them; one in six (16.9%) by a current or previous cohabiting intimate partner, and one in ten (11.3%) by a boyfriend or date (ABS 2013).

Exposure to partner violence has also been associated with an increased risk of a range of health problems including suicide, anxiety, depression and other mental health problems; to substance misuse; and to reproductive health problems such as low infant birth weight and sexually transmitted infection (Rees et al. 2011, VicHealth 2004, WHO 2013).

In Australia, the cost to society of violence against women and their children is \$21.7 billion annually. If no further action is taken to prevent violence against women and their children, costs will accumulate to over \$323 billion over the 30 years to 2045 (PricewaterhouseCoopers 2015).

Violence against women is more likely to occur in contexts of unequal relationships between men and women (Webster and Flood 2015) or when there are more rigid distinctions enforced between the roles of men and women (Flood & Pease 2006; Our Watch 2015; UN Women 2010). Violence is also more common in families and relationships in which men control decision-making (Gage 2005; Vézina & Hébert 2007) and less so in those relationships in which women have a greater level of agency (Gage 2005; Vyas & Watts 2009).

In Australia and internationally, efforts to reduce the prevalence of violence against women involve a significant focus on the promotion and improvement of gender equality. Gender equality is defined as the equal treatment of women and men in laws and policies, and equal access to resources and services within families, communities and society (WHO 2010). Addressing the social norms, social practices and social structures that produce and maintain gender inequality is a pivotal strategy to reduce violence and to increase equal and respectful relationships at every level (UN Women 2015).

The attitudes and beliefs held by the broader community about gender roles and relationships, and also the acceptability of intimate partner violence, have an important bearing on the prevalence of violence. Equally, community attitudes that favour equality and non-violence can contribute to the development of a society in which violence is less likely to occur (VicHealth 2014). Attitudes toward gender equality within relationships are therefore an important measure of community support for respectful and equal relationships, which are a key protective factor for mental wellbeing.

VicHealth Indicators: Mental wellbeing

- Resilience (range 0–8)
- Perceptions of neighbourhood – people are willing to help each other
- Perceptions of neighbourhood – this is a close-knit neighbourhood
- Perceptions of neighbourhood – people can be trusted
- Low gender equality in relationships score

Five mental wellbeing indicators are reported. The ‘resilience’ indicator is a score on a scale of 0–8, where 8 represents the highest possible level of resilience. The indicator is derived using the abbreviated Connor–Davidson Resilience Scale (CD-RISC 2) (Vaishnavi et al. 2007), a two-item measure with published psychometric properties.

Three social capital indicators relate to social connection and people’s perception of their local neighbourhood. Each indicator is represented by a score on a single item statement. The statements are:

- “People in this neighbourhood can be trusted.”
- “This is a close-knit neighbourhood.”
- “People around here are willing to help their neighbours.”

Each item is scored using a 5-point Likert scale ranging from ‘Strongly agree’ to ‘Strongly disagree’. These items have previously been used in Australia in the Household, Income and Labour Dynamics in Australia (HILDA) survey (waves 6, 10, 14) and first appeared in the Project on Human Development in Chicago Neighborhoods (wave 3) (Earls et al. 2007).

The fifth mental wellbeing indicator examines attitudes to gender equality in relationships. The indicator is based on the Gender Inequality in Relationships Scale (Harris et al. 2015), which asks respondents about their level of agreement with the following statements.

- “Men should take control in relationships and be the head of the household.”
- “Women prefer a man to be in charge of the relationship.”

Scores were derived from these two items measured on 5-point Likert scales, ranked from ‘Strongly agree’ to ‘Strongly disagree’, which were then combined and converted into scores out of 100. Scores on this indicator were divided into three categories, where ‘low’ represents a score equal to or less than 70, ‘medium’ represents a score of 80 or 90 and ‘high’ represents a score of 100. The proportion of those with a low gender equality score was used as an indicator of support for gender equality in relationships for the VicHealth Indicators Survey 2015.

Resilience

Age and gender analysis

The Victorian average resilience score was 6.4 out of 8. Overall, there were no differences between males and females. However, there were some differences between the various age groups, with younger cohorts having significantly lower-than-average resilience scores and older age groups (those up to 74 years) having significantly higher-than-average resilience scores. More specifically, those aged 18–24 (with a score of 6.1) and those aged 25–34 (with a score of 6.2) had lower-than-average resilience scores. Those aged 45–54 and 55–64 (with scores of 6.5) and those aged 65–74 (with a score of 6.7) had higher-than-average resilience scores. A similar pattern was apparent for both males and females.

Other demographic analysis

Compared with all Victorians (score of 6.4), groups with significantly **higher** resilience scores were those:

- who were employed (6.5) or retired (6.5)
- mainly speaking English at home (6.6)
- who were Australian-born (6.6)
- from an English-speaking country (6.7)
- with no reported disability (6.5)
- with a household annual income of \$80,000–\$99,999 (6.5) or \$100,000 or more (6.8)
- living in couple households (6.6)
- living in regional city (6.6), large shire (6.6) or small shire (6.7) geographic regions
- living outside the capital city (6.6)
- with a high SEIFA score (a Socio-Economic Indexes for Areas score of 5 – least disadvantaged) or a SEIFA score of 4 (both groups with a resilience score of 6.5).

Table 3.1 Average resilience score, by age and gender

Age group (years)	Resilience [range 0–8]								
	Males			Females			Persons		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI
18–24	6.1	5.9	6.2	6.0	5.9	6.2	6.1	6.0	6.2
25–34	6.2	6.0	6.3	6.3	6.2	6.4	6.2	6.1	6.3
35–44	6.4	6.3	6.5	6.3	6.2	6.4	6.4	6.3	6.4
45–54	6.5	6.4	6.6	6.5	6.4	6.6	6.5	6.4	6.6
55–64	6.6	6.5	6.7	6.5	6.4	6.6	6.5	6.5	6.6
65–74	6.7	6.6	6.8	6.6	6.5	6.8	6.7	6.6	6.7
75+	6.4	6.2	6.6	6.6	6.4	6.7	6.5	6.4	6.6
Total	6.4	6.3	6.4	6.4	6.3	6.4	6.4	6.4	6.4

3. MENTAL WELLBEING

When compared with all Victorians (score of 6.4), groups with significantly **lower** resilience scores were those:

- with a high school qualification only (6.2)
- who were unemployed persons (5.5) or students (5.9)
- mainly speaking a language other than English at home (5.7)
- from a non-English-speaking country (5.7)
- under 65 with a reported disability (5.9)
- whose sexuality was reported as something other than heterosexual (6.0)
- with a household annual income under \$20,000 (5.8) or \$20,000–\$39,999 (6.1)
- living in single-person (6.3) or in share or group households (6.0)
- living in metropolitan (6.3) or outer metropolitan (6.1) geographic regions
- with a low SEIFA score (a Socio-Economic Indexes for Areas score of 1 – most disadvantaged) (a resilience score of 6.1).

There was no difference observed by Aboriginal and/or Torres Strait Islander status.

Social capital and perceptions of neighbourhood

Age and gender analysis

At a state level:

- three-quarters (74.1%) agreed that people in their neighbourhood were ‘willing to help each other out’
- just over seven out of 10 (71.9%) Victorians agreed that people in their neighbourhood ‘could be trusted’
- just over six out of 10 (61.0%) agreed that they lived in ‘a close-knit neighbourhood’.

Overall, there were no gender differences noted for any of the three ‘perception of neighbourhood’ indicators. There were, however, a number of age differences: those aged 65 or over were more likely to affirm a sense of neighbourhood cohesion across all three indicators, while those under 35 were less likely to do so.

Compared with all Victorians, those aged 25–34 were **less likely** to report a sense of neighbourhood cohesion:

- 68.5% of this group agreed that people in their neighbourhood were ‘willing to help each other’
- 64.5% agreed that people in their neighbourhood ‘could be trusted’
- 53.2% agreed they lived in ‘a close-knit neighbourhood’.

Conversely, those aged 75 or over were **most likely** to report a sense of neighbourhood cohesion:

- 82.8% of this group agreed that people in their neighbourhood were ‘willing to help each other’
- 81.8% agreed that people in their neighbourhood ‘could be trusted’
- 73.5% agreed that they lived in ‘a close-knit neighbourhood’.

Table 3.2 Proportion of Victorians agreeing that people in their neighbourhood were ‘willing to help each other out’, by age and gender

Age group (years)	Perceptions of neighbourhood – people are willing to help each other								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	67.8	63.6	71.8	72.5	68.3	76.4	70.1	67.2	72.9
25–34	67.0	63.6	70.3	69.9	66.6	73.0	68.5	66.1	70.7
35–44	73.6	70.3	76.7	74.5	71.7	77.2	74.0	71.9	76.1
45–54	74.4	71.6	77.1	76.5	73.9	79.0	75.5	73.6	77.3
55–64	73.3	70.4	76.1	77.0	74.2	79.5	75.2	73.2	77.1
65–74	77.8	74.9	80.5	80.3	77.4	82.9	79.1	77.1	81.0
75+	80.9	76.8	84.6	84.3	81.0	87.2	82.8	80.3	85.2
Total	72.6	71.4	73.9	75.6	74.4	76.7	74.1	73.3	75.0

3. MENTAL WELLBEING

Table 3.3 Proportion of Victorians agreeing that people in their neighbourhood ‘could be trusted’, by age and gender

Age group (years)	Perceptions of neighbourhood – people can be trusted								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	65.6	61.3	69.6	66.4	62.0	70.6	66.0	63.0	68.9
25–34	63.8	60.3	67.2	65.0	61.7	68.3	64.5	62.1	66.8
35–44	71.9	68.6	75.1	70.3	67.4	73.2	71.1	68.9	73.2
45–54	73.4	70.5	76.1	72.7	70.1	75.3	73.0	71.1	74.9
55–64	74.8	71.9	77.5	75.1	72.3	77.7	74.9	73.0	76.8
65–74	79.9	77.2	82.4	79.8	77.1	82.4	79.9	78.0	81.7
75+	80.3	76.3	84.0	82.7	79.2	85.9	81.8	79.2	84.2
Total	71.6	70.3	72.8	72.1	70.9	73.3	71.9	71.0	72.7

Table 3.4 Proportion of Victorians agreeing that they lived in ‘a close-knit neighbourhood’, by age and gender

Age group (years)	Perceptions of neighbourhood – this is a close-knit neighbourhood								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	54.2	49.8	58.5	56.6	52.1	61.0	55.4	52.3	58.5
25–34	52.7	49.1	56.2	53.7	50.2	57.1	53.2	50.7	55.7
35–44	60.5	56.9	63.9	63.1	60.0	66.1	61.8	59.5	64.1
45–54	61.2	58.1	64.2	65.3	62.5	68.0	63.3	61.2	65.3
55–64	61.4	58.3	64.4	62.5	59.6	65.4	62.0	59.9	64.1
65–74	62.9	59.7	66.0	69.1	66.0	72.0	66.0	63.8	68.2
75+	71.8	67.5	75.8	75.0	71.2	78.5	73.5	70.7	76.2
Total	59.5	58.1	60.8	62.5	61.3	63.8	61.0	60.1	61.9

Other demographic analyses

‘People in this neighbourhood are willing to help each other’

Compared with Victorians overall (74.1% agreed), groups that were **more likely** to agree that people in their neighbourhood were ‘willing to help each other’ were those:

- who were retired (80.6%)
- over 65 with a reported disability (77.9%)
- with a household annual income of \$100,000 or more (77.6%)
- living in couple households (77.0%) or couple parent households with dependent children (77.6%)
- living in large shire (85.1%) or small shire (88.3%) geographic regions
- living outside the capital city (81.3%)
- with a high SEIFA score (a Socio-Economic Indexes for Areas score of 5 – least disadvantaged) (76.7%).

Compared with Victorians overall (74.1% agreed), demographic groups **less likely** to agree that people in their neighbourhoods were ‘willing to help each other’ were those:

- mainly speaking a language other than English at home (69.8%)
- from a non-English-speaking country (71.3%)
- under 65 with a reported disability (65.4%)
- whose sexuality was reported as something other than heterosexual (67.4%)
- with household annual income under \$20,000 (65.8%)
- living in share or group households (66.2%)
- living in metropolitan (71.9%), inner metropolitan (67.4%), outer metropolitan (70.1%) or interface (71.3%) geographic regions
- living in the state’s capital city (71.9%)
- with a low SEIFA score (a Socio-Economic Indexes for Areas score of 1 – most disadvantaged) (70.2%).

There were no differences in levels of agreement with the statement by education or Aboriginal and/or Torres Strait Islander status.

3. MENTAL WELLBEING

'People can be trusted'

Compared with Victorians overall (71.9% agreed), there were some differences by demographic characteristics in agreement that people in the local neighbourhood 'can be trusted'. Groups that were **more likely** to agree were those:

- who were retired (80.7%)
- over 65 with a reported disability (79.1%)
- with a household annual income of \$100,000 or more (75.4%)
- living in couple households (74.7%) or couple parent households with dependent children (74.8%)
- living in middle metropolitan (74.9%), large (82.4%) or small shire geographic regions (85.9%)
- living outside the capital city (78.2%)
- with a high SEIFA score (a Socio-Economic Indexes for Areas score of 5 – least disadvantaged) or a SEIFA score of 4 (78.5% and 76.1%, respectively).

Compared with Victorians overall (71.9% agreed), demographic groups **less likely** to agree with the statement that 'people in this neighbourhood can be trusted' were those:

- who were unemployed (64.3%) or students (66.9%)
- mainly speaking a language other than English at home (68.3%)
- from a non-English-speaking country (69.0%)
- under 65 with a reported disability (64.8%)
- whose sexuality was reported as something other than heterosexual (66.5%)
- with a household annual income under \$20,000 (63.1%)
- living in single parent households with dependent children (61.6%) or in share or group households (66.3%)
- living in inner metropolitan (66.9%), outer metropolitan (64.6%) or interface (66.9%) geographic regions
- living in the state's capital city (69.9%)
- with a low SEIFA score (a Socio-Economic Indexes for Areas score of 1 – most disadvantaged) (64.6%) or a SEIFA score of 3 (67.4%).

There were no differences in levels of agreement with the statement by education or Aboriginal and/or Torres Strait Islander status.

'This is a close-knit neighbourhood'

Compared with Victorians overall (61.0% agreed), demographic groups **more likely** to agree that they lived in a 'close-knit neighbourhood' were those:

- who had completed some high school or less (66.9%)
- who were retired (69.8%)
- over 65 with a reported disability (68.7%)
- living in couple parent households with dependent children (65.0%)
- living in large shire (75.0%) or small shire (81.9%) geographic regions
- living outside the capital city (70.1%).

Compared with all Victorians (61.0% agreed), demographic groups **less likely** to agree that they lived in a 'close-knit neighbourhood' were those:

- who were students (53.8%)
- under 65 with a reported disability (53.8%)
- whose sexuality was reported as something other than heterosexual (54.7%)
- with a household annual income under \$20,000 (55.3%)
- living in share or group households (52.5%)
- living in metropolitan (58.2%), inner metropolitan (50.8%) or interface (57.7%) geographic regions
- living in the state's capital city (58.2%)
- with a SEIFA (Socio-Economic Indexes for Areas) score of 3 (57.6%).

There were no differences in levels of agreement with this statement by language spoken at home, country of birth or Aboriginal and/or Torres Strait Islander status.

3. MENTAL WELLBEING

Table 3.5 Proportion of Victorians with low support for gender equality in relationships, by age and gender

Age group (years)	Low gender equality score								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	52.9	48.6	57.3	34.3	30.1	38.7	43.9	40.8	47.0
25–34	50.0	46.4	53.6	30.6	27.5	33.8	40.2	37.8	42.7
35–44	45.5	42.0	49.1	27.2	24.4	30.1	36.2	34.0	38.6
45–54	38.6	35.6	41.6	22.1	19.7	24.6	30.1	28.2	32.1
55–64	38.9	35.8	42.0	22.0	19.5	24.6	30.3	28.3	32.4
65–74	38.9	35.8	42.2	24.0	21.2	27.0	31.3	29.1	33.5
75+	42.7	38.2	47.3	33.2	29.3	37.2	37.2	34.2	40.2
Total	44.4	43.0	45.8	27.3	26.1	28.5	35.7	34.8	36.6

Gender equality within relationships

Age and gender analysis

Overall, approximately one-third (35.7%) of Victorians held low levels of support for equal relationships between women and men (represented by a ‘low gender equality in relationships score’). A higher proportion of both males and younger Victorians held low levels of support for equal relationships between women and men. Just over four out of 10 (44.4%) males had low levels of support for equal relationships between women and men, compared to 27.3% of females.

The proportion of those aged 18–24 with low levels of support for equal relationships between women and men was 43.9%, significantly higher than for all Victorians (35.7%). This was particularly marked among young males, with just over half (52.9%) of males aged 18–24 showing low levels of support for gender equality in relationships.

Fewer of those aged 45–54 (30.1%), 55–64 (30.3%) and 65–74 (31.3%) reported low support for gender equality in relationships compared with all Victorians. Conversely, a higher proportion of males aged 18–24 (52.9%) and of males aged 25–34 (50.0%) had low levels of support for gender equality in relationships. Compared with all females, females aged 18–24 (34.3%) and those aged 75 and over (33.2%) were more likely to show low support for gender equality in relationships – although by comparison, males are still less likely to support gender equality in relationships for these age categories. Low levels of support for gender equality in relationships were least prevalent among females aged 45–54 (22.1%) and 55–65 (22.0%).

Other demographic analysis

Groups with a **lower** proportion holding low levels of support for equal relationships, compared with all Victorians (35.7% of Victorians had a low score), were those:

- with university qualifications (32.6%)
- mainly speaking English at home (29.2%)
- who were Australian-born (29.9%) or from an English-speaking country (28.2%)
- whose sexuality was reported as something other than heterosexual (28.5%)
- with a household annual income of \$100,000 or more (29.4%)
- living in couple households (31.5%)
- living in a regional city (32.2%), or in large shire (31.3%) or small shire (31.9%) geographic regions
- living outside the capital city (31.7%)
- with a high SEIFA (a Socio-Economic Indexes for Areas score of 5 – least disadvantaged) or a SEIFA score of 4 (32.2% in both cases).

Groups with a **higher** proportion holding low levels of support for equal relationships, compared with all Victorians (35.7% of Victorians had a low score), were those:

- who had completed some high school or less (40.0%)
- who were unemployed (47.1%) or students (41.7%)
- mainly speaking a language other than English at home (54.0%)
- from a non-English-speaking country (52.9%)
- with a household annual income under \$20,000 (42.6%) or \$20,000–\$39,999 (39.5%)
- living in share or group households (43.7%)
- living in outer metropolitan geographic regions (42.9%)
- with a low SEIFA (a Socio-Economic Indexes for Areas score of 1 – most disadvantaged) (41.5%).

There were no differences by disability and Aboriginal and/or Torres Strait Islander status in the proportion of Victorians expressing attitudes of low support for gender equality within relationships.

3. MENTAL WELLBEING

Table 3.6 Summary of mental wellbeing indicators, by demographic

	Resilience [range 0–8]			Perceptions of neighbourhood – people are willing to help each other			Perceptions of neighbourhood – this is a close-knit neighbourhood			Perceptions of neighbourhood – people can be trusted			Low gender equality score		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	6.4	6.4	6.4	74.1	73.3	75.0	61.0	60.1	61.9	71.9	71.0	72.7	35.7	34.8	36.6
Gender															
Male	6.4	6.3	6.4	72.6	71.4	73.9	59.5	58.1	60.8	71.6	70.3	72.8	44.4	43.0	45.8
Female	6.4	6.3	6.4	75.6	74.4	76.7	62.5	61.3	63.8	72.1	70.9	73.3	27.3	26.1	28.5
Age															
18–24	6.1	6.0	6.2	70.1	67.2	72.9	55.4	52.3	58.5	66.0	63.0	68.9	43.9	40.8	47.0
25–34	6.2	6.1	6.3	68.5	66.1	70.7	53.2	50.7	55.7	64.5	62.1	66.8	40.2	37.8	42.7
35–44	6.4	6.3	6.4	74.0	71.9	76.1	61.8	59.5	64.1	71.1	68.9	73.2	36.2	34.0	38.6
45–54	6.5	6.4	6.6	75.5	73.6	77.3	63.3	61.2	65.3	73.0	71.1	74.9	30.1	28.2	32.1
55–64	6.5	6.5	6.6	75.2	73.2	77.1	62.0	59.9	64.1	74.9	73.0	76.8	30.3	28.3	32.4
65–74	6.7	6.6	6.7	79.1	77.1	81.0	66.0	63.8	68.2	79.9	78.0	81.7	31.3	29.1	33.5
75+	6.5	6.4	6.6	82.8	80.3	85.2	73.5	70.7	76.2	81.8	79.2	84.2	37.2	34.2	40.2
Education															
Some high school or less	6.3	6.2	6.4	75.7	73.6	77.7	66.9	64.7	69.1	74.1	72.0	76.1	40.0	37.8	42.3
Completed high school	6.2	6.1	6.3	73.6	71.0	76.0	60.0	57.3	62.7	68.9	66.2	71.4	38.4	35.7	41.2
TAFE/Certificate/Diploma	6.4	6.4	6.5	73.0	71.4	74.6	60.0	58.3	61.7	69.4	67.8	71.0	36.1	34.4	37.8
University	6.4	6.4	6.5	74.4	73.0	75.8	59.3	57.7	60.8	74.0	72.6	75.4	32.6	31.1	34.2
Main activity															
Employed	6.5	6.5	6.6	73.8	72.7	74.9	59.7	58.5	60.9	71.2	70.0	72.3	34.6	33.4	35.8
Unemployed	5.5	5.3	5.8	69.3	63.8	74.5	58.9	53.1	64.6	64.3	58.6	69.8	47.1	41.2	53.1
Student	5.9	5.8	6.1	70.0	65.9	73.8	53.8	49.5	58.0	66.9	62.7	70.8	41.7	37.5	45.9
Home duties	6.2	6.1	6.4	74.9	71.2	78.4	63.8	59.8	67.6	70.7	66.8	74.4	38.7	34.8	42.8
Retired	6.5	6.5	6.6	80.6	79.0	82.2	69.8	68.0	71.5	80.7	79.1	82.2	33.5	31.7	35.3
Main language spoken at home															
English	6.6	6.6	6.6	75.6	74.7	76.6	61.4	60.3	62.4	73.1	72.2	74.1	29.2	28.2	30.2
Other	5.7	5.7	5.8	69.8	67.9	71.7	59.9	57.9	61.9	68.3	66.4	70.1	54.0	52.0	56.1
Country of birth															
Australian born	6.6	6.6	6.6	75.1	74.1	76.1	61.1	60.0	62.2	72.5	71.5	73.5	29.9	28.9	31.0
English-speaking country	6.7	6.6	6.8	74.7	71.7	77.5	59.6	56.4	62.8	75.4	72.5	78.2	28.2	25.3	31.2
Non-English speaking country	5.7	5.6	5.8	71.3	69.4	73.1	61.1	59.1	63.1	69.0	67.1	70.9	52.9	50.9	55.0
Self-reported disability															
Reported disability – under 65 years	5.9	5.8	6.0	65.4	62.9	67.8	53.8	51.3	56.3	64.8	62.4	67.2	35.3	32.9	37.8
Reported disability – over 65 years	6.3	6.2	6.4	77.9	75.2	80.5	68.7	65.8	71.5	79.1	76.5	81.5	34.8	31.9	37.8
No disability reported	6.5	6.4	6.5	75.4	74.4	76.3	61.6	60.6	62.7	72.5	71.5	73.4	35.8	34.8	36.9
Aboriginal and/or Torres Strait Islander status															
Aboriginal and/or Torres Strait Islander	6.3	6.0	6.6	67.3	56.8	76.7	62.5	52.0	72.2	65.2	54.5	75.0	41.1	30.8	51.9
Non-Aboriginal and/or Torres Strait Islander	6.4	6.4	6.4	74.2	73.4	75.0	61.0	60.1	62.0	71.9	71.1	72.8	35.6	34.6	36.5
Sexuality															
Heterosexual	6.4	6.4	6.5	74.5	73.6	75.4	61.3	60.3	62.2	72.2	71.3	73.1	36.0	35.0	36.9
Other	6.0	5.8	6.1	67.4	63.1	71.5	54.7	50.2	59.1	66.5	62.2	70.7	28.5	24.5	32.7
Income															
Less than \$20,000	5.8	5.6	5.9	65.8	61.9	69.5	55.3	51.3	59.2	63.1	59.2	66.8	42.6	38.7	46.6
\$20,000–\$39,999	6.1	6.0	6.2	73.2	71.2	75.1	62.8	60.7	64.9	72.2	70.1	74.1	39.5	37.4	41.6
\$40,000–\$59,999	6.3	6.2	6.4	73.3	70.8	75.7	62.4	59.8	65.0	71.4	68.9	73.8	38.2	35.6	40.8
\$60,000–\$79,999	6.4	6.4	6.5	73.7	71.0	76.3	59.6	56.6	62.4	71.6	68.8	74.3	34.9	32.1	37.8
\$80,000–\$99,999	6.5	6.4	6.6	75.5	72.6	78.2	60.8	57.7	63.9	72.6	69.6	75.4	33.8	30.8	36.9
\$100,000 or more	6.8	6.8	6.9	77.6	76.0	79.2	61.8	60.0	63.7	75.4	73.7	77.1	29.4	27.6	31.2

3. MENTAL WELLBEING

	Resilience [range 0–8]			Perceptions of neighbourhood – people are willing to help each other			Perceptions of neighbourhood – this is a close-knit neighbourhood			Perceptions of neighbourhood – people can be trusted			Low gender equality score		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	6.4	6.4	6.4	74.1	73.3	75.0	61.0	60.1	61.9	71.9	71.0	72.7	35.7	34.8	36.6
Household structure															
Single person household	6.3	6.2	6.3	72.0	69.7	74.2	59.0	56.6	61.4	69.5	67.2	71.8	35.3	33.0	37.7
Couple household	6.6	6.5	6.6	77.0	75.4	78.4	63.6	61.9	65.3	74.7	73.2	76.3	31.5	29.9	33.2
Household with children	6.4	6.4	6.5	76.0	74.7	77.3	63.0	61.6	64.5	73.1	71.8	74.4	36.0	34.5	37.4
– Single parent with dependent children	6.3	6.1	6.4	68.3	62.8	73.5	58.8	53.2	64.3	61.6	55.9	67.0	34.5	29.2	40.2
– Couple parent with dependent children	6.5	6.4	6.5	77.6	75.9	79.2	65.0	63.2	66.8	74.8	73.1	76.4	35.1	33.4	37.0
Share or group household	6.0	5.9	6.1	66.2	63.1	69.1	52.5	49.3	55.7	66.3	63.2	69.2	43.7	40.6	46.9
Geography															
Metropolitan	6.3	6.2	6.3	71.9	70.7	73.2	58.2	56.8	59.5	71.1	69.8	72.3	36.4	35.1	37.7
– Inner metro	6.3	6.2	6.5	67.4	64.1	70.5	50.8	47.4	54.2	66.9	63.7	70.0	32.1	29.0	35.4
– Middle metro	6.4	6.3	6.4	73.9	72.3	75.4	60.3	58.6	62.0	74.9	73.3	76.4	34.8	33.1	36.5
– Outer metro	6.1	6.0	6.2	70.1	67.4	72.8	57.5	54.7	60.4	64.6	61.8	67.3	42.9	40.0	45.8
Interface	6.4	6.3	6.4	71.3	69.3	73.2	57.7	55.5	59.8	66.9	64.9	68.9	38.2	36.1	40.3
Regional city	6.6	6.5	6.7	77.0	74.7	79.2	63.8	61.3	66.3	73.1	70.7	75.4	32.2	29.8	34.6
Large shire	6.6	6.6	6.7	85.1	83.7	86.4	75.0	73.4	76.6	82.4	80.9	83.9	31.3	29.6	33.1
Small shire	6.7	6.6	6.7	88.3	86.9	89.6	81.9	80.2	83.4	85.9	84.4	87.3	31.9	30.0	33.9
Location															
Capital city	6.3	6.3	6.4	71.9	70.9	72.9	58.2	57.1	59.3	69.9	68.8	70.9	36.9	35.8	38.0
Rest of state	6.6	6.6	6.7	81.3	80.0	82.6	70.1	68.6	71.5	78.2	76.8	79.5	31.7	30.3	33.1
Internet at home															
Yes	6.4	6.4	6.5	74.2	73.3	75.1	60.3	59.4	61.3	71.7	70.8	72.6	35.0	34.0	35.9
SEIFA (index of disadvantage)															
1 – Low (most disadvantaged)	6.1	6.0	6.2	70.2	68.1	72.2	60.3	58.2	62.5	64.6	62.5	66.7	41.5	39.3	43.6
2	6.3	6.2	6.4	74.2	72.1	76.2	61.6	59.4	63.7	69.2	67.0	71.3	37.0	34.9	39.2
3	6.4	6.3	6.4	71.5	69.5	73.5	57.6	55.4	59.7	67.4	65.3	69.4	37.4	35.3	39.6
4	6.5	6.5	6.6	76.8	74.8	78.7	62.0	59.8	64.2	76.1	74.1	78.0	32.2	30.1	34.4
5 – High (least disadvantaged)	6.5	6.5	6.6	76.7	75.1	78.3	63.0	61.2	64.8	78.5	76.9	80.0	32.2	30.5	34.0

Summary and conclusion

Resilience is a fundamental component of mental wellbeing that enables people to cope with adversity and reach their full potential. Victorians have an average resilience score of 6.4 out of a possible score of 8, with the highest levels of resilience reported by people who are employed, in a relationship, retired, with a high household income or living in a high socioeconomic area. In contrast, levels of resilience are lower amongst those who are unemployed, students, single, non-English-speaking, with a disability, reported a sexuality as something other than heterosexual, with a low household income or living in a low socioeconomic area. Compared across the lifespan, it is older rather than younger people who exhibit higher levels of resilience.

As with resilience, self-reported levels of social capital are lower among younger Victorians than older ones, for each of the constituent concepts. There also are clear associations between low social capital and most (although not all) markers of social advantage.

This survey identifies that approximately one-third of Victorians hold attitudes that indicate low support for gender equality in relationships. This is particularly marked for young males aged 18–24, with over half (52.9%) scoring low on the gender equality measure. Almost one-third (34.7%) of young females aged 18–24 also exhibited low scores. Interestingly, the level of support for gender equality in relationships in this survey was lower than a recent national survey where approximately one in four had low support for gender equality in relationships. However a similar pattern of particularly low support for gender equality within relationships in younger age groups was observed (VicHealth 2014).

A VicHealth guide providing evidence-informed actions that can help improve resilience and social capital for all Victorians, and promote gender equality and respectful relationships, is available at www.vichealth.vic.gov.au/localgovernmentguides

References

- Australian Bureau of Statistics (ABS) 2013, *Personal safety, Australia, 2012* [Online], ABS cat. no. 4906.0, ABS, Canberra, viewed 18 May 2016, <www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4906.0Main+Features12012>.
- Australian Institute of Health and Welfare (AIHW) 2016, *Glossary* [Online], AIHW, Canberra, viewed on 24 May 2016, <www.aihw.gov.au/glossary/>.
- Barry, MM 2009, 'Addressing the determinants of positive mental health: Concepts, evidence and practice', *International Journal of Mental Health Promotion*, vol. 11, no. 3, pp. 4–7.
- Bryant, G, Heard, H & Watson, J 2015, *Measuring mental wellbeing in children and young people*, Public Health England, London.
- Burns, RA, Anstey, KJ & Windsor, TD 2011, 'Subjective well-being mediates the effects of resilience and mastery on depression and anxiety in a large community sample of young and middle-aged adults', *Australian and New Zealand Journal of Psychiatry*, vol. 45, no. 3, pp. 240–48.
- Coleman, J 1990, *Foundations of social theory*, Harvard University Press, Cambridge, Mass.
- Earls, FJ, Brooks-Gunn, J, Raudenbush, SW & Sampson, RJ 2007, *Project on Human Development in Chicago Neighborhoods (PHDCN): Community involvement and collective efficacy (primary caregiver), Wave 3, 2000–2002*, Inter-university Consortium for Political and Social Research (ICPSR), Ann Arbor MI.
- Elliott, J, Gale, CR, Parsons, S, Kuh, D, The HALCyon Study Team 2014, 'The neighbourhood cohesion and mental wellbeing among older adults: A mixed methods approach', *Social Science & Medicine*, vol. 107, pp. 44–51.
- Flood, M & Pease, B 2006, *The factors influencing community attitudes in relation to violence against women: A critical review of the literature*, VicHealth, Melbourne.
- Friedli, L 2009, *Mental health, resilience and inequalities*, World Health Organization Europe Regional Office, Copenhagen.
- Gage, AJ 2005, 'Women's experience of intimate partner violence in Haiti', *Social Science & Medicine*, vol. 61, no. 2, pp. 343–364.
- Harris, A, Honey, N, Webster, K, Diemer, K & Politoff, V 2015, *Young Australians' attitudes to violence against women: Findings from the 2013 National Community Attitudes Towards Violence Against Women Survey for respondents 16–24 years*, Victorian Health Promotion Foundation, Melbourne.
- Huppert, FA & So, TTC 2013, 'Flourishing across Europe: Application of a new conceptual framework for defining well-being', *Social Indicators Research*, vol. 110, no. 3, pp. 837–861.
- Kawachi, I 2006, 'Commentary: Social capital and health: making the connections one step at a time', *International Journal of Epidemiology*, vol. 35, pp. 989–993.
- Mead, R & Cummins, R 2010, *What makes us happy? Ten years of the Australian Unity Wellbeing Index*, Australian Unity, Deakin University, Melbourne.
- Office for National Statistics 2016, *Social capital across the UK: 2011 to 2012*, Office for National Statistics, London.
- Our Watch 2015, *Change the story: A shared framework for the primary prevention of violence against women and their children in Australia*, Our Watch, Melbourne.
- PricewaterhouseCoopers Australia (PwC) 2015, *A high price to pay: The economic case for preventing violence against women*, PricewaterhouseCoopers, Sydney.
- Putnam, J 1993, *Making democracy work: Civic traditions in modern Italy*, Princeton University, Princeton NJ.
- Reavley, N, Bassilios, B, Ryan, S, Schlichthorst, M & Nicholas, A 2015, *Interventions to build resilience among young people: a literature review*, Victorian Health Promotion Foundation, Melbourne.
- Rees, S, Silove, D, Chey, T, MAppStat, Ivancic, L, Steel, Z, Creamer, M, Tesson, M, Bryant, R, Mcfarlane, AC, Mills, KL, Slade, T, Carrgher, N, O'Donnell, M & Forbes, D 2011, 'Lifetime prevalence of gender-based violence in women and the relationship with mental disorders and psychosocial function', *Journal of the American Medical Association*, vol. 306, no. 5, pp. 513–521.
- Robinette, JW, Charles, ST, Mogle, JA, & Almeida, DM 2013, 'Neighborhood cohesion and daily well-being: Results from a diary study', *Social Science & Medicine*, vol. 96, pp. 174–82.
- Siegler, V 2014, *Measuring social capital*, Office for National Statistics, London Strahilevitz, L 2003, 'Social norms from close-knit groups to loose-knit groups', *University of Chicago Law Review*, vol. 70, no. 1, pp. 359–72.
- Strahilevitz, L 2003, Social norms from close-knit groups to loose-knit groups, *University of Chicago Law Review*, vol. 70, no. 1, pp. 359–72.
- Tollit, M, McDonald, M, Borschmann, R, Bennett, K, von Sabler, M & Patton, G 2015, *Epidemiological evidence relating to resilience and young people: a literature review*, Victorian Health Promotion Foundation, Melbourne.
- UN Women 2010, *Investing in gender equality: Ending violence against women and girls*, UN Women, New York.
- UN Women 2015, *A Framework to underpin action to prevent violence against women*, UN Women, New York.
- Vaishnavi, S, Connor, K & Davidson, JRT 2007, 'An abbreviated version of the Connor-Davidson Resilience Scale (CD-RISC), the CD-RISC2: Psychometric properties and applications in psychopharmacological trials', *Psychiatry Research*, vol. 152, pp. 293–297.
- Vézina, J & Hébert, M 2007, 'Risk factors for victimization in romantic relationships of young women: A review of empirical studies and implications for prevention', *Trauma, Violence & Abuse*, vol. 8, no. 1, pp. 33–66.
- VicHealth 2004, *The health costs of violence: Measuring the burden of disease caused by intimate partner violence: A summary of findings*, Victorian Health Promotion Foundation, Melbourne.

3. MENTAL WELLBEING

VicHealth 2014, *Australians' attitudes to violence against women. Findings from the 2013 National Community Attitudes towards Violence Against Women Survey (NCAS)*, Victorian Health Promotion Foundation, Melbourne.

Vyas, S & Watts, C 2009, 'How does economic empowerment affect women's risk of intimate partner violence in low and middle income countries? A systematic review of published evidence', *Journal of International Development*, vol. 21, pp. 577–602.

Webster, K 2016, *A preventable burden: Measuring and addressing the prevalence and health impacts of intimate partner violence in Australian women (ANROWS Compass, 07/2016)*, Australia's National Research Organisation for Women's Safety Limited (ANROWS), Sydney.

Webster, K, & Flood, M, 2015, *Framework foundations 1: A review of the evidence on correlates of violence against women and what works to prevent it*. Companion document to Our Watch, Australia's National Research Organisation for Women's Safety (ANROWS) and VicHealth, *Change the Story: A shared framework for the primary prevention of violence against women and their children in Australia*, Our Watch, Melbourne.

Weinberg, M, Franklin, C & Tomy, AJ 2016, *Resilience indicators research: A review*, Victorian Health Promotion Foundation, Melbourne.

World Economic Forum 2015, *The global gender gap index 2015*, World Economic Forum, Geneva, viewed 24 May 2016, <<http://reports.weforum.org/global-gender-gap-report-2015/the-global-gender-gap-index-2015/>>.

World Health Organization (WHO) 2010, *Violence prevention: The evidence*, WHO, Geneva.

World Health Organization (WHO) 2013, *Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence*, WHO, Geneva.

World Health Organization (WHO), 2014, *Mental health: a state of well-being*, World Health Organization, Geneva, viewed 16 May 2016, <www.who.int/features/factfiles/mental_health/en/>.



4. Physical activity and sedentary behaviour

Increasing participation in physical activity has health, social and economic benefits (Department of Health 2014, Cadilhac et al. 2011). The benefits of regularly engaging in physical activity are improved physical health, reduced risk of chronic disease, reduced risk of becoming overweight or obese, the development of stronger social connections, and improved mental wellbeing (Department of Health 2014).

In addition to individual health benefits, engaging in physical activity, particularly active travel, has a range of broader benefits for society, including reduced greenhouse gases, pollution, and energy consumption and improved environmental sustainability (National Heart Foundation of Australia 2014). Economic benefits of physical activity include reduced costs associated with transport, road infrastructure and traffic congestion. Community benefits include increased social connection, neighbourhood trust and safety, and reduced crime (Newman 2001).

Australia's physical activity and sedentary behaviour guidelines recommend that adults aged 18–64 do between two and a half and five hours of moderate intensity physical activity each week, or between one and a quarter and two and a half hours of vigorous intensity physical activity each week, as well as minimising prolonged sitting as much as possible (Department of Health 2014).

In 2014–15, around half (55.5%) of Australians aged 18 to 64 years engaged in sufficient physical activity (more than 150 minutes of moderate physical activity or 75 minutes of vigorous physical activity), whereas nearly one in three (29.7%) were insufficiently active and 14.8% were inactive (ABS 2015a). Physical activity levels vary by social position. Australians with lower levels of education, those who are unemployed, or those living in socioeconomically disadvantaged neighbourhoods are more likely to be inactive or do low levels of physical activity (ABS 2015a). Aboriginal and/or Torres Strait Islander adults are less likely to be physically active than non-Aboriginal and/or Torres Strait Islander adults (ABS 2014), and females tend to be less active than males throughout their lifespan (ABS 2015a).

In Australia, the estimated cost of physical inactivity to the health sector is over \$672 million dollars per year (Cadilhac et al. 2011). The potential savings to the Australian health sector from reducing physical inactivity by just 10% is \$96 million per year, with an increase in leisure, home and workforce productivity of \$162 million (Cadilhac et al. 2011).

Increasing participation in sport, active recreation and active travel

Participation in sport and active recreation is valued by people living in Australia, with an estimated 60% of people aged 15 and over reporting participation in sport and physical recreation at least once over the past year in 2013–14 (ABS 2015b). Trends in physical activity and sport participation demonstrate a growth in non-organised activities compared with traditional club-based or organised sport (ABS 2012, Hajkowicz et al. 2013). This shift has been driven by an increased demand for more individualised, flexible and non-competitive physical activity options, which may better suit busy lifestyles and help achieve personal fitness goals (Hajkowicz et al. 2013). However, in 2013–14, approximately one-quarter of Australians (26.1% of males and 25.0% of females) aged 15 years and over were involved in organised sport and physical activity, indicating that organised sport and physical activity can still play an important role in helping the community be more active (ABS 2015b). Sport delivers physical, mental and social health benefits, as well as providing a key setting to deliver health messages and to encourage healthy behaviours (Eime et al. 2013).

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Walking has been found to be the most popular form of physical activity, with 19.2% of Australians aged 15 years and over walking for exercise in 2013–2014 (ABS 2015b). Walking is suitable for all ages and fitness levels, is inexpensive and can be done almost anywhere. Walking is an important form of active travel to work and school, and a form of personal fitness and recreation (de Moor 2013). Getting more people walking within communities can contribute to reducing obesity, improving health outcomes, reducing traffic congestion, lessening environmental impacts and increasing community cohesion and safety (Crawford et al. 2015, de Moor 2013, Gordon-Larsen et al. 2009).

Reduce sitting in the workplace

Reducing and breaking up prolonged sitting throughout the day is important for health, even for those who meet or exceed the national physical activity guidelines (Dunstan et al. 2014). A growing body of evidence indicates that sedentary behaviour is associated with a higher energy intake, being overweight or obese, cardiovascular disease, type 2 diabetes, certain cancers and premature mortality (Grøntved & Hu 2011, Lynch 2010, Pearson & Biddle 2011, Thorp et al. 2011).

In 2014, nearly one-quarter (23.8%) of Victorians spent more than eight hours sitting on an average weekday (DHHS 2016). The average office-based employee in Australia spends about 77% of work hours sedentary (Baker IDI 2009). Occupational groups most at risk of prolonged sitting and associated illnesses are office workers, machinery operators or drivers, managers, and professionals with a high household income (Hadgraft et al. 2015). In general, reducing and breaking up sitting can improve workers' physical and mental health, reduce absenteeism and increase productivity, thereby providing important benefits to both individuals and workplaces (Brown et al. 2013, Pronk & Kottke 2009).

VicHealth Indicators: Physical activity and sedentary behaviour at work

Physical activity frequency (30 minutes or more)

- 0 days per week
- 1–3 days per week
- 4 or more days per week

Organised physical activity

- Participation in any organised physical activity
- Organised by a fitness, leisure or indoor sports centre
- Organised by a sports club or association

Non-organised physical activity

- Participation in any non-organised physical activity
- Activity type: walking
- Activity type: jogging or running
- Activity type: cycling
- Activity type: gym or fitness
- Activity type: swimming
- Participates alone
- Participates with someone

* For persons aged 18–64 who are working 35 or more hours per week.

Sedentary behaviour at work

- Time spent sitting on usual work day*

Physical activity

Three physical activity indicators refer to the level of physical activity over the course of the week. These indicators are derived from a single item asking respondents about the number of days in a usual week during which they would accumulate 30 minutes of physical activity or more. The 30 minutes did not have to be continuous and could be completed over 10-minute increments throughout the day. Physical activity was defined as “enough to raise your breathing rate and may include sport, exercise and brisk walking or cycling for recreation or to get to and from places, but should not include housework, gardening or physical activity that may be part of a job”.

This single item measure has been shown to have good criterion validity, with estimated physical activity levels based on accelerometer data (Milton, Clemes & Bull 2013). It was used in the VicHealth Indicators Survey 2015 as it is a time-efficient approach to measuring physical activity that can also be used as a field measure in evaluation projects.

The first of the three indicators reflects the percentage of individuals who report no days of physical activity in a usual week. The second and third indicators are complementary and reflect the percentage of individuals who engage in at least 30 minutes of physical activity on one to three days a week, and then four or more days in a usual week. Note: commentary has not been provided for findings on one to three days of physical activity; refer to Tables for data on this indicator.

It is important to note that the measure used in the VicHealth Indicators Survey 2015 differs from the measure used in other population level surveys, for example, the Victorian Population Health Survey (VPHS). For this reason, prevalence estimates may differ between surveys. The VPHS presents data on the proportion of Victorians meeting current Australian physical activity guidelines, and reports specifically on average time spent walking, time spent performing vigorous household chores, time spent performing activities other than household chores and gardening, and muscle strengthening exercises.

Organised physical activity

Three physical activity indicators refer to usual participation in organised physical activity – that is, physical activity organised by a club, association or other organisation. The first indicator reports the overall percentage of Victorians who usually take part in any organised physical activity, irrespective of the organiser. The second indicator reports the percentage of Victorians taking part in physical activity organised by a fitness, leisure or indoor sports centre, while the third indicator reports the percentage of Victorians taking part in physical activity organised by a sports club or association. The three items from which the indicators are derived were specifically developed for the VicHealth Indicators Survey 2015 to provide unique information about physical activity patterns of Victorians that are not available in any other surveys. The questions were designed by VicHealth, and were piloted and subjected to cognitive testing, which established their content validity. Test-retest reliability results showed them to be stable.

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Non-organised physical activity

Eight physical activity indicators refer to participation in non-organised physical activity. The first indicator reports on the overall percentage of Victorians taking part in any non-organised physical activity, for instance going for a run. Like the 'participation in organised physical activity' indicator, the indicator for participation in non-organised physical activity was specifically developed for the VicHealth Indicators Survey 2015, showed good validity and reliability, and provides information not available from any other survey.

Five indicators for non-organised physical activity report on the percentage of Victorians who nominated walking, jogging or running, cycling, gym or fitness, or swimming as one of their main three types of physical activity. These five activities were selected for reporting, because they constituted the top five non-organised physical activities by a wide margin. The VicHealth Indicators Survey 2015 is the first time that these indicators have been measured in this way.

The remaining two indicators report the percentage of Victorians who participate in non-organised physical activity on their own, and the percentage of Victorian who participate with someone else. Again, the VicHealth Indicators Survey 2015 is the first time that these indicators have been measured in this way.

Sedentary behaviour at work

One indicator for sedentary behaviour at work is presented. This indicator represents the average time individuals report sitting at work on a usual day and is based on a single item. The item is a variation of the sitting at work question in the Australian Health Survey 2011–2012 (ABS 2013), in that the reporting period was

changed from 'in the last week' to 'on a usual day', in order to better account for response variability over time. As the 2015 indicator only captures sitting at work, but excludes sitting during leisure time, results from the VicHealth Indicators Survey 2011 and 2015 cannot be directly compared.

Only respondents aged between 18 and 64 who also worked 35 or more hours a week were in scope for this indicator. This resulted in a sub-sample of only 27.7% of all respondents.

Participation in physical activity

Age and gender analysis

No days of physical activity a week

Overall, just under one in five Victorians (18.9%) reported doing no days of physical activity in a typical week. The proportion of males reporting no days of physical activity was significantly lower than for all Victorians (16.9%), and the proportion of females was significantly higher (20.9%).

A smaller proportion of younger Victorians reported no days of physical activity in a typical week (11.7% of those aged 18–24 and 15.8% of those aged 25–34) and a larger proportion of older Victorians reported no days of physical activity in a typical week (33.1% of those aged 75 or over). Similar patterns of results were observed for gender for this age group, with 9.6% of males and 14.1% of females aged 18–24 doing no days of physical activity in a typical week. Conversely, a higher proportion of those aged 75 or over reported no days of physical activity in a typical week (27.5% of males and 37.3% of females). In addition, males aged 55–64 (21.0%) reported a higher proportion doing no days of physical activity in a typical week.

Table 4.1 Proportion of Victorians doing no days of physical activity in a typical week, by age and gender

Age group (years)	Physical activity – 0 days per week								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	9.6	7.2	12.4	14.1	11.0	17.5	11.7	9.8	13.9
25–34	13.7	11.5	16.3	18.0	15.4	20.8	15.8	14.1	17.7
35–44	15.6	13.1	18.3	19.0	16.7	21.6	17.3	15.6	19.1
45–54	18.9	16.6	21.4	19.6	17.4	22.0	19.2	17.6	20.9
55–64	21.0	18.5	23.6	21.6	19.2	24.1	21.3	19.5	23.0
65–74	18.3	15.9	20.8	23.3	20.6	26.2	20.8	19.0	22.7
75+	27.5	23.5	31.8	37.3	33.5	41.3	33.1	30.3	36.0
Total	16.9	15.9	17.9	20.9	19.8	21.9	18.9	18.2	19.6

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.2 Proportion of Victorians doing physical activity of 30 minutes or more, one to three days a week, by age and gender

Age group (years)	Physical activity – 1 to 3 days per week								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	38.4	34.3	42.8	40.8	36.4	45.3	39.5	36.5	42.6
25–34	46.1	42.5	49.7	44.7	41.3	48.2	45.4	42.9	47.8
35–44	44.1	40.6	47.7	45.2	42.1	48.3	44.6	42.3	47.0
45–54	38.4	35.4	41.4	38.6	35.8	41.3	38.5	36.5	40.5
55–64	35.2	32.2	38.3	34.8	32.0	37.6	35.0	33.0	37.0
65–74	30.2	27.3	33.3	33.9	30.8	37.0	32.1	30.0	34.2
75+	26.2	22.4	30.4	27.8	24.3	31.4	27.3	24.7	30.0
Total	38.8	37.4	40.1	39.1	37.8	40.4	38.9	38.0	39.8

Table 4.3 Proportion of Victorians doing physical activity of 30 minutes or more, four or more days a week, by age and gender

Age group (years)	Physical activity – 4 or more days per week								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	51.4	47.1	55.7	44.6	40.1	49.1	48.1	45.0	51.2
25–34	39.8	36.4	43.4	36.5	33.3	39.8	38.2	35.8	40.6
35–44	39.7	36.3	43.3	35.1	32.1	38.1	37.4	35.1	39.7
45–54	42.3	39.3	45.4	41.4	38.6	44.2	41.8	39.8	43.9
55–64	43.0	39.9	46.1	42.7	39.9	45.6	42.9	40.8	45.0
65–74	49.8	46.6	53.0	41.8	38.7	45.0	45.7	43.5	48.0
75+	43.7	39.2	48.2	32.4	28.7	36.2	37.1	34.3	40.1
Total	43.5	42.2	44.9	39.1	37.9	40.4	41.3	40.4	42.2

Four or more days

Slightly more than two in five Victorians reported participating in four or more days of physical activity in a typical week (41.3%). Fewer females reported undertaking four or more days of physical activity in a usual week (39.1%) compared with all Victorians. A higher proportion of Victorians aged 18–24 (48.1%) and 65–74 (45.7%) reported four or more days of physical activity in a typical week, while those aged 75 or older and those aged 35–44 had lower proportions (37.1% and 37.4%, respectively). Compared with all males, those aged 18–24 and 65–74 had higher proportions participating in physical activity four or more days a week. For females, those aged 75 or over had a lower proportion (32.4%) participating in physical activity four or more days a week, compared with all females.

Other demographic analysis

0 days of physical activity a week

Compared with all Victorians (18.9% doing no days), demographic groups that had a **lower** proportion doing no days of physical activity in a usual week were those:

- with university qualifications (13.3%)
- who were employed (16.1%) or students (11.1%)
- mainly speaking English at home (17.0%)
- who were Australian-born (16.9%)
- with no reported disability (16.1%)
- with a household annual income of \$80,000–\$99,999 (15.6%) or \$100,000 or more (11.6%)

- living in inner metropolitan geographic regions (10.9%)
- with internet access at home (17.2%)
- with a high SEIFA (a Socio-Economic Indexes for Areas score of 5 – least disadvantaged) (13.7%).

Compared with all Victorians (18.9% doing no days), demographic groups that had a **higher** proportion doing no days of physical activity in a usual week were those:

- who had completed some high school or less (32.2%)
- who reported their main activity as ‘home duties’ (24.7%) or retired persons (25.5%)
- mainly speaking a language other than English at home (24.3%)
- from a non-English-speaking country (24.7%)
- with a reported disability (26.0% for those under 65, and 36.7% for those over 65)
- with a household annual income of \$20,000–\$39,999 (27.7%)
- living in single-person households (23.5%)
- living in outer metropolitan (22.3%), large shire (21.4%) or small shire (23.6%) geographic regions
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (25.4%).

There were no differences by Aboriginal and/or Torres Strait Islander status or sexuality.

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Four or more days

Compared with all Victorians (41.3% doing four or more days), demographic groups that had a **higher** proportion doing four or more days of physical activity in a usual week were those:

- mainly speaking English at home (43.8%)
- Australian-born (43.5%) or those from English-speaking countries (46.6%)
- living in inner metropolitan geographic regions (49.1%).

Compared with all Victorians (41.3% doing four or more days), demographic groups that had a **lower** proportion doing four or more days of physical activity in a usual week were those:

- who had completed some high school or less (37.4%)
- who reported their main activity as 'home duties' (35.8%)

- mainly speaking a language other than English at home (34.3%)
- from a non-English-speaking country (33.9%)
- with a reported disability (36.3% for those under 65, and 34.2% for those over 65)
- with a household annual income of \$20,000–\$39,999 (37.9%)
- living in households with children (38.4%) or in couple parent households with dependent children (35.6%)
- living in outer metropolitan geographic regions (36.8%)
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (37.9%).

There were no differences by Aboriginal and/or Torres Strait Islander status or sexuality.

Table 4.4 Summary of indicators relating to physical activity frequency, by demographic

	Physical activity – 0 days per week			Physical activity – 1 to 3 days per week			Physical activity – 4 or more days per week		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	18.9	18.2	19.6	38.9	38.0	39.8	41.3	40.4	42.2
Gender									
Male	16.9	15.9	17.9	38.8	37.4	40.1	43.5	42.2	44.9
Female	20.9	19.8	21.9	39.1	37.8	40.4	39.1	37.9	40.4
Age									
18–24	11.7	9.8	13.9	39.5	36.5	42.6	48.1	45.0	51.2
25–34	15.8	14.1	17.7	45.4	42.9	47.8	38.2	35.8	40.6
35–44	17.3	15.6	19.1	44.6	42.3	47.0	37.4	35.1	39.7
45–54	19.2	17.6	20.9	38.5	36.5	40.5	41.8	39.8	43.9
55–64	21.3	19.5	23.0	35.0	33.0	37.0	42.9	40.8	45.0
65–74	20.8	19.0	22.7	32.1	30.0	34.2	45.7	43.5	48.0
75+	33.1	30.3	36.0	27.3	24.7	30.0	37.1	34.3	40.1
Education									
Some high school or less	32.2	30.1	34.4	29.2	27.2	31.2	37.4	35.2	39.5
Completed high school	17.4	15.4	19.5	38.7	36.0	41.5	43.5	40.8	46.3
TAFE/Certificate/Diploma	18.9	17.6	20.2	39.6	37.9	41.3	40.7	39.1	42.4
University	13.3	12.2	14.4	43.3	41.7	44.8	42.7	41.1	44.3
Main activity									
Employed	16.1	15.2	17.0	42.4	41.2	43.6	41.1	39.9	42.3
Unemployed	18.7	14.5	23.5	36.8	31.1	42.7	42.7	37.0	48.6
Student	11.1	8.6	14.0	42.7	38.5	46.9	45.9	41.7	50.2
Home duties	24.7	21.3	28.5	38.5	34.7	42.4	35.8	32.0	39.7
Retired	25.5	23.8	27.2	29.0	27.3	30.7	43.9	42.1	45.8
Main language spoken at home									
English	17.0	16.3	17.8	38.3	37.3	39.4	43.8	42.7	44.8
Other	24.3	22.5	26.0	40.5	38.5	42.5	34.3	32.4	36.3
Country of birth									
Australian born	16.9	16.1	17.7	38.8	37.7	39.9	43.5	42.4	44.6
English-speaking country	17.5	15.1	20.0	34.8	31.7	37.9	46.6	43.4	49.9
Non-English speaking country	24.7	23.0	26.5	40.5	38.5	42.5	33.9	32.1	35.9
Self-reported disability									
Reported disability – under 65 years	26.0	23.9	28.2	35.8	33.4	38.3	36.3	34.0	38.8
Reported disability – over 65 years	36.7	33.8	39.6	25.6	23.1	28.3	34.2	31.3	37.1
No disability reported	16.1	15.3	16.9	40.7	39.6	41.8	42.8	41.7	43.8
Aboriginal and/or Torres Strait Islander status									
Aboriginal and/or Torres Strait Islander	19.1	12.1	27.9	32.4	23.1	42.9	43.5	33.5	54.0
Non-Aboriginal and/or Torres Strait Islander	18.9	18.2	19.6	39.0	38.1	39.9	41.3	40.4	42.2

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.4 Summary of indicators relating to physical activity frequency, by demographic

	Physical activity – 0 days per week			Physical activity – 1 to 3 days per week			Physical activity – 4 or more days per week		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	18.9	18.2	19.6	38.9	38.0	39.8	41.3	40.4	42.2
Sexuality									
Heterosexual	19.0	18.3	19.8	38.8	37.9	39.8	41.3	40.3	42.2
Other	15.8	12.8	19.1	41.2	36.8	45.7	42.2	37.9	46.7
Income									
Less than \$20,000	22.6	19.5	25.9	34.9	31.1	38.7	41.2	37.3	45.1
\$20,000–\$39,999	27.7	25.9	29.6	32.6	30.6	34.6	37.9	35.9	40.0
\$40,000–\$59,999	21.2	19.1	23.4	35.5	33.0	38.1	42.5	40.0	45.1
\$60,000–\$79,999	17.0	14.9	19.3	42.1	39.2	45.1	40.5	37.6	43.4
\$80,000–\$99,999	15.6	13.5	17.9	43.2	40.1	46.4	40.6	37.5	43.7
\$100,000 or more	11.6	10.4	12.8	44.2	42.3	46.1	43.8	41.9	45.7
Household structure									
Single person household	23.5	21.6	25.5	31.3	29.1	33.6	43.5	41.2	45.9
Couple household	18.7	17.4	20.0	36.9	35.3	38.6	43.6	41.9	45.3
Household with children	18.2	17.1	19.4	42.8	41.3	44.2	38.4	37.0	39.9
– Single parent with dependent children	23.9	19.4	28.9	33.4	28.3	38.8	42.4	36.9	48.0
– Couple parent with dependent children	17.0	15.6	18.5	46.8	44.9	48.6	35.6	33.8	37.4
Share or group household	16.1	13.9	18.5	38.6	35.5	41.7	45.0	41.9	48.2
Geography									
Metropolitan	17.5	16.5	18.6	40.3	38.9	41.6	41.4	40.1	42.7
– Inner metro	10.9	9.0	13.1	39.7	36.4	43.0	49.1	45.7	52.5
– Middle metro	17.3	16.0	18.7	40.5	38.8	42.3	41.3	39.6	43.0
– Outer metro	22.3	19.9	24.8	40.0	37.2	42.9	36.8	34.1	39.6
Interface	21.3	19.6	23.0	38.7	36.6	40.8	39.3	37.2	41.4
Regional city	17.2	15.5	19.0	38.1	35.6	40.6	43.8	41.2	46.3
Large shire	21.4	20.0	22.9	35.0	33.3	36.8	42.3	40.6	44.1
Small shire	23.6	22.0	25.3	32.9	31.0	34.8	42.1	40.1	44.1
Location									
Capital city	18.7	17.8	19.6	39.8	38.7	41.0	40.7	39.6	41.8
Rest of state	19.6	18.5	20.7	36.0	34.5	37.4	43.4	41.9	44.9
Internet at home									
Yes	17.2	16.4	17.9	40.4	39.4	41.4	41.8	40.8	42.7
SEIFA (index of disadvantage)									
1 – Low (most disadvantaged)	25.4	23.5	27.3	35.8	33.8	38.0	37.9	35.8	40.0
2	21.1	19.4	22.9	37.4	35.3	39.6	40.1	38.0	42.2
3	20.1	18.4	21.8	38.0	35.9	40.1	41.0	38.9	43.1
4	17.3	15.7	19.0	40.0	37.8	42.2	42.0	39.8	44.2
5 – High (least disadvantaged)	13.7	12.5	15.1	41.7	39.9	43.5	44.0	42.2	45.9

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Participation in organised physical activity

Age and gender analysis

Respondents were asked if they took part in organised physical activity (defined as organised by a club, association or other organisation) or non-organised physical activity. Just under three out of 10 (28.7%) Victorians took part in organised physical activity on a weekly basis. Similar to participation in physical activity more generally, higher proportions of those aged 18–24 and 25–34 participated in organised physical activity on a weekly basis (40.5% and 33.8%, respectively), compared with Victorians more generally. Lower proportions of those aged 45–54 (25.0%), 55–64 (21.5%) and 75 or over (23.0%) participated in organised physical activity on a weekly basis, compared with Victorians overall.

Among males, a higher proportion of those aged 18–24 (43.0%) and 25–34 (33.5%) participated in organised physical activity compared with males overall. Conversely, males aged 55–64 (17.1%) and 65–74 (22.2%) had a lower proportion participating in organised physical activity, compared with males overall.

For females, a higher proportion of those aged 18–24 (37.7%) and 25–34 (34.1%) participated in organised physical activity, compared with females overall. Conversely, females aged 45–54 (25.7%), 55–64 (25.5%) and 75 or over (22.8%) had a lower proportion participating in organised physical activity compared with females overall.

There were no significant differences between all males (27.6%) and all females (29.6%). However, a higher proportion of females aged 55–64 (25.5%) and 65–74 (30.3%) participated in organised physical activity, compared with their male counterparts (17.1% and 22.2% respectively).

Other demographic analysis

Compared with all Victorians (28.7% participated in organised physical activity), demographic groups with a **higher** proportion participating in organised physical activity on a weekly basis were those:

- with university qualifications (33.6%)
- who were employed (30.9%) or students (37.8%)
- mainly speaking English at home (30.8%)
- who were Australian-born (31.0%)
- with no reported disability (31.0%)

- with a household annual income of \$100,000 or more (35.6%)
- living in inner metropolitan (33.7%) or middle metropolitan (32.0%) geographic regions
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (33.5%).

Compared with all Victorians (28.7% participated in organised physical activity), demographic groups with a **lower** proportion participating in organised physical activity on a weekly basis were those:

- who had completed some high school or less (19.7%)
- who were unemployed persons (18.2%), who reported their main activity as 'home duties' (22.2%), or retired persons (25.9%)
- mainly speaking a language other than English at home (22.7%)
- from a non-English-speaking country (22.1%)
- with a reported disability (20.8% for those under 65, and 18.4% for those over 65)
- with a household annual income of less than \$20,000 (22.5%) or \$20,000–\$39,999 (20.7%)
- living in single-person households (24.5%)
- living in outer metropolitan (23.7%) or small shire (23.1%) geographic regions
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (22.5%).

There was no difference in participation in organised physical activity on a weekly basis by Aboriginal and/or Torres Strait Islander status or sexuality.

Who coordinates the organised physical activity that Victorians participate in?

Age and gender analysis

The two most common organisations to coordinate the organised physical activity that Victorians participated in were sports club or associations (9.8%) and fitness, leisure or sports centres (9.2%). A higher proportion of males participated in physical activity organised by a sports club or association (12.8%), compared with females (7.0%).

Table 4.5 Proportion of Victorians participating in organised physical activity, by age and gender

Age group (years)	Physical activity – participation in any organised physical activity								
	Males			Females			Persons		
Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	
18–24	43.0	38.7	47.3	37.7	33.4	42.1	40.5	37.4	43.5
25–34	33.5	30.2	37.0	34.1	30.9	37.4	33.8	31.5	36.1
35–44	26.9	23.9	30.1	29.4	26.6	32.3	28.2	26.2	30.3
45–54	24.2	21.6	26.9	25.7	23.3	28.3	25.0	23.2	26.8
55–64	17.1	14.9	19.5	25.5	23.0	28.2	21.5	19.8	23.3
65–74	22.2	19.7	24.9	30.3	27.5	33.3	26.3	24.4	28.3
75+	22.9	19.5	26.7	22.8	19.6	26.2	23.0	20.6	25.4
Total	27.6	26.4	28.9	29.6	28.4	30.8	28.7	27.8	29.5

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.6 Proportion of Victorians participating in physical activity organised by a sports club or association, by age and gender

Age group (years)	Physical activity – organised by a sports club or association								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	21.4	18.0	25.1	11.1	8.5	14.1	16.3	14.2	18.7
25–34	13.0	10.7	15.7	6.8	5.3	8.7	9.9	8.5	11.5
35–44	11.8	9.7	14.2	5.8	4.5	7.3	8.8	7.5	10.1
45–54	11.9	10.0	14.0	5.6	4.4	7.1	8.7	7.6	9.9
55–64	8.2	6.7	9.9	4.9	3.8	6.2	6.5	5.6	7.5
65–74	11.5	9.7	13.5	9.0	7.3	11.0	10.2	9.0	11.6
75+	12.4	9.8	15.4	7.4	5.5	9.7	9.5	7.9	11.3
Total	12.8	11.9	13.7	7.0	6.3	7.6	9.8	9.3	10.4

Table 4.7 Proportion of Victorians participating in physical activity organised by a fitness, leisure or sports centre, by age and gender

Age group (years)	Physical activity – organised by a fitness, leisure or indoor sports centre								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	13.5	10.7	16.8	13.0	10.1	16.3	13.4	11.3	15.6
25–34	13.6	11.3	16.3	13.3	11.1	15.9	13.5	11.8	15.3
35–44	8.4	6.6	10.6	11.5	9.6	13.7	10.0	8.6	11.5
45–54	6.8	5.3	8.5	9.7	8.1	11.6	8.3	7.1	9.5
55–64	3.3	2.3	4.6	8.8	7.2	10.7	6.2	5.2	7.3
65–74	3.0	2.1	4.2	7.4	5.9	9.0	5.3	4.4	6.3
75+	2.0	1.1	3.2	4.1	2.7	6.0	3.2	2.3	4.3
Total	8.1	7.3	8.9	10.2	9.4	11.0	9.2	8.6	9.7

A higher proportion of those aged 18–24 participated in physical activity organised by sporting clubs and associations (16.3%) and fitness, leisure or sports centres (13.4%). Likewise, a higher proportion of those aged 25–34 participated in physical activity organised by a fitness, leisure or sports centre (13.5%). A lower proportion of those aged 55–64 participated in physical activity organised by a sports club or association (6.5%) or a fitness, leisure or sports centre (6.2%). Physical activity organised by a fitness, leisure or sports centre was significantly lower among those aged 65–74 (5.3%) and 75 or over (3.2%).

Other demographic analysis

Sports club or association

Compared with all Victorians (9.8% participated in physical activity organised by a sports club or association), participation in physical activity organised by a sports club or association was **higher** among those:

- mainly speaking English at home (11.3%)
- who were Australian-born (11.6%)
- with a household annual income of \$100,000 or more (11.9%)
- living in a regional city (13.8%), or in large shire (12.9%) and small shire (12.7%) geographic regions
- living outside the capital city (13.5%).

Compared with all Victorians (9.8% participated in physical activity organised by a sports club or association), participation in physical activity organised by a sports club or association was **lower** among those:

- who had completed some high school or less (7.9%)
- who reported their main activity as ‘home duties’ (6.6%)
- mainly speaking a language other than English at home (5.5%)
- from a non-English-speaking country (5.7%)
- with a reported disability (6.7% for those under 65, and 6.6% for those over 65)
- with a household annual income of \$20,000–\$39,999 (7.4%)
- living in single-person households (6.9%)
- living in outer metropolitan geographic regions (7.6%).

There were no differences by Aboriginal and/or Torres Strait Islander status or sexuality in participation in physical activity organised by a sports club or association.

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Fitness, leisure and sports centres

Compared with all Victorians (9.2% participated in physical activity organised by a fitness, leisure or sports centre), participation in physical activity organised by a fitness, leisure or sports centre was **higher** among those:

- with university qualifications (12.2%)
- who were employed (10.6%) or students (13.2%)
- with a household annual income of \$100,000 or more (12.3%)
- living in inner metropolitan geographic regions (12.5%)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (11.2%).

Compared with all Victorians (9.2% participated in physical activity organised by a fitness, leisure or sports centre), participation in physical activity organised by a fitness, leisure or sports centre was **lower** among those:

- who had completed some high school or less (4.3%)
- who were retired (4.8%)
- over 65 with a reported disability (2.7%)
- with a household annual income of less than \$20,000 (4.7%) or of \$20,000–\$39,999 (5.3%)
- living in single-person households (6.2%)
- living in large shire (5.3%) or small shire (3.3%) geographic regions
- living outside the capital city (6.5%)
- a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (7.2%).

There were no differences by Aboriginal and/or Torres Strait Islander status or sexuality in participation in physical activity organised by a fitness, leisure or sports centre.

Table 4.8 Summary of indicators relating to organised physical activity, by demographic

	Participation in any organised physical activity			Organised by a fitness, leisure or indoor sports centre			Organised by a sports club or association		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	28.7	27.8	29.5	9.2	8.6	9.7	9.8	9.3	10.4
Gender									
Male	27.6	26.4	28.9	8.1	7.3	8.9	12.8	11.9	13.7
Female	29.6	28.4	30.8	10.2	9.4	11.0	7.0	6.3	7.6
Age									
18–24	40.5	37.4	43.5	13.4	11.3	15.6	16.3	14.2	18.7
25–34	33.8	31.5	36.1	13.5	11.8	15.3	9.9	8.5	11.5
35–44	28.2	26.2	30.3	10.0	8.6	11.5	8.8	7.5	10.1
45–54	25.0	23.2	26.8	8.3	7.1	9.5	8.7	7.6	9.9
55–64	21.5	19.8	23.3	6.2	5.2	7.3	6.5	5.6	7.5
65–74	26.3	24.4	28.3	5.3	4.4	6.3	10.2	9.0	11.6
75+	23.0	20.6	25.4	3.2	2.3	4.3	9.5	7.9	11.3
Education									
Some high school or less	19.7	18.0	21.5	4.3	3.4	5.4	7.9	6.8	9.2
Completed high school	30.4	27.9	33.1	8.5	7.0	10.3	11.4	9.7	13.3
TAFE/Certificate/Diploma	27.1	25.5	28.6	8.3	7.3	9.4	10.4	9.4	11.5
University	33.6	32.1	35.1	12.2	11.2	13.3	9.9	9.0	10.9
Main activity									
Employed	30.9	29.8	32.1	10.6	9.8	11.4	10.6	9.9	11.4
Unemployed	18.2	13.8	23.2	8.1	5.1	12.2	6.5	3.8	10.3
Student	37.8	33.8	42.1	13.2	10.4	16.3	11.6	9.1	14.5
Home duties	22.2	19.1	25.6	8.4	6.3	10.9	6.6	4.9	8.8
Retired	25.9	24.4	27.5	4.8	4.1	5.7	9.9	8.9	11.0
Main language spoken at home									
English	30.8	29.8	31.8	9.1	8.5	9.8	11.3	10.7	12.0
Other	22.7	21.0	24.5	9.4	8.2	10.7	5.5	4.6	6.6
Country of birth									
Australian born	31.0	30.0	32.1	9.1	8.5	9.8	11.6	10.9	12.4
English-speaking country	29.8	26.9	32.9	9.3	7.4	11.5	8.0	6.3	10.0
Non-English speaking country	22.1	20.4	23.8	9.2	8.0	10.5	5.7	4.8	6.7

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.8 Summary of indicators relating to organised physical activity, by demographic

	Participation in any organised physical activity			Organised by a fitness, leisure or indoor sports centre			Organised by a sports club or association		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	28.7	27.8	29.5	9.2	8.6	9.7	9.8	9.3	10.4
Self-reported disability									
Reported disability – under 65 years	20.8	18.7	22.9	7.5	6.2	9.1	6.7	5.5	8.1
Reported disability – over 65 years	18.4	16.2	20.7	2.7	2.0	3.6	6.6	5.3	8.1
No disability reported	31.0	30.0	32.0	10.0	9.4	10.7	10.6	10.0	11.3
Aboriginal and/or Torres Strait Islander status									
Aboriginal and/or Torres Strait Islander	23.4	15.1	33.7	7.1*	2.6	14.9	9.9*	4.5	18.2
Non-Aboriginal and/or Torres Strait Islander	28.7	27.9	29.6	9.2	8.6	9.8	9.8	9.3	10.4
Sexuality									
Heterosexual	28.9	28.0	29.8	9.2	8.6	9.8	10.0	9.4	10.6
Other	28.1	24.2	32.2	9.0	6.6	11.9	8.1	6.0	10.8
Income									
Less than \$20,000	22.5	19.2	26.0	4.7	3.1	6.7	7.8	5.7	10.3
\$20,000–\$39,999	20.7	19.0	22.4	5.3	4.3	6.4	7.4	6.4	8.6
\$40,000–\$59,999	26.8	24.5	29.2	8.3	6.8	9.9	9.5	8.0	11.2
\$60,000–\$79,999	30.2	27.5	33.0	8.9	7.2	10.8	10.5	8.8	12.5
\$80,000–\$99,999	31.5	28.6	34.5	10.8	8.9	13.0	11.1	9.3	13.2
\$100,000 or more	35.6	33.8	37.5	12.3	11.1	13.7	11.9	10.7	13.2
Household structure									
Single person household	24.5	22.5	26.7	6.2	5.1	7.6	6.9	5.7	8.2
Couple household	30.2	28.6	31.8	9.1	8.0	10.2	10.3	9.3	11.3
Household with children	28.5	27.2	29.9	9.3	8.5	10.3	10.8	9.9	11.8
– Single parent with dependent children	24.2	19.6	29.3	9.5	6.6	13.2	10.6	7.3	14.7
– Couple parent with dependent children	28.6	27.0	30.3	8.6	7.6	9.7	10.5	9.4	11.7
Share or group household	31.0	28.0	34.0	11.1	9.1	13.3	9.6	7.8	11.7
Geography									
Metropolitan	30.2	29.0	31.5	10.4	9.6	11.3	8.5	7.8	9.3
– Inner metro	33.7	30.6	37.0	12.5	10.3	14.9	8.5	6.7	10.6
– Middle metro	32.0	30.4	33.7	10.7	9.6	11.8	8.9	8.0	10.0
– Outer metro	23.7	21.3	26.2	8.5	7.0	10.2	7.6	6.1	9.2
Interface	26.3	24.4	28.2	9.2	8.0	10.6	9.0	7.8	10.3
Regional city	29.5	27.2	31.9	8.1	6.7	9.8	13.8	12.1	15.7
Large shire	26.5	24.9	28.1	5.3	4.5	6.2	12.9	11.6	14.2
Small shire	23.1	21.4	24.8	3.3	2.6	4.0	12.7	11.3	14.2
Location									
Capital city	29.0	28.0	30.0	10.0	9.3	10.7	8.7	8.0	9.3
Rest of state	27.6	26.2	29.0	6.5	5.7	7.4	13.5	12.5	14.6
Internet at home									
Yes	30.2	29.3	31.1	9.9	9.3	10.5	10.2	9.6	10.9
SEIFA (index of disadvantage)									
1 – Low (most disadvantaged)	22.5	20.7	24.3	7.2	6.1	8.5	8.3	7.2	9.4
2	26.8	24.9	28.8	7.5	6.3	8.9	10.6	9.3	11.9
3	27.0	25.1	29.0	8.5	7.3	9.9	9.7	8.4	11.1
4	30.8	28.8	32.9	10.1	8.7	11.5	10.4	9.1	11.8
5 – High (least disadvantaged)	33.5	31.7	35.2	11.2	10.1	12.5	10.0	8.9	11.2

* Sampling variability high, use with caution (relative standard error 25–50%)

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.9 Proportion of Victorians participating in non-organised physical activity, by age and gender

Age group (years)	Participation in any non-organised physical activity								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	73.0	68.9	76.7	71.7	67.5	75.7	72.4	69.5	75.1
25–34	73.6	70.4	76.6	69.8	66.5	72.9	71.7	69.4	73.9
35–44	75.2	72.1	78.2	72.2	69.4	74.9	73.7	71.7	75.7
45–54	73.8	71.1	76.4	72.7	70.1	75.2	73.2	71.4	75.0
55–64	72.8	70.0	75.5	71.0	68.2	73.6	71.9	69.9	73.7
65–74	73.4	70.5	76.1	65.6	62.4	68.6	69.4	67.3	71.5
75+	58.9	54.4	63.4	47.2	43.2	51.2	52.3	49.3	55.3
Total	72.6	71.4	73.8	68.5	67.3	69.7	70.5	69.7	71.4

Participation in non-organised physical activity

Age and gender analysis

Just over seven out of 10 (70.5%) Victorians took part in non-organised physical activity on a weekly basis. Similar to participation in physical activity more generally, a higher proportion of males (72.6%) participated in non-organised physical activity. A higher proportion (73.7%) of those aged 35–44, and a lower proportion of those aged 75 or older (52.3%) participated in non-organised physical activity, compared with all Victorians. A lower proportion of males (58.9%) and females (47.2%) aged 75 or older participated in non-organised physical activity, compared with all males and all females. Females aged 45–54 had a higher participation rate (72.7%) for non-organised physical activity compared with all females.

Other demographic analysis

Compared with all Victorians (70.5% took part in non-organised physical activity), **higher** participation rates in non-organised physical activity on a weekly basis were seen for those:

- with university qualifications (76.7%)
- who were employed (73.7%)
- mainly speaking English at home (72.3%)
- who were Australian-born (72.4%)
- with no reported disability reported (73.4%)
- with a household annual income of \$100,000 or more (78.2%)
- living in couple parent households with dependent children (74.2%)
- living in inner metropolitan geographic regions (80.3%)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (75.4%).

Compared with all Victorians (70.5% took part in non-organised physical activity), **lower** participation rates in non-organised physical activity on a weekly basis were seen for those:

- who had completed some high school or less (57.4%)
- who were retired (62.7%)
- mainly speaking a language other than English at home (65.4%)
- from a non-English-speaking country (65.4%)
- with a reported disability (64.5% for those under 65, and 50.4% for those over 65)
- with a household annual income of \$20,000 – \$39,999 (61.8%)
- living in single-person households (65.8%)
- living in small shire geographic regions (67.2%)
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 (65.0%) or 2 (67.4%).

There was no difference in participation in non-organised physical activity on a weekly basis by Aboriginal and/or Torres Strait Islander status or sexuality.

Non-organised physical activity type

Age and gender analysis

Respondents were asked to list the three main types of physical activities they participate in. The top five non-organised physical activities undertaken by Victorians were:

- walking (51.2%)
- jogging or running (14.0%)
- cycling (11.8%)
- gym or fitness sessions (7.6%)
- swimming (5.2%).

These activities were consistently mentioned across all local government areas, and the top three activities in all local government areas were always one of those listed above.

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Non-organised – walking

A higher proportion (55.3%) of females engaged in walking as a form of non-organised physical activity, compared with males (46.8%), as did those aged 45–74 (57.4% of those aged 45–54; 62.6% of those aged 55–64; and 61.8% of those aged 65–74). Compared with all Victorians, those aged 18–24 (37.2%), 25–34 (43.3%) and 75 or over (44.9%) had a lower participation rate in walking.

Males aged 45–74 had a higher rate of participation in walking as a form of non-organised physical activity (51.8% of those aged 45–54, 60.0% of those aged 55–64 and 62.7% of those aged 65–74), compared with all males. Males aged 18–24 and 25–34 had a lower rate of participation (29.4% and 37.0% respectively), compared with all males.

Females aged 45–74 had a higher rate of participation in walking as a form of non-organised physical activity (62.7% of those aged 45–54, 65.3% of those aged 55–64, and 60.9% of those aged 65–74). Females aged 18–24 (45.2%), 25–34 (49.4%) and 75 or over (41.9%) had a lower rate of participation, compared with all females. In age groups from 18 to 54, females had higher rates of participation than their male counterparts.

Non-organised – jogging or running

Males had higher participation rates (16.3%) in jogging or running as a form of non-organised physical activity, and females had lower participation rates (11.9%), compared with Victorians overall. Younger Victorians had higher participation rates compared with Victorians overall (31.8% of those aged 18–24, 21.9% of those aged 25–34 and 17.6% of those aged 35–44), while older Victorians had lower participation rates (10.5% of those aged 45–54, 4.7% of those aged 55–64 and 1.8% of those aged 65–74).

A similar trend was observed for males, with higher levels of participation in jogging or running among those aged 18–24 (33.4%), 25–34 (24.9%) and 35–44 (20.9%), compared with males overall. Older males had lower participation rates compared with all males (12.0% of those aged 45–54, 6.2% of those aged 55–64, and 2.7% of those aged 65–74).

Similarly, females aged 18–24 and 25–34 reported higher levels of participation in jogging or running (at 30.1% and 18.9%, respectively), compared with females overall. Older females had lower participation rates (9.0% of those aged 45–54 and 3.4% of those aged 55–64), compared with all females.

Non-organised – cycling

Males reported higher participation rates in cycling as a form of non-organised physical activity (16.1%) and females reported lower rates (7.7%), compared with Victorians overall. Victorians aged 35–54 had higher participation rates compared with Victorians overall (15.8% of those aged 35–44 and 14.4% of those aged 45–54). Older Victorians had lower participation rates in cycling compared with Victorians overall (8.2% of those aged 65–74 and 3.9% of those aged 75 or over).

For males, those aged 18–24 (11.6%) and those aged 75 or over (6.9%) had lower participation rates in cycling compared with all males, while those aged 35–44 (21.2%) and 45–54 (19.7%) reported higher levels of participation.

Females aged 35–44 reported higher levels of participation (10.6%), compared with females overall, while females aged 65–74 had lower participation rates (3.3%).

Non-organised – gym or fitness sessions

Males (9.3%) reported higher rates of participation in non-organised gym or fitness sessions, and females reported lower rates (6.0%), compared with Victorians overall. Victorians aged 18–24 (12.3%) and 25–34 (11.0%) had higher rates compared with Victorians overall. Older Victorians had lower rates of participation in gym or fitness sessions compared with Victorians overall (5.1% of those aged 55–64, 3.3% of those aged 65–74 and 3.3% of those aged 75 or over).

Similarly, males aged 18–24 and 25–34 reported higher participation in gym or fitness sessions (at 14.4% and 13.3%, respectively), compared with males overall. Older males reported lower rates compared with all males (5.8% of those aged 55–64, 5.3% of those aged 65–74 and 5.0% of those aged 75 or older).

Females aged 18–24 and 25–34 reported higher rates of participation (at 10.0% and 8.6%, respectively), compared with females overall. Older females reported lower rates compared with all females (1.5% of those aged 65–74).

Non-organised – swimming

There were no gender differences reported for participation in swimming. The only age difference reported for participation in swimming was for those aged 75 or older, who had lower participation rates for swimming (at 1.9%) than Victorians overall.

Table 4.10 Proportion of Victorians participating in walking, by age and gender

Age group (years)	Activity type – walking								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	29.4	25.5	33.4	45.2	40.8	49.7	37.2	34.2	40.2
25–34	37.0	33.6	40.5	49.4	46.0	52.8	43.3	40.9	45.7
35–44	45.2	41.6	48.7	57.0	53.9	60.1	51.2	48.8	53.5
45–54	51.8	48.7	54.9	62.7	60.0	65.4	57.4	55.3	59.4
55–64	60.0	56.9	63.0	65.3	62.5	68.1	62.6	60.6	64.7
65–74	62.7	59.6	65.8	60.9	57.7	64.0	61.8	59.6	64.0
75+	48.7	44.2	53.3	41.7	37.9	45.7	44.9	41.9	47.8
Total	46.8	45.5	48.2	55.3	54.0	56.6	51.2	50.2	52.1

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.11 Proportion of Victorians participating in jogging or running, by age and gender

Age group (years)	Activity type – jogging or running								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	33.4	29.4	37.6	30.1	26.1	34.4	31.8	28.9	34.7
25–34	24.9	21.8	28.1	18.9	16.4	21.7	21.9	19.9	24.0
35–44	20.9	18.2	23.9	14.3	12.2	16.7	17.6	15.9	19.5
45–54	12.0	10.0	14.2	9.0	7.4	10.8	10.5	9.2	11.9
55–64	6.2	4.7	8.0	3.4	2.4	4.6	4.7	3.8	5.8
65–74	2.7	1.8	3.8	0.9*	0.4	1.7	1.8	1.3	2.4
75+	0.3*	0.1	0.7	No data	-	-	0.2*	0.1	0.5
Total	16.3	15.2	17.4	11.9	11.0	12.8	14.0	13.3	14.7

* Sampling variability high, use with caution (relative standard error 25–50%)

No data = Relative standard error above 50%, estimate not reported.

Table 4.12 Proportion of Victorians participating in cycling, by age and gender

Age group (years)	Activity type – cycling								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	11.6	9.1	14.6	9.2	6.9	12.1	10.4	8.7	12.4
25–34	17.0	14.5	19.9	8.8	7.0	10.8	12.9	11.3	14.6
35–44	21.2	18.4	24.2	10.6	8.7	12.6	15.8	14.1	17.6
45–54	19.7	17.3	22.2	9.3	7.8	11.0	14.4	13.0	15.9
55–64	15.0	12.9	17.4	7.0	5.7	8.4	10.9	9.7	12.2
65–74	13.5	11.3	15.9	3.3	2.5	4.3	8.2	7.1	9.5
75+	6.9	4.6	9.9	1.6*	0.8	2.8	3.9	2.8	5.3
Total	16.1	15.1	17.1	7.7	7.0	8.4	11.8	11.2	12.4

* Sampling variability high, use with caution (relative standard error 25–50%)

Table 4.13 Proportion of Victorians participating in gym or fitness, by age and gender

Age group (years)	Activity type – gym or fitness								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	14.4	11.5	17.7	10.0	7.5	13.1	12.3	10.3	14.4
25–34	13.3	11.0	16.0	8.6	6.9	10.7	11.0	9.5	12.6
35–44	9.0	7.1	11.2	6.1	4.7	7.7	7.5	6.3	8.9
45–54	8.5	6.8	10.5	6.7	5.4	8.2	7.6	6.5	8.8
55–64	5.8	4.4	7.4	4.4	3.3	5.6	5.1	4.2	6.1
65–74	5.3	4.0	6.8	1.5	1.0	2.0	3.3	2.6	4.1
75+	5.0	3.1	7.4	2.0*	1.1	3.5	3.3	2.3	4.5
Total	9.3	8.5	10.2	6.0	5.4	6.7	7.6	7.1	8.2

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.14 Proportion of Victorians participating in swimming, by age and gender

Age group (years)	Activity type – swimming								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	5.7	3.9	7.9	7.1	5.0	9.7	6.4	5.0	8.0
25–34	4.1	2.8	5.8	5.8	4.3	7.6	5.0	4.0	6.1
35–44	6.3	4.7	8.3	5.2	4.0	6.7	5.7	4.7	6.9
45–54	5.8	4.5	7.4	7.1	5.7	8.7	6.4	5.5	7.5
55–64	4.9	3.7	6.4	5.1	3.9	6.5	5.0	4.1	6.0
65–74	4.0	2.9	5.4	4.2	2.8	6.0	4.1	3.2	5.2
75+	2.4	1.4	3.9	1.6*	0.8	2.9	1.9	1.3	2.8
Total	5.0	4.4	5.6	5.4	4.8	6.0	5.2	4.8	5.6

* Sampling variability high, use with caution (relative standard error 25–50%)

Other demographic analysis

Non-organised – walking

Compared with all Victorians (51.2% participated in walking), **higher** participation rates in non-organised walking were seen for those:

- who were retired (55.1%)
- mainly speaking English at home (53.7%)
- were Australian-born (53.3%)
- living in couple households (54.8%)
- living in regional cities (54.9%) or small shire (54.9%) geographic regions
- living outside the capital city (54.2%).

Compared with all Victorians (51.2% participated in walking), **lower** participation rates in non-organised walking were seen for those:

- who were students (38.5%)
- mainly speaking a language other than English at home (43.7%)
- from a non-English-speaking country (44.5%)
- over 65 with a reported disability (43.1%)
- with a household annual income of less than \$20,000 (45.3%)
- living in share or group households (43.0%).

There was no difference in participation in non-organised walking by educational attainment, Aboriginal and/or Torres Strait Islander status, sexuality or SEIFA quintile.

Non-organised – jogging or running

Compared with all Victorians (14.0% participated in jogging or running), those with **higher** participation rates in non-organised jogging or running were those:

- with a high school-only qualification (17.5%) or university qualification (19.5%)
- who were employed (17.1%) or students (31.8%)
- without a reported disability (16.6%)
- with a household annual income of \$100,000 or more (20.1%)
- living in households with children (17.2%), in couple parent households with dependent children (18.4%) or in share or group households (18.7%)
- living in inner metropolitan geographic regions (22.9%)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (17.0%).

Compared with all Victorians (14.0% participated in jogging or running), those with **lower** participation rates in non-organised jogging or running were those:

- who had completed some high school or less (4.4%) and persons with TAFE, Certificate or Diploma qualifications (11.6%)
- who reported their main activity as ‘home duties’ (8.4%) or were retired (1.1%)
- with a reported disability (6.6% for those under 65, and 0.3%¹ for those over 65)
- with a household annual income of \$20,000–\$39,999 (5.9%) or \$40,000–\$59,999 (11.1%)
- living in single-person households (8.2%) or in couple households (9.5%)
- living in large shire (10.4%) or small shire (8.3%) geographic regions
- living outside the capital city (11.6%)
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (11.0%).

There was no difference in participation in non-organised jogging or running by language spoken at home, country of birth, Aboriginal and/or Torres Strait Islander status or sexuality.

¹ RSE is between 25% and 50% – treat estimate with caution

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Non-organised – cycling

Compared with all Victorians (11.8% participated in cycling), those with **higher** participation rates in non-organised cycling were those:

- with university qualifications (15.2%)
- who were employed (14.3%)
- with a household annual income of \$100,000 or more (18.0%)
- living in couple parent households with dependent children (14.2%)
- living in inner metropolitan geographic regions (18.3%).

Compared with all Victorians (11.8% participated in cycling), those with **lower** participation rates in non-organised cycling were those:

- who had completed some high school or less (5.0%)
- who reported their main activity as 'home duties' (7.2%) or were retired (6.6%)
- mainly speaking a language other than English at home (8.7%)
- from a non-English-speaking country (8.1%)
- over 65 with a reported disability (4.7%)
- with a household annual income of less than \$20,000 (7.5%) or \$20,000–\$39,999 (7.8%)
- living in single-person households (9.1%)
- living in outer metropolitan (7.7%) or interface (9.0%) geographic regions
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (8.5%).

There were no significant differences in participation in non-organised cycling by Aboriginal and/or Torres Strait Islander status or sexuality.

Non-organised – gym or fitness sessions

Compared with all Victorians (7.6% participated in gym or fitness sessions), those with **higher** participation rates in non-organised gym or fitness sessions were those:

- with university qualifications (9.3%)
- who were employed (9.0%) or were students (10.9%)
- with a household annual income of \$80,000–\$99,999 (10.4%) or \$100,000 or more (9.4%)
- living in share or group households (13.1%)
- living in inner metropolitan geographic regions (12.3%).

Compared with all Victorians (7.6% participated in gym or fitness sessions), those with **lower** participation rates in non-organised gym or fitness sessions were those:

- who had completed some high school or less (3.5%)
- who reported their main activity as 'home duties' (5.2%) or were retired (3.4%)
- over 65 with a reported disability (3.2%)
- with a household annual income of \$20,000–\$39,999 (4.8%)
- living in couple households (6.0%)
- living in large shire (5.9%) or small shire (5.5%) geographic regions
- living outside the capital city (6.1%).

There were no significant differences in participation in non-organised gym or fitness sessions by language spoken at home, country of birth, Aboriginal and/or Torres Strait Islander status, sexuality or SEIFA quintile.

Non-organised – swimming

Compared with all Victorians (5.2% participated in swimming), those with **higher** participation rates in non-organised swimming were those:

- with university qualifications (7.0%)
- living in inner metropolitan geographic areas (9.6%).

Compared with all Victorians (5.2% participated in swimming), those with **lower** participation rates in non-organised swimming were those:

- who had completed some high school or less (2.3%)
- who were retired (3.5%)
- over 65 with a reported disability (2.4%)
- living in small shire geographic regions (3.5%).

There were no significant differences in participation in non-organised swimming by language spoken at home, country of birth, Aboriginal and/or Torres Strait Islander status, sexuality, annual income, household structure or SEIFA quintile.

Participation in non-organised physical activity alone or with someone else

Age and gender analysis

Just over half of all Victorians (53.0%) participated in non-organised physical activity by themselves. This equates to 75.1% of those that participated in non-organised physical activity. Just under a third (31.8%) of all Victorians (45.1% of those who participated in non-organised activities) reported that they participated in non-organised activities with someone else.

Compared with all Victorians, males (55.9%) had higher rates, and females lower rates (50.1%), of participating alone in non-organised physical activity.

Generally, younger Victorians had higher rates of participation in non-organised activity either with someone else (35.2% of those aged 25–34 and 37.1% of those aged 35–44) or alone (58.0% of those aged 18–24). Those aged 75 or over had lower rates of participating in non-organised activity, both with someone else (17.5%) and also alone (40.7%). It is important to interpret these findings in the context of lower physical activity participation rates overall by this age group.

Females aged 18–24 had higher rates of participating in non-organised physical activity alone (56.7%), and females aged 35–44 had higher rates of participating in non-organised with someone else (38.3%).

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.15 Proportion of Victorians participating in non-organised physical activity alone, by age and gender

Age group (years)	Participates alone								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	59.2	54.9	63.5	56.7	52.2	61.1	58.0	54.9	61.1
25–34	55.2	51.7	58.8	50.4	46.9	53.8	52.8	50.4	55.3
35–44	56.6	53.1	60.1	50.8	47.7	53.9	53.7	51.4	56.1
45–54	58.1	55.0	61.1	52.8	49.9	55.6	55.4	53.3	57.4
55–64	56.3	53.2	59.4	51.6	48.7	54.5	53.9	51.8	56.1
65–74	55.4	52.1	58.5	45.9	42.7	49.1	50.5	48.3	52.8
75+	45.1	40.7	49.6	37.2	33.4	41.1	40.7	37.8	43.6
Total	55.9	54.6	57.3	50.1	48.8	51.4	53.0	52.1	53.9

Table 4.16 Proportion of Victorians participating in non-organised physical activity with someone, by age and gender

Age group (years)	Participates with someone								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	30.9	27.0	35.0	33.4	29.2	37.7	32.1	29.2	35.0
25–34	35.5	32.2	39.0	35.0	31.8	38.3	35.2	32.9	37.6
35–44	36.0	32.6	39.4	38.3	35.3	41.4	37.1	34.8	39.4
45–54	30.7	27.9	33.6	34.2	31.5	37.0	32.5	30.5	34.5
55–64	28.8	26.0	31.7	31.9	29.2	34.8	30.4	28.5	32.4
65–74	30.3	27.4	33.4	28.1	25.3	31.1	29.2	27.1	31.3
75+	21.3	17.5	25.5	14.7	12.0	17.7	17.5	15.2	20.0
Total	31.6	30.3	32.9	32.1	30.9	33.4	31.8	31.0	32.7

Other demographic analysis

Non-organised – alone

Compared with all Victorians (53.0% participated on their own), demographic groups with a **higher** rate of participation in non-organised physical activity on their own were those:

- with university qualifications (58.0%)
- who were employed (55.8%) or were students (60.2%)
- mainly speaking English at home (55.0%)
- who were Australian-born (55.1%)
- with a household annual income of \$100,000 or more (59.1%)
- living in single-person households (58.6%)
- living in inner metropolitan geographic regions (65.3%)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (57.2%).

Compared with all Victorians (53.0% participated on their own), those with a **lower** rate of participation in non-organised physical activity on their own were those:

- those who had completed some high school or less (41.7%)
- who reported their main activity as ‘home duties’ (44.1%) or who were retired (46.0%)
- mainly speaking a language other than English at home (47.3%)
- from a non-English-speaking country (47.1%)

- over 65 with a reported disability (37.7%)
- with a household annual income of \$20,000–\$39,999 (48.1%)
- living in single-parent households with dependent children (45.8%)
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (48.7%) or 2 (49.3%).

There were no significant differences in participation in non-organised activity alone by Aboriginal and/or Torres Strait Islander status or sexuality.

Non-organised – with someone else

Compared with all Victorians (31.8% participated with someone else), demographic groups with a **higher** rate of participation in non-organised physical activity with someone else were those:

- with university qualifications (37.4%)
- who were employed persons (33.9%) and those who reported their main activity as ‘home duties’ (40.0%)
- with no reported disability (34.0%)
- with a household annual income of \$100,000 or more (38.4%)
- living in households with children (36.0%) or couple parent households with dependent children (37.8%)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (35.1%).

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Compared with all Victorians (31.8% participated with someone else), those with a **lower** rate of participation in non-organised physical activity with someone else were those:

- who had completed some high school or less (22.0%)
- who were retired (25.4%)
- with a reported disability (26.6% for those under 65, and 18.5% for those over 65)
- with a household annual income of less than \$20,000 (26.6%) or \$20,000–\$39,999 (24.0%)
- living in single-person households (14.6%)
- living in small shire geographic regions (27.6%)
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (26.9%).

There were no significant differences in participation in non-organised activity with someone else by language spoken at home, country of birth, Aboriginal and/or Torres Strait Islander status or sexuality.

Table 4.17 Summary of indicators relating to participation in non-organised physical activity, by demographic

	Participation in any non-organised physical activity			Activity type – walking			Activity type – jogging or running			Activity type – cycling		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	70.5	69.7	71.4	51.2	50.2	52.1	14.0	13.3	14.7	11.8	11.2	12.4
Gender												
Male	72.6	71.4	73.8	46.8	45.5	48.2	16.3	15.2	17.4	16.1	15.1	17.1
Female	68.5	67.3	69.7	55.3	54.0	56.6	11.9	11.0	12.8	7.7	7.0	8.4
Age												
18–24	72.4	69.5	75.1	37.2	34.2	40.2	31.8	28.9	34.7	10.4	8.7	12.4
25–34	71.7	69.4	73.9	43.3	40.9	45.7	21.9	19.9	24.0	12.9	11.3	14.6
35–44	73.7	71.7	75.7	51.2	48.8	53.5	17.6	15.9	19.5	15.8	14.1	17.6
45–54	73.2	71.4	75.0	57.4	55.3	59.4	10.5	9.2	11.9	14.4	13.0	15.9
55–64	71.9	69.9	73.7	62.6	60.6	64.7	4.7	3.8	5.8	10.9	9.7	12.2
65–74	69.4	67.3	71.5	61.8	59.6	64.0	1.8	1.3	2.4	8.2	7.1	9.5
75+	52.3	49.3	55.3	44.9	41.9	47.8	0.2*	0.1	0.5	3.9	2.8	5.3
Education												
Some high school or less	57.4	55.2	59.6	48.4	46.2	50.7	4.4	3.4	5.5	5.0	4.1	6.0
Completed high school	71.4	68.9	73.9	49.2	46.5	52.0	17.5	15.4	19.9	10.3	8.7	12.1
TAFE/Certificate/Diploma	70.2	68.6	71.7	52.9	51.2	54.6	11.6	10.5	12.9	12.1	11.0	13.2
University	76.7	75.4	78.0	51.5	49.9	53.1	19.5	18.2	20.8	15.2	14.1	16.3
Main activity												
Employed	73.7	72.7	74.8	51.2	50.0	52.5	17.1	16.2	18.1	14.3	13.5	15.2
Unemployed	73.5	68.0	78.4	53.6	47.6	59.4	13.4	9.6	18.1	9.9	6.9	13.6
Student	74.8	70.9	78.4	38.5	34.4	42.6	31.8	27.9	35.9	11.8	9.2	14.8
Home duties	66.3	62.4	70.1	55.8	51.7	59.7	8.4	6.4	10.8	7.2	5.4	9.5
Retired	62.7	60.8	64.5	55.1	53.2	57.0	1.1	0.8	1.5	6.6	5.8	7.6
Main language spoken at home												
English	72.3	71.4	73.3	53.7	52.7	54.8	13.6	12.8	14.4	12.9	12.2	13.7
Other	65.4	63.4	67.3	43.7	41.7	45.7	15.3	13.9	16.9	8.7	7.6	9.9
Country of birth												
Australian born	72.4	71.5	73.4	53.3	52.2	54.4	14.2	13.4	15.1	12.9	12.2	13.7
English-speaking country	71.3	68.3	74.1	54.7	51.5	57.9	11.0	8.9	13.3	14.4	12.2	16.9
Non-English speaking country	65.4	63.5	67.3	44.5	42.5	46.5	14.4	13.0	15.9	8.1	7.1	9.3
Self-reported disability												
Reported disability – under 65 years	64.5	62.1	66.8	50.1	47.6	52.6	6.6	5.3	8.0	10.6	9.1	12.2
Reported disability – over 65 years	50.4	47.4	53.5	43.1	40.2	46.1	0.3*	0.1	0.6	4.7	3.4	6.2
No disability reported	73.4	72.4	74.3	52.0	50.9	53.1	16.6	15.7	17.4	12.7	12.0	13.4
Aboriginal and/or Torres Strait Islander status												
Aboriginal and/or Torres Strait Islander	66.6	56.2	76.0	52.4	42.0	62.7	9.2*	4.0	17.3	6.9*	2.9	13.5
Non-Aboriginal and/or Torres Strait Islander	70.6	69.8	71.5	51.2	50.3	52.1	14.1	13.4	14.8	11.9	11.3	12.5

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.17 Summary of indicators relating to participation in non-organised physical activity, by demographic

	Participation in any non-organised physical activity			Activity type – walking			Activity type – jogging or running			Activity type – cycling		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	70.5	69.7	71.4	51.2	50.2	52.1	14.0	13.3	14.7	11.8	11.2	12.4
Sexuality												
Heterosexual	70.5	69.6	71.4	51.1	50.1	52.1	14.0	13.3	14.7	11.8	11.2	12.4
Other	72.8	68.8	76.6	52.0	47.5	56.4	16.9	13.6	20.6	13.6	10.6	17.0
Income												
Less than \$20,000	66.6	62.8	70.2	45.3	41.4	49.2	15.3	12.4	18.6	7.5	5.6	9.9
\$20,000–\$39,999	61.8	59.8	63.8	49.8	47.7	51.9	5.9	4.8	7.2	7.8	6.6	9.1
\$40,000–\$59,999	69.3	66.8	71.6	52.3	49.7	54.9	11.1	9.3	13.0	10.2	8.7	11.9
\$60,000–\$79,999	71.3	68.6	74.0	50.5	47.6	53.5	15.5	13.3	18.0	11.5	9.8	13.5
\$80,000–\$99,999	73.8	71.0	76.5	51.4	48.3	54.6	16.8	14.4	19.4	14.6	12.4	16.9
\$100,000 or more	78.2	76.6	79.8	52.9	51.0	54.8	20.1	18.6	21.7	18.0	16.6	19.5
Household structure												
Single person household	65.8	63.5	68.0	50.9	48.5	53.3	8.2	6.8	9.9	9.1	7.6	10.7
Couple household	70.1	68.5	71.6	54.8	53.1	56.5	9.5	8.4	10.7	11.8	10.7	13.0
Household with children	72.2	70.8	73.5	51.3	49.8	52.8	17.2	16.1	18.4	12.9	11.9	13.9
– Single parent with dependent children	66.1	60.7	71.2	49.1	43.5	54.7	13.7	9.8	18.4	9.8	6.9	13.4
– Couple parent with dependent children	74.2	72.6	75.9	52.2	50.3	54.0	18.4	16.9	19.9	14.2	12.9	15.5
Share or group household	72.2	69.3	75.0	43.0	39.9	46.2	18.7	16.3	21.3	13.1	11.1	15.3
Geography												
Metropolitan	71.8	70.6	73.0	49.8	48.4	51.2	15.7	14.7	16.8	12.8	11.9	13.8
– Inner metro	80.3	77.5	82.8	50.5	47.1	53.8	22.9	20.0	26.0	18.3	15.7	21.1
– Middle metro	71.5	69.9	73.0	50.2	48.4	51.9	15.5	14.2	16.9	13.5	12.3	14.7
– Outer metro	67.2	64.5	69.9	48.6	45.7	51.5	11.6	9.8	13.7	7.7	6.2	9.4
Interface	68.2	66.1	70.1	51.0	48.8	53.1	12.8	11.3	14.4	9.0	7.8	10.2
Regional city	71.9	69.7	74.1	54.9	52.4	57.4	13.4	11.6	15.5	13.5	11.7	15.4
Large shire	68.8	67.1	70.4	53.0	51.2	54.8	10.4	9.1	11.8	11.2	10.0	12.5
Small shire	67.2	65.4	69.0	54.9	52.8	56.8	8.3	6.9	9.7	10.9	9.6	12.3
Location												
Capital city	70.7	69.6	71.7	50.2	49.1	51.3	14.8	13.9	15.6	11.6	10.9	12.3
Rest of state	70.2	68.8	71.5	54.2	52.7	55.7	11.6	10.5	12.8	12.4	11.4	13.5
Internet at home												
Yes	72.2	71.3	73.1	51.6	50.6	52.6	15.2	14.5	16.0	12.6	11.9	13.2
SEIFA (index of disadvantage)												
1 – Low (most disadvantaged)	65.0	62.9	67.0	48.5	46.4	50.7	11.0	9.6	12.5	8.5	7.4	9.8
2	67.4	65.3	69.4	49.6	47.5	51.8	11.9	10.4	13.6	10.6	9.3	12.0
3	69.9	67.9	71.8	50.4	48.3	52.6	14.3	12.8	16.0	12.0	10.7	13.5
4	72.0	70.0	74.0	53.8	51.5	56.0	14.0	12.4	15.7	13.7	12.2	15.3
5 – High (least disadvantaged)	75.4	73.8	77.0	52.5	50.6	54.3	17.0	15.5	18.5	13.1	11.9	14.4

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.17 Summary of indicators relating to participation in non-organised physical activity, by demographic

	Activity type – gym or fitness			Activity type – swimming			Participates alone			Participates with someone		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	7.6	7.1	8.2	5.2	4.8	5.6	53.0	52.1	53.9	31.8	31.0	32.7
Gender												
Male	9.3	8.5	10.2	5.0	4.4	5.6	55.9	54.6	57.3	31.6	30.3	32.9
Female	6.0	5.4	6.7	5.4	4.8	6.0	50.1	48.8	51.4	32.1	30.9	33.4
Age												
18–24	12.3	10.3	14.4	6.4	5.0	8.0	58.0	54.9	61.1	32.1	29.2	35.0
25–34	11.0	9.5	12.6	5.0	4.0	6.1	52.8	50.4	55.3	35.2	32.9	37.6
35–44	7.5	6.3	8.9	5.7	4.7	6.9	53.7	51.4	56.1	37.1	34.8	39.4
45–54	7.6	6.5	8.8	6.4	5.5	7.5	55.4	53.3	57.4	32.5	30.5	34.5
55–64	5.1	4.2	6.1	5.0	4.1	6.0	53.9	51.8	56.1	30.4	28.5	32.4
65–74	3.3	2.6	4.1	4.1	3.2	5.2	50.5	48.3	52.8	29.2	27.1	31.3
75+	3.3	2.3	4.5	1.9	1.3	2.8	40.7	37.8	43.6	17.5	15.2	20.0
Education												
Some high school or less	3.5	2.8	4.4	2.3	1.6	3.1	41.7	39.6	43.9	22.0	20.2	24.0
Completed high school	9.6	8.0	11.5	4.2	3.2	5.5	55.5	52.7	58.2	29.6	27.1	32.1
TAFE/Certificate/Diploma	7.5	6.6	8.5	4.9	4.2	5.7	52.1	50.4	53.8	31.5	30.0	33.2
University	9.3	8.3	10.3	7.0	6.3	7.9	58.0	56.5	59.6	37.4	35.9	39.0
Main activity												
Employed	9.0	8.3	9.8	5.7	5.2	6.3	55.8	54.6	57.0	33.9	32.7	35.0
Unemployed	6.9	4.3	10.2	4.5*	2.5	7.3	53.9	48.0	59.8	31.5	26.1	37.2
Student	10.9	8.4	13.9	6.5	4.6	8.9	60.2	55.9	64.3	32.3	28.4	36.5
Home duties	5.2	3.7	7.0	4.3	2.9	6.2	44.1	40.2	48.1	40.0	36.1	44.0
Retired	3.4	2.8	4.1	3.5	2.9	4.3	46.0	44.2	47.9	25.4	23.7	27.1
Main language spoken at home												
English	7.8	7.2	8.4	5.3	4.8	5.8	55.0	53.9	56.0	32.4	31.4	33.4
Other	7.3	6.3	8.4	4.9	4.1	5.9	47.3	45.3	49.4	30.3	28.4	32.2
Country of birth												
Australian born	7.9	7.2	8.5	5.1	4.6	5.6	55.1	54.0	56.2	32.4	31.3	33.4
English-speaking country	7.7	6.0	9.7	6.3	4.8	8.1	54.3	51.1	57.5	31.3	28.3	34.3
Non-English speaking country	7.1	6.1	8.2	5.1	4.3	6.1	47.1	45.1	49.1	30.6	28.8	32.5
Self-reported disability												
Reported disability – under 65 years	7.3	6.0	8.7	5.2	4.2	6.5	49.6	47.1	52.1	26.6	24.4	28.8
Reported disability – over 65 years	3.2	2.1	4.5	2.4	1.6	3.4	37.7	34.9	40.6	18.5	16.1	21.1
No disability reported	8.1	7.5	8.7	5.4	4.9	5.9	54.9	53.8	55.9	34.0	32.9	35.0
Aboriginal and/or Torres Strait Islander status												
Aboriginal and/or Torres Strait Islander	7.5*	2.8	15.8	No data	-	-	48.8	38.5	59.2	29.5	20.6	39.6
Non-Aboriginal and/or Torres Strait Islander	7.7	7.2	8.2	5.2	4.8	5.6	53.0	52.1	54.0	31.9	31.0	32.8
Sexuality												
Heterosexual	7.6	7.1	8.1	5.2	4.8	5.7	52.8	51.9	53.8	32.1	31.2	33.0
Other	9.2	6.8	12.1	5.1	3.4	7.2	58.3	53.9	62.6	28.5	24.6	32.7
Income												
Less than \$20,000	8.1	6.0	10.7	3.5	2.3	5.1	51.9	47.9	55.8	26.6	23.1	30.3
\$20,000–\$39,999	4.8	3.9	5.9	4.3	3.4	5.3	48.1	45.9	50.2	24.0	22.1	25.9
\$40,000–\$59,999	7.7	6.3	9.4	5.5	4.4	6.8	52.4	49.8	55.0	29.7	27.3	32.1
\$60,000–\$79,999	7.9	6.3	9.7	5.6	4.4	7.1	52.6	49.7	55.6	34.1	31.4	37.0
\$80,000–\$99,999	10.4	8.4	12.6	4.7	3.5	6.1	54.1	51.0	57.3	35.4	32.4	38.5
\$100,000 or more	9.4	8.3	10.6	6.5	5.6	7.5	59.1	57.3	61.0	38.4	36.6	40.3

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.17 Summary of indicators relating to participation in non-organised physical activity, by demographic

	Activity type – gym or fitness			Activity type – swimming			Participates alone			Participates with someone		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	7.6	7.1	8.2	5.2	4.8	5.6	53.0	52.1	53.9	31.8	31.0	32.7
Household structure												
Single person household	7.1	5.8	8.6	4.7	3.8	5.7	58.6	56.3	61.0	14.6	13.0	16.4
Couple household	6.0	5.2	6.9	4.9	4.2	5.8	51.2	49.5	52.9	32.9	31.3	34.5
Household with children	7.5	6.7	8.3	5.1	4.5	5.8	51.9	50.4	53.4	36.0	34.6	37.4
– Single parent with dependent children	8.0	5.3	11.4	3.4*	1.9	5.7	45.8	40.3	51.5	33.0	27.9	38.4
– Couple parent with dependent children	7.4	6.4	8.4	5.5	4.7	6.4	53.3	51.4	55.2	37.8	36.0	39.6
Share or group household	13.1	10.9	15.4	6.5	5.0	8.2	56.7	53.5	59.8	33.1	30.2	36.2
Geography												
Metropolitan	8.4	7.7	9.2	5.7	5.1	6.4	54.8	53.4	56.2	32.6	31.3	33.9
– Inner metro	12.3	10.0	14.8	9.6	7.7	11.8	65.3	62.1	68.5	34.0	30.9	37.3
– Middle metro	7.4	6.5	8.4	5.4	4.6	6.2	54.3	52.6	56.1	33.8	32.1	35.5
– Outer metro	8.3	6.8	10.1	4.1	3.1	5.4	49.3	46.4	52.2	28.8	26.2	31.5
Interface	7.4	6.3	8.7	4.2	3.4	5.1	50.0	47.8	52.1	30.4	28.4	32.4
Regional city	6.6	5.3	8.1	5.4	4.2	6.7	52.5	50.0	55.0	34.0	31.6	36.4
Large shire	5.9	5.0	7.0	5.0	4.2	5.8	51.8	50.0	53.6	29.8	28.1	31.5
Small shire	5.5	4.5	6.6	3.5	2.8	4.3	51.0	49.0	53.0	27.6	25.8	29.5
Location												
Capital city	8.1	7.5	8.8	5.2	4.7	5.7	53.3	52.2	54.4	31.9	30.8	32.9
Rest of state	6.1	5.3	6.9	5.1	4.4	5.8	51.9	50.4	53.4	31.8	30.3	33.2
Internet at home												
Yes	8.1	7.6	8.7	5.5	5.1	6.0	53.9	52.9	54.9	33.5	32.5	34.4
SEIFA (index of disadvantage)												
1 – Low (most disadvantaged)	6.8	5.7	8.0	4.6	3.7	5.6	48.7	46.5	50.9	26.9	25.0	28.9
2	6.8	5.6	8.1	4.3	3.5	5.2	49.3	47.2	51.5	29.9	27.9	32.0
3	7.6	6.5	8.9	4.7	3.8	5.7	52.8	50.6	54.9	31.6	29.6	33.7
4	7.4	6.3	8.7	5.8	4.8	6.9	54.1	51.9	56.3	33.6	31.5	35.7
5 – High (least disadvantaged)	8.9	7.9	10.1	6.1	5.2	7.0	57.2	55.4	59.1	35.1	33.3	36.9

* Sampling variability high, use with caution (relative standard error 25–50%)

No data = Relative standard error above 50%, estimate not reported

Table 4.18 Average time spent sitting on a usual work day, by age and gender

Age group (years)	Time spent sitting on usual work day (Base: those aged 18–64 years who are working 35 or more hours)								
	Males			Females			Persons		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI
18–24	2:35	2:09	3:01	4:12	3:36	4:48	3:13	2:51	3:35
25–34	4:22	4:06	4:38	5:11	4:54	5:29	4:42	4:30	4:54
35–44	4:36	4:22	4:51	5:09	4:50	5:27	4:46	4:35	4:58
45–54	4:19	4:05	4:32	4:49	4:33	5:04	4:29	4:19	4:40
55–64	4:17	3:60	4:34	4:19	3:57	4:41	4:18	4:04	4:31
65–74	-	-	-	-	-	-	-	-	-
75+	-	-	-	-	-	-	-	-	-
Total	4:16	4:08	4:23	4:53	4:44	5:03	4:29	4:24	4:35

* Sampling variability high, use with caution (relative standard error 25–50%)

No data = Relative standard error above 50%, estimate not reported

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Sedentary behaviour – time spent sitting on usual work day

Age and gender analysis

On average, Victorians reported spending 4 hours 29 minutes sitting on a usual work day. Females spent a longer time sitting on a usual work day (4 hours 53 minutes) and males spent less time (4 hours 16 minutes). Those aged between 18 and 24 spent less time sitting on a usual work day (3 hours 13 minutes).

Other demographic analysis

There were a number of demographic differences in the amount of time spent sitting on a usual work day. Compared with all Victorians (4 hours 29 minutes sitting), significantly **less** time was spent sitting on a usual work day by those:

- who had completed some high school or less (3 hours 18 minutes), those with a high school-only qualification (4 hours 3 minutes), and those with TAFE, Certificate or Diploma qualifications (3 hours 40 minutes)
- with a household annual income of less than \$20,000 (2 hours 57 minutes), of \$20,000–\$39,999 (3 hours 2 minutes) or of \$40,000–\$59,999 (3 hours 36 minutes)
- living in regional cities (3 hours 40 minutes), large shire (3 hours 29 minutes) or small shire (3 hours 14 minutes) geographic regions
- living outside the capital city (3 hours 33 minutes)
- with a low SEIFA (a Socio-Economic Index for Areas score of 1 – most disadvantaged) (3 hours 52 minutes) or a SEIFA of 2 (4 hours 3 minutes).

Compared with all Victorians (4 hours 29 minutes sitting), significantly **more** time was spent sitting on a usual work day by those:

- with university qualifications (5 hours 20 minutes)
- with a household annual income of \$100,000 or more (5 hours 12 minutes)
- living in metropolitan (5 hours 1 minute), inner metropolitan (5 hours 44 minutes) or middle metropolitan (5 hours 3 minutes) geographic regions
- living in a capital city (4 hours 44 minutes)
- with a high SEIFA (a Socio-Economic Index for Areas score of 5 – least disadvantaged) (5 hours 4 minutes).

There were no significant differences in average time spent sitting on a usual work day by language spoken at home, country of birth, disability status, Aboriginal and/or Torres Strait Islander status, sexuality or household structure.

Table 4.19 Average time spent sitting on a usual work day, by demographic

	Time spent sitting on usual work day (Base: those aged 18–64 years who are working 35 or more hours)		
	Score (Avg)	Lower 95% CI	Higher 95% CI
Victoria	4:29	4:24	4:35
Gender			
Male	4:16	4:08	4:23
Female	4:53	4:44	5:03
Age			
18–24	3:13	2:51	3:35
25–34	4:42	4:30	4:54
35–44	4:46	4:35	4:58
45–54	4:29	4:19	4:40
55–64	4:18	4:04	4:31
65–74	-	-	-
75+	-	-	-
Education			
Some high school or less	3:18	2:57	3:40
Completed high school	4:03	3:43	4:23
TAFE/Certificate/Diploma	3:40	3:29	3:50
University	5:20	5:12	5:27
Main activity			
Employed	4:30	4:24	4:36
Unemployed	1:34*	0:06	3:01
Student	2:53	1:47	3:59
Home duties	2:29*	0:25	4:33
Retired	-	-	-

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Table 4.19 Average time spent sitting on a usual work day, by demographic

	Time spent sitting on usual work day (Base: those aged 18–64 years who are working 35 or more hours)		
	Score (Avg)	Lower 95% CI	Higher 95% CI
Victoria	4:29	4:24	4:35
Main language spoken at home			
English	4:28	4:21	4:34
Other	4:34	4:22	4:46
Country of birth			
Australian born	4:23	4:16	4:30
English-speaking country	4:44	4:24	5:03
Non-English speaking country	4:41	4:29	4:54
Self-reported disability			
Reported disability – under 65 years	4:18	4:00	4:36
Reported disability – over 65 years	-	-	-
No disability reported	4:31	4:25	4:37
Aboriginal and/or Torres Strait Islander status			
Aboriginal and/or Torres Strait Islander	4:12	3:11	5:12
Non-Aboriginal and/or Torres Strait Islander	4:30	4:24	4:36
Sexuality			
Heterosexual	4:29	4:23	4:35
Other	4:30	4:03	4:57
Income			
Less than \$20,000	2:57	1:52	4:01
\$20,000–\$39,999	3:02	2:32	3:32
\$40,000–\$59,999	3:36	3:20	3:52
\$60,000–\$79,999	4:14	3:58	4:30
\$80,000–\$99,999	4:14	3:59	4:30
\$100,000 or more	5:12	5:04	5:21
Household structure			
Single person household	4:50	4:31	5:09
Couple household	4:46	4:33	4:58
Household with children	4:25	4:17	4:33
– Single parent with dependent children	3:59	3:27	4:31
– Couple parent with dependent children	4:35	4:25	4:44
Share or group household	4:23	4:05	4:41
Geography			
Metropolitan	5:01	4:53	5:09
– Inner metro	5:44	5:26	6:02
– Middle metro	5:03	4:53	5:13
– Outer metro	4:21	4:02	4:39
Interface	4:11	3:58	4:24
Regional city	3:40	3:25	3:56
Large shire	3:29	3:15	3:43
Small shire	3:14	2:58	3:30
Location			
Capital city	4:44	4:37	4:51
Rest of state	3:33	3:23	3:43
Internet at home			
Yes	4:31	4:25	4:37
SEIFA (index of disadvantage)			
1 – Low (most disadvantaged)	3:52	3:37	4:07
2	4:03	3:48	4:17
3	4:21	4:08	4:34
4	4:36	4:22	4:49
5 – High (least disadvantaged)	5:04	4:54	5:15

* Sampling variability high, use with caution (relative standard error 25–50%)

No data = Relative standard error above 50%, estimate not reported

Summary and conclusion

Most Victorians are not getting enough physical activity to benefit their health, with only two in five Victorian adults participating in physical activity for half an hour on four or more days per week. One in five Victorians do not engage in any physical activity during the week. A sedentary lifestyle places individuals at increased risk of developing chronic diseases such as type 2 diabetes, cardiovascular disease, stroke and certain types of cancers that are associated with premature morbidity and mortality (Owen et al 2009).

This survey provides new, detailed information on the context of Victorian's physical activity. Overall, across the population, physical activity is more often instigated by individuals by themselves or with family and friends, rather than organised by clubs, associations or organisations. In fact, more than 70% of people who participate in physical activity are involved in non-organised activities, the most popular of which are walking (51.2%), jogging or running (14%), cycling (11.8%), attending a gym or fitness centre (7.6%) and swimming (5.2%). These results reflect recent trends reported elsewhere, which demonstrate a growth in non-organised activities, compared with traditional club-based or organised sport participation (ABS 2012, Hajkowicz et al. 2013).

Organised sport and clubs are still enjoyed by a significant proportion of people. This survey found that one in four (28.7%) Victorians participated in organised sport, and one in 10 (9.8%) participated in a sport club or association, on a weekly basis. It is important to note, however, that participation does not necessarily reflect adequate levels of physical activity.

Gender is a major factor associated with physical activity, with consistently higher participation rates among males than females. The one exception to this rule is walking, which is more commonly undertaken by women. Age appears to be factor for all but the most active individuals, with increasing age leading to less physical activity for all types of activity, excluding walking.

The relationship between physical activity and other markers of social position is complex. Some, such as household income, non-English-speaking background, and SEIFA score, are related to physical activity levels, but others, such as sexual orientation or household income, are not. While only some types of disadvantage appear related to physical activity, their effect applies across all forms of physical activity, whether organised through a club or association, or not.

This survey provides information on sedentary behaviour at work. Sedentary behaviour is associated with a range of health issues and uninterrupted sitting is particularly prevalent in the workplace (Baker IDI 2009, Groøntved & Hu 2011, Lynch 2010, Pearson & Biddle 2011). The survey restricted the measure of sedentary behaviour to time spent sitting in the workplace by Victorians employed full-time: this group spent an average of 4 hours 29 minutes sitting during work hours per day. Females in this group were found to spend more time sitting than males.

Only some markers of social advantage were associated with sitting time. Where there was an association, higher levels of advantage were related to more time sitting.

A VicHealth guide providing evidence-informed actions that can help increase physical activity and reduce sedentary behaviour, particularly at a local level is available at www.vichealth.vic.gov.au/localgovernmentguides.

Further information

This chapter reports prevalence data on Victorian's physical activity levels, participation in organised physical activity (including participation in physical activity organised by a fitness, leisure or indoor sports centre or a sports club or association, and whether the physical activity was competitive or non-competitive), and participation in non-organised physical activity (including main types of physical activity and whether Victorians participate alone or with others). Complementary information about Victorian's physical activity and sedentary behaviours is presented in the Victorian Population Health Survey 2014 (DHHS 2016).

References

- Australian Bureau of Statistics (ABS) 2012, *Participation in sport and physical recreation, Australia, 2011–12*, ABS cat. no. 4177.0, ABS, Canberra.
- Australian Bureau of Statistics (ABS) 2013, *Australian Health Survey (Core) Questionnaire, 2011–12*, ABS cat. no. 4363.0.55.001, ABS, Canberra, viewed 16 May 2016, <[www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/9140F72890430A59CA257B8E0014A428/\\$File/australian%20health%20survey%20\(core\)%202011-12%20questionnaire.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/9140F72890430A59CA257B8E0014A428/$File/australian%20health%20survey%20(core)%202011-12%20questionnaire.pdf)>.
- Australian Bureau of Statistics (ABS) 2014, *Australian Aboriginal and Torres Strait Islander Health Survey: Physical activity, 2012–13*, cat. no. 4727.0.55.004, ABS, Canberra.
- Australian Bureau of Statistics (ABS) 2015a, *National Health Survey: First results, 2014–15*, ABS cat. no. 4364.0.55.001, ABS, Canberra.
- Australian Bureau of Statistics (ABS) 2015b, *Participation in sport and physical recreation, Australia, 2013–14*, ABS cat. no. 4177.0, ABS, Canberra.
- Baker IDI Heart and Diabetes Institute and the Cancer Prevention Research Centre at the University of Queensland 2009, *Stand up Australia: Sedentary behaviour in workers*, Medibank Private, Canberra.
- Brown, HE, Ryde, GC, Gilson, ND, Burton, NW & Brown, WJ 2013, 'Objectively measured sedentary behavior and physical activity in office employees: Relationships with presenteeism', *Journal of Occupational and Environmental Medicine*, vol. 55, no. 8, pp. 945–53.
- Cadilhac, DA, Cumming, TB, Sheppard, L, Pearce, DC, Carter, R & Magnus, A 2011, 'The economic benefits of reducing physical inactivity: An Australian example', *International Journal of Behavioral Nutrition and Physical Activity*, vol. 8, p. 99.

4. PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Crawford, S, Bennetts, S, Cooklin, A, Hackworth, N, Nicholson, J, D'Esposito, F, Green, JB, Matthews, J, Zubrick, S, Strazdins, L & Parcel, GS 2015, *Parental fear as a barrier to children's independent mobility and resultant physical activity: Final report*, VicHealth, Carlton, Victoria.

de Moor, D 2013, *Walking for health: Walking works*, Public Health England, London.

Department of Health 2014, *Australia's physical activity and sedentary behaviour guidelines*, Department of Health, Canberra, viewed 2 June 2016, <www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-strateg-phys-actguidelines>.

Department of Health and Human Services (DHHS) 2016, *Victorian Population Health Survey 2014: Modifiable risk factors contributing to chronic disease*, State Government of Victoria, Melbourne.

Dunstan, D, Healy, G, Owen, N, Salmon, J, Ridgers, N, Okely, T, Cliff, D, Daley, M & Bauman, A 2014, 'Action Area 5 – Prolonged sitting (sedentary behaviour)', in *Blueprint for an active Australia*, 2nd edn, National Heart Foundation of Australia, Melbourne.

Eime, RM, Young, JA, Harvey, JT, Charity, MJ & Payne, WR 2013, 'A systematic review of the psychological and social benefits of participation in sport for adults: Informing development of a conceptual model of health through sport', *International Journal of Behavioral Nutrition and Physical Activity*, vol. 10, p. 135.

Gordon-Larsen, P, Hou, N, Sidney, S, Sternfeld, B, Lewis, CE, Jacobs, DR Jr & Popkin, BM 2009, 'Fifteen-year longitudinal trends in walking patterns and their impact on weight change', *American Journal of Clinical Nutrition*, vol. 89, no. 1, pp. 19–26.

Grøntved, A & Hu, F 2011, 'Television viewing and risk of type 2 diabetes, cardiovascular disease, and all-cause mortality: A meta-analysis', *JAMA*, vol. 305, no. 23, pp. 2448–55.

Hadgraft, NT, Lynch, BM, Clark, BK, Healy, GN, Owen, N & Dunstan, DW 2015, 'Excessive sitting at work and at home: Correlates of occupational sitting and TV viewing time in working adults', *BMC Public Health*, vol. 15, pp. 1–13.

Hajkovicz, SA, Cook, H, Wilhelmseder, L & Boughen, N 2013, *The future of Australian sport: Megatrends shaping the sports sector over coming decades. A consultancy report for the Australian sports commission*, CSIRO, Canberra.

Lynch, BM 2010, 'Sedentary behavior and cancer: A systematic review of the literature and proposed biological mechanisms', *Cancer Epidemiology, Biomarkers and Prevention*, vol. 19, no. 11, pp. 2691–709.

Milton, K, Clemes, S & Bull, F 2013, 'Can a single question provide an accurate measure of physical activity?', *British Journal of Sports Medicine*, vol. 47, no. 1, pp. 44–48.

National Heart Foundation of Australia 2014, *Blueprint for an active Australia*, 2nd edn, National Heart Foundation of Australia, Melbourne.

Newman, P 2001, 'Human settlements: Health and the physical environment', in *The social origins of health and well-being*, eds R Eckersley, J Dixon & RM Douglas, Cambridge University Press, Cambridge.

Owen N, A Bauman, W Brown 2009, 'Too much sitting: A novel and important predictor of chronic disease risk?', *British Journal of Sports Medicine*, vol 43, pp. 81–83.

Pearson, N & Biddle, SJ 2011, 'Sedentary behavior and dietary intake in children, adolescents, and adults: A systematic review', *American Journal of Preventive Medicine*, vol. 41, no. 2, pp. 178–88.

Pronk, NP & Kottke, TE 2009, 'Physical activity promotion as a strategic corporate priority to improve worker health and business performance', *Preventive Medicine*, vol. 49, no. 4, pp. 316–21.

Thorp, AA, Owen, N, Neuhaus, M & Dunstan, DW 2011, 'Sedentary behaviors and subsequent health outcomes in adults: A systematic review of longitudinal studies, 1996–2011', *American Journal of Preventive Medicine*, vol. 41, no. 2, pp. 207–15.



5. Healthy eating

A healthy diet is vital for optimal growth, development and wellbeing throughout life and contributes to physical vitality, mental health and social wellbeing (NHMRC 2013, WHO 2003). A healthy diet also helps prevent chronic diseases such as cardiovascular disease, cancer and diabetes as well as their associated risk factors including overweight and obesity, high blood pressure and high cholesterol (NHMRC 2013).

In Australia, unhealthy diet is responsible for a significant proportion of the chronic disease burden, with dietary risk factors responsible for 10.4% (AIHW 2016).

Overweight and obesity is a particularly common health risk factor that is influenced by diet. In Victoria, 63.3% (2.9 million adults) were overweight or obese in 2014–15 (ABS 2016). Being overweight or obese is associated with an increased risk of developing chronic disease (NHMRC 2013). It also places a significant economic burden on the Australian health care system. The total annual direct, indirect and social costs of overweight and obesity have been estimated at between \$58 and \$62 billion, with direct costs estimated at \$8–21 billion per annum (Access Economics 2008; Colagiuri et al. 2010). In Victoria, overweight and obesity costs more than \$14 billion annually (Access Economics 2008).

With increasing prevalence of overweight and obesity and chronic disease in our society, there is an urgent need to encourage a reduction in the consumption of discretionary food and drink (energy-dense, nutrient-poor) and to increase the consumption of a healthy diet (NHMRC 2013).

The *Australian Dietary Guidelines* describe a healthy diet as being high in nutrient-rich foods such as vegetables, fruit, lean proteins, healthy oils, low-fat milk, cheese and yoghurt, nuts, seeds and wholegrains; and low in discretionary foods that are high in excess energy (kilojoules), salt, added sugar and saturated and trans fats (NHMRC 2013).

Across Victoria, as in other states, high-income groups, non-Aboriginal and/or Torres Strait Islander peoples and people living in more advantaged neighbourhoods are more likely to eat a healthy balanced diet, be a healthy weight and have better health outcomes (Ghosh 2016). Conversely, Aboriginal and/or Torres Strait Islander peoples, new arrivals of refugee background, and socioeconomically disadvantaged people are more likely to experience food insecurity (Markwick et al. 2014, Palermo et al. 2016).

Fruit and vegetable intake

Fruit and vegetable consumption is internationally accepted as an indicator of a healthy diet (AIHW 2007). The World Health Organization reports that low fruit and vegetable consumption is one of the top 10 risk factors contributing to global mortality (WHO 2011). In Australia, population studies have estimated that inadequate fruit and vegetable consumption is responsible for 3.4% of the total burden of disease (AIHW 2016).

The *Australian Dietary Guidelines* recommend that Australian adults eat five serves of vegetables (approximately 400 grams per day) and two serves of fruit (approximately 300 grams per day) every day (NHMRC 2013). In Victoria, only 6.4% of the adult population consumed the recommended serves of vegetables, while 47.8% consumed the recommended serves of fruit in 2014 (DHHS 2016). Males and females experiencing social and economic disadvantage – including low educational attainment, being unemployed and having low household income – were more likely to not consume the recommended serves of fruit and vegetables (DHHS 2016).

Take-away foods eaten outside the home

Food and drinks that are high in energy (kilojoules), saturated and/or trans fats, added sugar and/or salt and are low in essential nutrients, are defined as energy-dense and nutrient-poor foods, also known as ‘discretionary food and drink’ (NHMRC 2013). Discretionary food and drink are not required as part of a healthy balanced diet and do not provide essential nutrients needed for optimal health (NHMRC 2013). When last measured in 2011–2012, discretionary food and drink made up around one-third (34.6%) of Australians’ total daily energy intake (ABS 2013).

Fast food, and most take-away meals and snacks such as burgers, pizzas and fried foods, are considered ‘discretionary’ (NHMRC 2013). In Australia, the average fast-food meal provides about half (47.5%) of an adult’s daily energy intake (Brindal et al. 2008) and regular consumption can increase total energy intake, which may lead to unnecessary weight gain (Rosenheck 2008; WCRF & AICR 2007).

The impact of dietary salt intake on health, such as that in take-away foods, is often overlooked. Excess salt in the diet increases the risk of developing high blood pressure – a major risk factor for cardiovascular disease and stroke, which are the two leading causes of death and disability in Victoria (NHMRC 2013, Lim et al, 2012). In Victoria, salt is consumed at nearly twice the recommended level (Nowson et al. 2015) and around 75% of salt eaten is from processed foods, including take-away foods (Better Health Channel 2014).

Water consumption

Water comprises between 50% and 80% of body weight in adults and is essential for the body to function (NHMRC 2013, Popkin et al. 2010).

The Australian Dietary Guidelines (NHMRC 2013) recommend that Australians should drink plenty of water every day instead of sugar-sweetened beverages (which include soft drinks, energy drinks, sports drinks, vitamin waters, fruit drinks, cordials and alcoholic drinks). Water is recommended rather than sugar-sweetened beverages because it contains no energy (kilojoules) and it is generally free and accessible. The recommended daily intake of water for Australians is about eight cups (2.1 litres) for males and about 10 cups (2.6 litres) for females (NHMRC & New Zealand Ministry of Health 2006).

In contrast to water consumption, high consumption of sugar-sweetened beverages has been linked to ill health. There is considerable evidence that high consumption of sugar-sweetened beverages increases the risk of developing diabetes, dental caries, weight gain and obesity (Malik et al. 2010, Woodward-Lopez et al. 2011). Currently, one in four Australian children are overweight or obese and one in two Australian children have tooth decay in their permanent teeth by the time they are 12 (AIHW 2012). In Victoria, sugar-sweetened soft drinks are widely consumed – with just over 15% (15.3%) of Victorian males and just over 7% (7.2%) of Victorian females consuming soft drinks on a daily basis (DHHS 2016).

VicHealth Indicators: Healthy eating

- Number of serves of vegetables per day
- Number of serves of fruit per day
- Eats take-away meals or snacks at least 3 times per week
- No water consumed per day
- Number of cups of water consumed per day

Five indicators for healthy eating are presented. The first two indicators report on individuals’ consumption of vegetables and fruit and are expressed as the mean number of serves eaten per day. Both indicators refer to a single item that records individuals’ number of serves as a numeral. A serve of vegetables was defined as a half cup of cooked vegetables or one cup of salad vegetables. Potato crisps and vegetable juice consumption did not count towards vegetable consumption. A serve of fruit was defined as one medium piece or two small pieces of fruit, or one cup of diced fruit pieces. Fruit juice consumption did not count towards daily fruit consumption.

Fruit and vegetable consumption also appear in the Victorian Population Health Survey (VPHS). While the VPHS reports on the percentage of Victorians adhering to Australian dietary guidelines (see the 2014 Victorian Population Health Survey), VicHealth reports the average number of serves. Their inclusion in the VicHealth Indicators Survey 2015 reflects the importance of these measures as proxy measures of a healthy diet (AIHW 2007).

One indicator of healthy eating refers to consumption of take-away meals or snacks. The indicator reports the percentage of individuals eating take-away food or snacks – such as pizza, hamburgers, or hot chips – three or more times per week. It is based on a single graduated frequency item, which was specifically developed for the VicHealth Indicators Survey 2015 and derived from a measure used in the RESIDE study (Trapp et al. 2015). It complements the vegetable and fruit indicators by providing indirect information on the consumption of discretionary food. The question on take-away meals and snacks was included as there is increased consumption of snacks (IPSOS 2016), and an increased availability of fast-food options promoted as a snack. The qualifying examples of take-away and snack food were inserted following cognitive testing that showed the need for disambiguation. Piloting and cognitive testing confirmed the items’ content validity, while test-retest reliability results showed the item to be stable over time.

Two indicators of healthy eating refer to individuals’ water consumption. The first indicator reports the percentage of individuals who report no water consumption on a usual day. The second indicator reports the average number of cups of water (250 ml) usually consumed by individuals. Both indicators are based on a single item that asks about daily water consumption.

The water consumption item has previously been used in the VicHealth H30 Challenge Survey (Colmar-Brunton 2015), and in the NSW Population Health Survey (NSW Health 2014), and is a variation of the water consumption question in the VPHS. The VPHS reports water consumption estimates in millilitres, while the VicHealth Indicators Survey 2015 reports on the number of cups consumed.

5. HEALTHY EATING

Table 5.1 Average serves of vegetables each day, by age and gender

Age group (years)	Number of serves of vegetables per day								
	Males			Females			Persons		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI
18–24	1.9	1.8	2.0	2.3	2.1	2.4	2.1	2.0	2.2
25–34	1.9	1.8	2.0	2.5	2.3	2.6	2.2	2.1	2.3
35–44	2.0	1.9	2.1	2.4	2.4	2.5	2.2	2.1	2.3
45–54	2.0	1.9	2.1	2.6	2.5	2.7	2.3	2.2	2.4
55–64	2.1	2.0	2.1	2.7	2.6	2.8	2.4	2.3	2.4
65–74	2.0	1.9	2.1	2.6	2.5	2.7	2.3	2.3	2.4
75+	2.1	2.0	2.3	2.3	2.2	2.4	2.2	2.2	2.3
Total	2.0	1.9	2.0	2.5	2.5	2.5	2.2	2.2	2.3

Number of serves of vegetables per day

Age and gender analysis

On average, Victorians reported that they usually consumed 2.2 serves of vegetables each day. This is less than half of the daily recommended intake of five serves (NHMRC 2013). For information on the proportion of Victorians meeting vegetable guidelines, refer to the VPHS 2014 (DHHS 2016).

Females consumed a higher number of vegetable serves in a usual day (2.5 serves) and males consumed fewer (2.0 serves), compared with the Victorian average.

Compared with males, females of all ages consumed a higher number of vegetable serves, with the exception of the oldest cohort (those aged 75 or over).

Overall, those aged 18–24 consumed fewer vegetables (2.1 serves) and those aged 55–64 consumed more serves of vegetables (2.4 serves), compared with all Victorians.

There were no differences observed in the number of serves of vegetables per day among males across differing age groups; however, among females, those aged 55–64 reported consuming a higher number of vegetables serves in a usual day (2.7 serves) and those aged 18–24 and those aged 75 or over reported consuming fewer serves (2.3 serves for both groups).

Other demographic analysis

Compared with all Victorians (2.2 serves), demographic groups consuming a **higher** number of vegetable serves on average per day were those:

- with university qualifications (2.5 serves)
- mainly speaking English at home (2.4 serves)
- who were Australian-born (2.4 serves) and those from a non-English-speaking country (2.5 serves)
- with a household annual income of \$100,000 or more (2.5 serves)
- living in couple households (2.4 serves)
- living in large shire or small shire geographic regions (2.4 and 2.5 serves, respectively)
- living in the rest of the state (outside the capital city) (2.4 serves)
- with a high SEIFA (a Socio-Economic Indexes for Areas score of 5 – least disadvantaged) (2.4 serves).

Compared with all Victorians (2.2 serves), demographic groups consuming **fewer** vegetable serves per day were those:

- who had completed some high school or less (2.0 serves), those with a high school qualification only (2.1 serves) or with TAFE, Certificate or Diploma qualifications (2.2 serves)
- who were unemployed (1.8 serves)
- mainly speaking a language other than English at home (1.9 serves)
- from a non-English-speaking country (1.9 serves)
- with a household annual income less than \$20,000 or \$20,000–\$39,999 (2.0 and 2.1 serves, respectively)
- living in single-person, share or group households (2.1 serves in each case)
- living in outer metropolitan or interface geographic regions (2.1 serves in both cases)
- with a low SEIFA (a score of 1 – most disadvantaged) (2.1 serves).

There were no significant differences observed by disability status, Aboriginal and/or Torres Strait Islander status or sexuality.

5. HEALTHY EATING

Table 5.2 Average serves of fruit each day, by age and gender

Age group (years)	Number of serves of fruit per day								
	Males			Females			Persons		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI
18–24	1.5	1.4	1.6	1.7	1.6	1.8	1.6	1.6	1.7
25–34	1.4	1.3	1.5	1.6	1.5	1.6	1.5	1.4	1.5
35–44	1.4	1.3	1.5	1.6	1.5	1.6	1.5	1.4	1.6
45–54	1.5	1.4	1.6	1.7	1.6	1.8	1.6	1.6	1.7
55–64	1.5	1.5	1.6	1.8	1.7	1.8	1.7	1.6	1.7
65–74	1.6	1.5	1.7	1.9	1.8	1.9	1.7	1.7	1.8
75+	1.7	1.6	1.8	1.9	1.8	2.0	1.8	1.7	1.9
Total	1.5	1.5	1.5	1.7	1.7	1.7	1.6	1.6	1.6

Table 5.3 Proportion of Victorians eating take-away meals or snacks three or more times a week, by age and gender

Age group (years)	Eats take-away meals/snacks at least three times a week								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	27.0	23.2	31.0	16.6	13.3	20.2	22.0	19.4	24.7
25–34	22.8	19.9	25.9	11.8	9.6	14.2	17.3	15.4	19.2
35–44	16.2	13.6	19.0	5.9	4.5	7.6	11.0	9.5	12.6
45–54	10.9	9.1	13.0	2.9	2.1	4.0	6.9	5.9	8.0
55–64	7.5	5.9	9.4	1.2*	0.7	2.1	4.3	3.4	5.3
65–74	3.2	2.2	4.6	0.7*	0.3	1.5	2.0	1.4	2.7
75+	2.2*	1.1	3.9	0.8*	0.2	1.9	1.4*	0.8	2.2
Total	14.4	13.4	15.5	6.1	5.4	6.8	10.2	9.6	10.8

* Sampling variability high, use with caution (relative standard error 25–50%)

Number of serves of fruit per day

Age and gender analysis

On average, Victorians reported they usually consumed 1.6 serves of fruit each day, less than the daily recommended intake of two fruit serves (NHMRC 2013). For information on the proportion of Victorians meeting fruit guidelines, refer to the VPHS 2014 (DHHS 2016).

Females reported consuming a higher number of fruit serves in a usual day (1.7 serves), compared with all Victorians. Conversely, males reported consuming fewer fruit serves per day (1.5 serves) than all Victorians.

Those aged 25–34 and 35–44 reported consuming fewer serves of fruit daily, on average (1.5 serves in both cases), compared with all Victorians. Those aged 65–74 and those aged 75 or over reported consuming a higher average of fruit serves daily compared with all Victorians (1.7 and 1.8 serves, respectively).

For females, the same pattern of results was found, with those aged 65–74 and those aged 75 or over reporting a higher average number of fruit serves consumed daily (1.9 serves in both cases), compared with all females. Those aged 25–34 and 35–44 reported a lower daily average of fruit serve consumption (1.6 serves in both cases), compared with all females. This same pattern was not observed in males. The only age group significantly different to the average for all males (1.5 serves), was males aged 75 or over (1.7 serves).

Other demographic analysis

Compared with all Victorians (1.6 serves), demographic groups consuming a **higher** number of fruit serves, on average on a usual day, were those:

- with university qualifications (1.7 serves)
- who were retired (1.8 serves)
- from an English-speaking country (1.7 serves)
- over 65 with a reported disability (1.7 serves).

Compared with all Victorians (1.6 serves), demographic groups consuming **fewer** fruit serves, on average on a usual day, were those:

- with TAFE, Certificate or Diploma qualifications (1.5 serves)
- who were employed (1.6 serves)
- over 65 with a reported disability (1.5 serves)
- with a SEIFA score of 3 (1.5 serves).

There were no differences by language spoken at home, Aboriginal and/or Torres Strait Islander status, sexuality, income, household structure or location.

5. HEALTHY EATING

Eats take-away meals and snacks at least three times per week

Age and gender analysis

Approximately one in 10 Victorians (10.2%) consumed take-away meals or snacks at least three times a week. There were significant differences by both gender and age. A higher proportion of males (14.4%) consumed take-away meals or snacks at least three times a week than females (6.1%). Reported consumption of take-away meals and snacks was higher for younger age groups and lower for older age groups. Only 2.0% of those aged 65–74 ate take-away meals or snacks at least three times in a typical week. This compares to 22.0% of those aged 18–24. The difference across age was even more marked for males, ranging from 3.2% among males aged 65–74 up to 27.0% among males aged 18–24. The same pattern was observed for females, with 16.1% of those aged 18–24 reporting consuming take-away meals or snacks at least three times a week, which decreased to 0.7%¹ of those aged 64–75.

Other demographic analysis

Compared with all Victorians (10.2% consumed at least three times per week), demographic groups with a **lower** proportion reporting take-away meal or snack consumption at least three times a week were those:

- who had completed some high school or less (6.3%)
- who reported their main activity as 'home duties' (4.6%) or who were retired (1.7%)
- over 65 with a reported disability (1.9%)
- with a household annual income of \$20,000–\$39,999 (7.5%)
- living in couple households (6.5%) or in couple parent households with dependent children (8.2%)
- living in a regional city (7.8%), or in large shire or small shire geographic regions (5.7% and 4.0%, respectively)
- living outside the capital city (6.6%).

Compared with all Victorians (10.2% consumed at least three times per week), demographic groups with a **higher** proportion reporting take-away meal or snack consumption at least three times a week were those:

- who were employed (12.4%) or unemployed (15.2%) or who were students (16.5%)
- mainly speaking a language other than English at home (12.8%)
- from a non-English-speaking country (12.3%)
- whose sexuality was reported as something other than heterosexual (14.9%)
- with a household annual income of less than \$20,000 (14.6%)
- living in a share or group household (20.1%)
- living in inner metropolitan geographic regions (14.2%).

There were no differences observed by Aboriginal and/or Torres Strait Islander status or SEIFA quintile.

Water consumption

Age and gender analysis

On average, Victorians consumed 5.4 cups of water in a usual day and 3.1% reported that they did not consume any water at all in a usual day.

Generally, when compared with all Victorians, patterns of water consumption were similar for gender and age. The only exception to this was that a significantly higher proportion of males did not consume any water in a typical day compared with females (4.0% and 2.3%, respectively). However, on average, males (5.6 cups) consumed more cups of water in a usual day compared with females (5.2 cups).

Older Victorians consumed fewer cups of water in a usual day, compared with the average, and the proportion of those drinking no water increased with age. This is best highlighted by looking at the youngest age group (those aged 18–24), who consumed 6.4 cups of water on average a day, with just 0.9%¹ reporting consuming no water in a usual day. This compares to the older age cohort (those aged 75 and over), who consumed only 3.7 cups on average, with 6.4% reporting drinking no water in a usual day.

Table 5.4 Average number of cups of water consumed in a usual day, by age and gender

Age group (years)	Number of cups of water consumed per day								
	Males			Females			Persons		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI
18–24	6.9	6.5	7.3	5.9	5.6	6.2	6.4	6.2	6.6
25–34	7.1	6.8	7.4	6.1	5.9	6.3	6.6	6.4	6.8
35–44	5.9	5.7	6.2	5.5	5.3	5.7	5.7	5.5	5.9
45–54	5.3	5.1	5.6	4.9	4.7	5.1	5.1	5.0	5.2
55–64	4.5	4.3	4.7	4.8	4.7	5.0	4.7	4.5	4.8
65–74	3.9	3.7	4.1	4.2	4.1	4.4	4.1	4.0	4.2
75+	3.4	3.2	3.6	4.0	3.8	4.2	3.7	3.6	3.9
Total	5.6	5.5	5.7	5.2	5.1	5.3	5.4	5.3	5.4

¹ RSE is between 25% and 50% – treat estimate with caution.

5. HEALTHY EATING

Table 5.5 Proportion of Victorians consuming no water in a usual day, by age and gender

Age group (years)	No water consumed per day								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	No data	-	-	1.0*	0.3	2.4	0.9*	0.4	1.7
25–34	0.7*	0.3	1.4	1.2*	0.6	2.2	1.0	0.6	1.5
35–44	3.6	2.5	5.2	1.5	0.9	2.4	2.6	1.9	3.4
45–54	4.1	2.9	5.5	2.3	1.5	3.3	3.2	2.5	4.0
55–64	6.6	5.1	8.3	2.9	2.0	3.9	4.7	3.8	5.6
65–74	7.5	5.9	9.2	3.9	2.9	5.2	5.7	4.7	6.7
75+	8.9	6.5	11.9	4.5	3.0	6.5	6.4	5.0	8.0
Total	4.0	3.5	4.5	2.3	1.9	2.6	3.1	2.8	3.4

* Sampling variability high, use with caution (relative standard error 25–50%)
No data = Relative standard error above 50%, estimate not reported

Among males, those aged 18–24 consumed 6.9 cups of water a day and just 0.8%² reported consuming no water in a usual day. This compares to those aged 75 or over, who consumed 3.4 cups on average, with 8.9% reporting drinking no water in a usual day. These results are significantly different when compared with all males (5.6 cups, 4% consuming no water).

Among females, those aged 18–24 consumed 5.9 cups of water in a usual day. This compares to those aged 75 or over, who consumed 4.0 cups on average, with 4.5% reporting drinking no water in a usual day. These results are significantly different when compared with all females.

Other demographic analysis

Proportion consuming no water in a usual day

Demographic groups with a **lower** proportion of people drinking no water in a usual day, compared with all Victorians (3.1% consumed no water), were those:

- with university qualifications (1.9%)
- who were students (0.7%²)
- who reported their main activity as ‘home duties’ (1.6%⁴)
- mainly speaking a language other than English at home (1.3%)
- from a non-English-speaking country (2.0%)
- with a household annual income of \$100,000 or more (2.0%)
- living in households with children (2.2%) or in couple parent households with dependent children (1.8%)
- living in inner metropolitan (1.4%) or middle metropolitan (2.2%) geographic regions.

Demographic groups with a **higher** proportion of people drinking no water in a usual day, compared with all Victorians (3.1% consumed no water), were those:

- who had completed some high school or less (5.6%)
- who were retired (5.8%)
- from an English-speaking country (4.7%)
- with a reported disability – both for those under (4.8%) and over 65 (6.2%)
- with a household annual income of \$20,000–\$39,999 (4.5%)
- living in single-person households (5.0%)
- living in large shire (4.8%) or small shire (5.5%) geographic regions.

There was no difference in the proportion of those drinking no water in a usual day by Aboriginal and/or Torres Strait Islander status, by sexuality or by SEIFA quintiles.

² RSE is between 25% and 50% – treat estimate with caution.

5. HEALTHY EATING

Table 5.6 Summary of healthy eating indicators, by demographic

	Number of serves of vegetables per day			Number of serves of fruit per day			Eats take-away meals/snacks at least three times a week			No water consumed per day			Number of cups of water consumed per day		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI
Victoria	2.2	2.2	2.3	1.6	1.6	1.6	10.2	9.6	10.8	3.1	2.8	3.4	5.4	5.3	5.4
Gender															
Male	2.0	1.9	2.0	1.5	1.5	1.5	14.4	13.4	15.5	4.0	3.5	4.5	5.6	5.5	5.7
Female	2.5	2.5	2.5	1.7	1.7	1.7	6.1	5.4	6.8	2.3	1.9	2.6	5.2	5.1	5.3
Age															
18–24	2.1	2.0	2.2	1.6	1.6	1.7	22.0	19.4	24.7	0.9*	0.4	1.7	6.4	6.2	6.6
25–34	2.2	2.1	2.3	1.5	1.4	1.5	17.3	15.4	19.2	1.0	0.6	1.5	6.6	6.4	6.8
35–44	2.2	2.1	2.3	1.5	1.4	1.6	11.0	9.5	12.6	2.6	1.9	3.4	5.7	5.5	5.9
45–54	2.3	2.2	2.4	1.6	1.6	1.7	6.9	5.9	8.0	3.2	2.5	4.0	5.1	5.0	5.2
55–64	2.4	2.3	2.4	1.7	1.6	1.7	4.3	3.4	5.3	4.7	3.8	5.6	4.7	4.5	4.8
65–74	2.3	2.3	2.4	1.7	1.7	1.8	2.0	1.4	2.7	5.7	4.7	6.7	4.1	4.0	4.2
75+	2.2	2.2	2.3	1.8	1.7	1.9	1.4*	0.8	2.2	6.4	5.0	8.0	3.7	3.6	3.9
Education															
Some high school or less	2.0	1.9	2.1	1.6	1.5	1.6	6.3	5.2	7.7	5.6	4.7	6.7	4.5	4.4	4.7
Completed high school	2.1	2.0	2.2	1.6	1.6	1.7	11.7	9.9	13.8	2.5	1.8	3.4	5.4	5.2	5.6
TAFE/Certificate/Diploma	2.2	2.1	2.2	1.5	1.5	1.6	11.5	10.3	12.7	3.3	2.8	3.9	5.6	5.5	5.7
University	2.5	2.4	2.5	1.7	1.6	1.7	10.7	9.6	11.7	1.9	1.5	2.3	5.6	5.5	5.7
Main activity															
Employed	2.3	2.2	2.3	1.6	1.5	1.6	12.4	11.6	13.3	2.5	2.1	2.9	5.8	5.7	5.8
Unemployed	1.8	1.6	1.9	1.5	1.4	1.7	15.2	11.1	20.1	2.5*	1.3	4.5	5.2	4.8	5.6
Student	2.2	2.1	2.3	1.7	1.6	1.8	16.5	13.4	19.9	0.7*	0.2	1.7	6.1	5.8	6.4
Home duties	2.3	2.2	2.4	1.6	1.5	1.7	4.6	3.0	6.7	1.6*	0.9	2.8	5.1	4.9	5.3
Retired	2.3	2.3	2.4	1.8	1.7	1.8	1.7	1.2	2.3	5.8	5.0	6.7	4.0	3.9	4.1
Main language spoken at home															
English	2.4	2.3	2.4	1.6	1.6	1.6	9.3	8.6	10.0	3.7	3.3	4.1	5.2	5.1	5.3
Other	1.9	1.8	1.9	1.6	1.6	1.7	12.8	11.4	14.3	1.3	0.9	1.8	5.9	5.7	6.0
Country of birth															
Australian born	2.4	2.3	2.4	1.6	1.6	1.6	9.6	8.9	10.3	3.3	3.0	3.7	5.3	5.2	5.4
English-speaking country	2.5	2.4	2.6	1.7	1.6	1.8	8.7	6.7	10.9	4.7	3.5	6.1	4.9	4.7	5.1
Non-English speaking country	1.9	1.8	1.9	1.7	1.6	1.7	12.3	10.9	13.7	2.0	1.5	2.6	5.8	5.6	5.9
Self-reported disability															
Reported disability – under 65 years	2.2	2.1	2.3	1.5	1.5	1.6	11.1	9.4	12.9	4.8	3.8	6.0	5.4	5.2	5.5
Reported disability – over 65 years	2.2	2.1	2.3	1.7	1.7	1.8	1.9	1.2	2.7	6.2	4.9	7.7	4.0	3.8	4.2
No disability reported	2.3	2.2	2.3	1.6	1.6	1.6	10.8	10.1	11.5	2.5	2.2	2.8	5.5	5.4	5.6
Aboriginal and/or Torres Strait Islander status															
Aboriginal and/or Torres Strait Islander	2.1	1.9	2.4	1.6	1.3	1.8	6.5*	2.4	13.7	1.5*	0.6	3.2	6.2	5.4	6.9
Non-Aboriginal and/or Torres Strait Islander	2.2	2.2	2.3	1.6	1.6	1.6	10.2	9.6	10.8	3.1	2.8	3.4	5.4	5.3	5.4
Sexuality															
Heterosexual	2.2	2.2	2.3	1.6	1.6	1.6	10.0	9.4	10.7	3.0	2.7	3.3	5.4	5.3	5.4
Other	2.3	2.2	2.5	1.5	1.5	1.6	14.9	11.8	18.4	3.7	2.3	5.7	5.7	5.4	6.1
Income															
Less than \$20,000	2.0	1.8	2.1	1.5	1.4	1.6	14.6	11.6	17.9	3.5	2.4	4.9	5.4	5.1	5.7
\$20,000–\$39,999	2.1	2.1	2.2	1.6	1.6	1.6	7.5	6.3	8.8	4.5	3.7	5.4	4.8	4.7	4.9
\$40,000–\$59,999	2.1	2.1	2.2	1.6	1.5	1.6	11.3	9.6	13.3	4.1	3.2	5.1	5.3	5.1	5.5
\$60,000–\$79,999	2.2	2.1	2.3	1.6	1.5	1.6	9.2	7.5	11.3	2.7	1.9	3.7	5.6	5.4	5.8
\$80,000–\$99,999	2.2	2.2	2.3	1.6	1.6	1.7	9.9	8.0	12.1	2.3	1.5	3.4	5.9	5.7	6.2
\$100,000 or more	2.5	2.4	2.6	1.6	1.6	1.6	11.3	10.0	12.6	2.0	1.5	2.5	5.6	5.5	5.8

5. HEALTHY EATING

Table 5.6 Summary of healthy eating indicators, by demographic

	Number of serves of vegetables per day			Number of serves of fruit per day			Eats take-away meals/snacks at least three times a week			No water consumed per day			Number of cups of water consumed per day		
	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (Avg)	Lower 95% CI	Higher 95% CI
Victoria	2.2	2.2	2.3	1.6	1.6	1.6	10.2	9.6	10.8	3.1	2.8	3.4	5.4	5.3	5.4
Household structure															
Single person household	2.1	2.0	2.2	1.6	1.6	1.7	10.1	8.4	11.9	5.0	4.0	6.1	4.9	4.7	5.0
Couple household	2.4	2.3	2.4	1.7	1.6	1.7	6.5	5.5	7.5	3.6	3.0	4.2	5.0	4.8	5.1
Household with children	2.3	2.2	2.3	1.6	1.6	1.6	9.1	8.2	10.1	2.2	1.8	2.7	5.5	5.4	5.7
– Single parent with dependent children	2.1	1.9	2.2	1.5	1.4	1.7	11.9	8.3	16.3	4.2*	2.3	6.9	5.3	4.9	5.7
– Couple parent with dependent children	2.3	2.3	2.4	1.6	1.6	1.7	8.2	7.1	9.3	1.8	1.4	2.4	5.6	5.5	5.7
Share or group household	2.1	2.0	2.2	1.5	1.5	1.6	20.1	17.6	22.8	2.2	1.4	3.2	6.2	6.0	6.5
Geography															
Metropolitan	2.2	2.2	2.3	1.6	1.6	1.6	11.7	10.8	12.6	2.5	2.1	2.9	5.5	5.4	5.5
– Inner metro	2.4	2.3	2.5	1.6	1.6	1.7	14.2	11.9	16.9	1.4*	0.8	2.4	5.8	5.5	6.0
– Middle metro	2.3	2.2	2.4	1.6	1.6	1.7	10.7	9.6	12.0	2.2	1.8	2.8	5.4	5.3	5.5
– Outer metro	2.1	2.0	2.1	1.6	1.5	1.6	12.3	10.4	14.5	3.7	2.7	4.8	5.4	5.2	5.6
Interface	2.1	2.1	2.2	1.6	1.5	1.6	10.7	9.4	12.2	3.6	2.9	4.4	5.4	5.3	5.6
Regional city	2.3	2.2	2.4	1.6	1.6	1.7	7.8	6.4	9.5	2.9	2.2	3.8	5.3	5.1	5.5
Large shire	2.4	2.3	2.4	1.6	1.6	1.7	5.7	4.7	6.8	4.8	4.0	5.6	5.1	4.9	5.2
Small shire	2.5	2.4	2.5	1.6	1.6	1.7	4.0	3.1	5.1	5.5	4.6	6.5	5.0	4.9	5.2
Location															
Capital city	2.2	2.2	2.2	1.6	1.6	1.6	11.3	10.6	12.1	2.9	2.5	3.2	5.4	5.4	5.5
Rest of state	2.4	2.3	2.4	1.6	1.6	1.7	6.6	5.7	7.6	3.8	3.4	4.4	5.2	5.1	5.3
Internet at home															
Yes	2.3	2.3	2.3	1.6	1.6	1.6	10.7	10.0	11.4	2.8	2.5	3.1	5.5	5.4	5.5
SEIFA (index of disadvantage)															
1 – Low (most disadvantaged)	2.1	2.0	2.2	1.6	1.5	1.6	11.3	9.8	12.9	3.6	3.0	4.4	5.5	5.4	5.7
2	2.2	2.1	2.2	1.6	1.5	1.6	10.4	8.9	12.0	3.3	2.7	4.0	5.4	5.3	5.6
3	2.2	2.1	2.3	1.5	1.5	1.6	10.2	8.8	11.7	3.4	2.7	4.1	5.4	5.3	5.6
4	2.3	2.3	2.4	1.6	1.6	1.7	9.5	8.2	11.0	3.0	2.3	3.8	5.3	5.1	5.5
5 – High (least disadvantaged)	2.4	2.3	2.4	1.7	1.6	1.7	9.9	8.8	11.2	2.5	2.0	3.1	5.3	5.2	5.4

* Sampling variability high, use with caution (relative standard error 25–50%)

Average number of cups of water consumed per day

Demographic groups that consumed **more** cups of water on average per day, compared with all Victorians (5.4 cups), were those:

- with TAFE, Certificate or Diploma qualifications (5.6 cups) or with university qualifications (5.6 cups)
- who were employed (5.8 cups) or students (6.1 cups)
- mainly speaking a language other than English at home (5.9 cups)
- from a non-English-speaking country (5.8 cups)
- with a household annual income of \$80,000–\$99,999 (5.9 cups) or of \$100,000 or more (5.6 cups)
- living in couple parent households with dependent children (5.6 cups) or in share or group households (6.2 cups)
- living in inner metropolitan geographic regions (5.8 cups).

Demographic groups that consumed **fewer** cups of water on average, compared with all Victorians (5.4 cups), were those:

- who had completed some high school or less (4.5 cups)
- who reported their main activity as 'home duties' (5.1 cups) or were retired (4.0 cups)
- mainly speaking English at home (5.2 cups)
- from an English-speaking country (4.9 cups)
- over 65 with a reported disability (4.0 cups)
- with a household annual income of \$20,000–\$39,999 (4.8 cups)
- living in single-person (4.9 cups) or couple (5.0 cups) households
- living in large shire or small shire geographic regions (5.1 cups and 5.0 cups, respectively)
- living outside the capital city (5.2 cups).

There were no differences observed by Aboriginal and/or Torres Strait Islander status, by sexuality or by SEIFA quintile.

Summary and conclusion

On average, Victorians are consuming less than half the five servings of vegetables per day recommended in the NHMRC guidelines (NHMRC 2013). Similarly, fruit consumption among Victorians averages 1.6 serves daily, less than the two servings of fruit recommended. This survey found Victorians who are from a non-English-speaking background, unemployed or who reside in disadvantaged areas consume fewer vegetables than the population average. In contrast, Victorians with university qualifications, a high annual household income and those with a high SEIFA are likely to consume more servings of vegetables – yet at levels still below the recommended guidelines of five serves per day.

The average Victorian consumes only 5.4 cups of water per day, significantly less than the recommended eight cups for females and 10 cups for males. Low consumption of water is present for all demographic groups. Making water the beverage of choice can contribute to the prevention of high sugar-sweetened beverage (SSB) consumption. This is important as high SSB consumption has been linked to elevated risks of poor health (Malik et al. 2010, Woodward-Lopez et al. 2011).

This survey found that Victorians are frequent consumers of take-away meals, with one in 10 people consuming take-away meals or snacks at least three times or more per week. Disadvantaged groups were more likely to eat take-away meals or snacks, potentially putting them at greater risk. Discretionary foods, such as burgers, pizza, chips and fried foods are often high in calories, saturated fat, added sugar and salt. Frequent consumption of take-away and fast-food meals is strongly linked to excess weight gain and to an increased risk of overweight or obesity (Duffey et al. 2009, Pereira et al. 2005, Burgoine et al. 2014).

To address diet quality effectively across all population groups, policies that influence affordability and access to a healthy food supply need to consider the impact on persons from all social and economic environments (Browne 2009).

A VicHealth guide providing evidence-informed actions that can help improve healthy eating for all Victorians, is available at www.vichealth.vic.gov.au/localgovernmentguides.

Further information

This chapter reports prevalence data on average number of serves of fruit and vegetables, proportion of people eating take-away meals or snacks, and water consumption. Complementary information about the eating behaviours of Victorians is presented in the VPHS 2014 (DHHS 2016), including the proportion of Victorians meeting dietary guidelines and consumption of sugar-sweetened soft drinks.

References

- Access Economics 2008, *The growing cost of obesity in 2008: Three years on*, Access Economics, Canberra.
- Australian Bureau of Statistics (ABS) 2013, *Australian Health Survey: Consumption of food groups from the Australian Dietary Guidelines, 2011–12*, ABS, Canberra.
- Australian Bureau of Statistics (ABS) 2016, *National Health Survey: First results, 2014–15*, cat no. 4364.0.55.001, ABS, Canberra.
- Australian Institute of Health and Welfare (AIHW) 2007, *Australian diet quality index project*, AIHW cat. no. PHE 85, AIHW, Canberra.
- Australian Institute of Health and Welfare (AIHW) 2012, *Risk factors, diseases & death: Dental and oral health*, AIHW, Canberra.
- Australian Institute of Health and Welfare (AIHW) 2016, *Australian burden of disease study: Impact and causes of illness and death in Australia 2011*, Australian Burden of Disease Study series no. 3, AIHW cat. no. BOD 4, Canberra, AIHW.
- Better Health Channel 2014, *Salt*, Department of Health & Human Services, Melbourne, viewed on 3 April 2016, <www.betterhealth.vic.gov.au/health/healthyliving/salt>.
- Brantley, PJ, Myers, VH & Roy, HJ. 2005, 'Environmental and lifestyle influences on obesity', *The Journal of the Louisiana State Medical Society*, vol. 157, spec. no. 1, pp. S19–27.
- Brindal, E, Mohr, P, Wilson, C & Wittert, G 2008, 'Obesity and the effects of choice at a fast food restaurant', *Obesity Research & Clinical Practice*, 2(2), pp. 111–17.
- Browne, JL, Laurence, S & Thorpe, S 2009, 'Acting on food insecurity in urban Aboriginal and Torres Strait Islander communities: Policy and practice interventions to improve local access and supply of nutritious food', *Australian Indigenous HealthInfoNet*, viewed 21 May 2016, <www.healthinfonet.ecu.edu.au/health-risks/nutrition/reviews/other-reviews>.
- Burgoine, T, Forouhi, NG, Griffin, SJ, Wareham, NJ & Monsivais P 2014, 'Associations between exposure to takeaway food outlets, takeaway food consumption, and body weight in Cambridgeshire, UK: population based, cross sectional study', *BMJ* 2014;348:g1464, published online March 13 2014.
- Bussey, C 2013, 'Food security and traditional foods in remote Aboriginal communities: A review of the literature', *Australian Indigenous HealthBulletin*, vol. 13, no. 2, pp. 1–10.
- Colagiuri, S, Lee, CM, Colagiuri, R, Magliano, D, Shaw, JE, Zimmet, PZ & Caterson, ID 2010, 'The cost of overweight and obesity in Australia', *Medical Journal of Australia*, vol. 192, no. 5, pp. 260–64.
- Colmar-Brunton 2015, 'VicHealth water initiative benchmark and evaluation research', unpublished confidential document, VicHealth.

5. HEALTHY EATING

Duffey, KJ, Gordon-Larsen, P, Steffen, LM, Jacobs, DR Jr & Popkin, BM 2009, 'Regular consumption from fast food establishments relative to other restaurants is differentially associated with metabolic outcomes in young adults', *The Journal of Nutrition*, vol. 139, no. 11, pp. 2113–38.

Department of Health and Human Services (DHHS) 2016, *Victorian Population Health Survey 2014: Modifiable risk factors contributing to chronic disease*, DHHS, Melbourne.

Ghosh, A, Charlton, KE, Batterham, MJ 2016, 'Socioeconomic disadvantage and its implications for population health planning of obesity and overweight, using cross-sectional data from general practices from a regional catchment in Australia', *BMJ Open*, vol. 6, e010405.

Institute for Health Metrics and Evaluation 2010, *Global burden of diseases, injuries, and risk factors study 2010*, viewed 7 April 2016, <www.healthmetricsandevaluation.org/sites/default/files/country-profiles/GBD%20Country%20Report%20-%20Australia.pdf>.

IPSOS 2016, *Food CHATs – annual report 2015–16*, viewed 18 August 2016, <<http://ipsos.com.au/wp-content/uploads/2016/05/FoodCHATs-report-abridged.2016.pdf>>.

Lim, S.S., Vos, T., Flaxman, A.D., Danaei, G., Shibuya, K., Adair-Rohani, H., AlMazroa, M.A., Amann, M., Anderson, H.R., Andrews, K.G. and Aryee, M., 2012. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *The lancet*, 380(9859), pp.2224–2260.

Malik, VS, Popkin, BM, Bray, GA, Després, JP & Hu, FB 2010, 'Sugar-sweetened beverages, obesity, type 2 diabetes mellitus, and cardiovascular disease risk', *Circulation*, vol. 121, no. 11, pp. 1356–64.

Markwick, A, Ansari, Z, Sullivan, M & McNeil, J 2014, 'Social determinants and lifestyle risk factors only partially explain the higher prevalence of food insecurity among Aboriginal and Torres Strait Islanders in the Australian state of Victoria: A cross-sectional study', *BMC Public Health*, 14, pp. 1–10.

National Health and Medical Research Council (NHMRC) 2013, *Australian Dietary Guidelines*, NHMRC, Canberra.

National Health and Medical Research Council (NHMRC) & New Zealand Ministry of Health 2006, *Nutrient reference values for Australia and New Zealand*, NHMRC, Canberra.

Nowson, C, Lim, K, Grimes, C, O'Halloran, S, Land, MA, Webster, J, Shaw, J, Chalmers, J, Smith, W, Flood, V & Woodward, M 2015, 'Dietary salt intake and discretionary salt use in two general population samples in Australia: 2011 and 2014', *Nutrients*, 7(12), pp.10501–12.

NSW Health 2014, *NSW Population Health Survey 2014 – Questionnaire*, viewed 21 September 2016, <www.health.nsw.gov.au/surveys/adult/Documents/Questionnaire-2014-WEB.pdf>.

Palermo, C, McCartan, J, Kleve, S, Sinha, K & Shiell, A 2016, 'A longitudinal study of the cost of food in Victoria influenced by geography and nutritional quality', *Australian and New Zealand Journal of Public Health*, vol. 40, no. 3, pp. 270–73.

Pereira, MA, Kartashov, AI, Ebbeling, CB, Van Horn, L, Slattery, ML, Jacobs, DR Jr & Ludwig DS 2005, 'Fast-food habits, weight gain, and insulin resistance (the CARDIA study): 15-year prospective analysis', *Lancet*, vol. 365, no. 9453, pp. 36–42.

Popkin, BM, D'Anci, KE & Rosenberg, IH 2010, 'Water, hydration, and health', *Nutrition Reviews*, vol. 68, no. 8, pp. 439–58.

Rosenheck, R., 2008, 'Fast food consumption and increased caloric intake: A systematic review of a trajectory towards weight gain and obesity risk', *Obesity Reviews*, 9(6), pp. 535–547.

Trapp, GS, Hickling, S, Christian, HE, Bull, F, Timperio, AF, Boruff, B, Shrestha, D & Giles-Corti, B 2015, 'Individual, social, and environmental correlates of healthy and unhealthy eating', *Health Education & Behavior*, vol. 42, no. 6, pp. 759–68.

World Cancer Research Fund & American Institute for Cancer Research (WCRF & AICR) 2007, *Food, nutrition, physical activity, and the prevention of cancer: A global perspective*, AICR, Washington, DC.

Woodward-Lopez, G, Kao, J & Ritchie, L 2011, 'To what extent have sweetened beverages contributed to the obesity epidemic?', *Public Health Nutrition*, vol. 14, no. 3, pp. 499–509.

World Health Organization (WHO) 2003, *Diet, nutrition and the prevention of chronic diseases: Report of the joint WHO/FAO expert consultation*, WHO Technical Report Series, No. 916, WHO, Geneva.

World Health Organization (WHO) 2011, *Global health risks: Mortality and burden of disease attributable to selected major risks*, WHO, Geneva.



6. Alcohol

Alcohol plays a complex role in Australian society. Most Australian adults drink alcohol for enjoyment, relaxation and socialisation at levels that cause few adverse effects (NHMRC 2009).

The National Health and Medical Research Council's (NHMRC) *Australian guidelines to reduce health risks from drinking alcohol* (the guidelines) recommend drinking no more than two standard drinks on any day (to reduce the 'lifetime risk' of harm from alcohol-related disease and injury) and drinking no more than four standard drinks on a single occasion (to reduce the risk of alcohol-related injury) (NHMRC 2009).

The Australian Institute of Health and Welfare (AIHW) National Drug Strategy Household Survey found that 18.2% of Australians aged 14 or older exceeded the 'lifetime risk' guidelines and 26.4% exceeded the 'single occasion risk' guidelines at least once a month in 2013. These figures are slightly lower than they were in 2010, when 20.5% exceeded the 'lifetime risk' guidelines and 29.0% exceeded the 'single occasion risk' guidelines at least once a month (AIHW 2014).

Harms from alcohol

Harm associated with alcohol use, which includes short-term harm and long-term health consequences, is well documented (Rehm et al. 2010). In 2010, there were 5554 deaths and 157,132 hospitalisations that were directly attributable to alcohol in Australia – a quarter of them in Victoria (Gao et al. 2014).

In 2008, researchers estimated that alcohol-related harm cost Australians \$15.3 billion per annum in 2004–05, with \$10.8 billion attributed to tangible costs (such as labour and health costs) and \$4.5 billion to intangible costs (such as lives lost through alcohol-related violence and accidents) (Collins & Lapsley 2008).

Prevalence of harm

Millions of Australians are harmed in alcohol-related incidents each year. Almost five million people in Australia (26.0%) aged 14 and over reported being a victim of an alcohol-related incident in the preceding 12 months, and the number of Australians who experienced physical abuse in an alcohol-related incident increased from 1.3 million to 1.7 million in 2013 (AIHW 2014). One in three (39.6%) young people (aged 18–24) reported being harmed by someone under the influence of alcohol in the previous 12 months (AIHW 2014).

Using a wider definition of 'harm' that includes effects such as noise disturbance, fear of physical abuse, sexual abuse, child neglect, violence and death, it is estimated that almost 70% of Australians are experiencing harm due to another person's drinking in a given year (Laslett et al. 2011). A gender difference exists with regard to the source of harm resulting from the alcohol consumption of others: females were more likely than males to experience harm inflicted by someone they knew well in the household or family, whereas males were more likely to be exposed to alcohol-related harm inflicted by friends and co-workers (Laslett et al. 2011).

Factors that influence alcohol related harm

The level of harm caused by alcohol consumption is related to the amount consumed on a single occasion the effects of alcohol on the drinker's cognitive ability and behaviour, the drinking situation and environment, societal attitudes and values towards drinking, and the amount consumed during a lifetime (Graham et al. 2006, Rehm et al. 2010). As a consequence, the amount of harm that occurs will vary between individuals depending on their drinking behaviour and drinking context.

6. ALCOHOL

A universally applicable rule is that the risk of injury increases as more alcohol is consumed during a single drinking session. Episodes of binge-drinking are predominantly associated with risks related to self-injury or injuries to others affected by the drinker's behaviour (e.g. families, friends, co-workers and strangers).

Prevalence of risky drinking on a single occasion

Risk of harm from drinking on a single occasion

While many Australians consume alcohol within the guidelines, a considerable number of Australians drink at levels that put them at risk of harm. The 2013 National Drug Strategy Household Survey found that 3.8 million Australians aged 14 and over consume more than four standard drinks of alcohol a day, twice the level recommended in health guidelines. Of more concern is recent research that shows that 20.0% of Australians are consuming 74.2% of the alcohol consumed nationally (FARE 2016).

Gender and alcohol consumption

The *National Drug Strategy Household Survey detailed report* highlights that males are more likely than females to drink quantities of alcohol on a single occasion that would place them at risk of harm (46.9% of males compared with 26.8% of females), and to engage in risky drinking more often, with 20.2% of males consuming risky quantities at least weekly, compared to 7.5% of females (AIHW 2014).

National data also shows that these gender differences in risky drinking are consistent across all age groups. For example, 25.7% of young males aged 18–24 engaged in risky drinking on a weekly basis, compared to 14.4% of females of the same age, while 11.4% of Australian males aged 50–59 years engaged in risky drinking on a weekly basis, compared to 4.6% of females (AIHW 2016).

Risky drinking and age

Researchers analysing National Drug Strategy Household Survey data identified that risky drinking differs by age, with young adults aged 18–24 more likely to drink at harmful levels on a single occasion than the rest of the adult population (AIHW 2014). A substantial proportion of Australian males in their 50s consume alcohol at risky levels, with 13.7% engaging in risky drinking on a monthly basis, and 9.2% on a daily basis (AIHW 2014).

The survey showed that the proportion of young people aged 18–24 who engage in risky drinking on a weekly basis decreased from 27.9% to 20.3% between 2010 and 2013; however, the proportion of young people aged 18–24 who engage in risky drinking on a monthly basis increased over this period, from 22.5% to 24.9% (AIHW 2014).

Risky drinking and socioeconomic status

Alcohol consumption and alcohol-related harm affect Australians across a range of socioeconomic backgrounds. Interestingly, the patterns of consumption and alcohol-related harm appear quite different to other health risk factors such as smoking and obesity, which are more prevalent among Australians of low socioeconomic status (SES). An analysis of the 2011–12 Victorian Population Health Survey found that males and females who consumed levels of alcohol that put them at short-term risk of alcohol-related harm on a monthly basis were significantly more likely to be of higher SES status (Department of Health 2013). In contrast, the proportion of males and females who abstain from alcohol was higher among people from low SES groups.

There is also evidence to suggest that, although people from low socioeconomic groups drink less alcohol, they are more susceptible to the damaging effects of alcohol and experience higher rates of alcohol-related disease (Jones et al. 2015; Mäkelä & Paljärvi 2008). Research demonstrates that the relationship between alcohol and socioeconomic inequality is complex, influenced by a number of factors such as age and sex; by a cluster of lifestyle risk factors including drinking patterns, differential access to health care, financial hardship, community and environmental factors; and by limited access to services that protect against alcohol-related harm (e.g. health clinics, safe transport, alcohol and drug counselling services) – all of which result in cumulative disadvantage (Schmidt et al. 2010; Smith and Foster 2014; World Health Organization 2014).

Drinking culture

Cultural values, beliefs and norms about alcohol consumption influence alcohol-related harm, both positively and negatively. For example, societies where moderate alcohol consumption is integrated with meals (e.g. France and Italy) experience significantly fewer alcohol-related problems compared with cultures where alcohol is strongly associated with celebration and heavy episodic drinking occasions (e.g. the United Kingdom, the United States, Scandinavia and Australia) (Ahlström & Österberg 2004).

VicHealth Indicators: Alcohol

- At risk of short-term harm each month (5 or more drinks)
- At very high risk of short-term harm each month (11 or more drinks)
- Alcohol culture – “getting drunk every now and then is okay”

Three indicators for harmful interaction with alcohol are presented. The first indicator represents the percentage of individuals who report consuming five or more standard drinks in a single sitting at least monthly. The second indicator represents the percentage of individuals consuming more than 11 standard drinks in a single sitting at least monthly. A standard drink is equal to one pot of full-strength beer, one small glass of wine or one pub-sized nip of spirits.

Each of the two indicators is based on a graduated frequency question – a common question design in alcohol consumption surveillance studies (e.g. Livingston 2015). Victorian estimates of the prevalence of alcohol consumption that would pose a high risk of short-term harm (five or more drinks in a single sitting) are also available in the Victorian Population Health Survey. The VicHealth Indicators Survey 2015 provides data on the prevalence of alcohol consumption that would result in very high risk of short-term harm (11 or more standard drinks in a single sitting) at the local government area geographic level, which is not available elsewhere.

The third alcohol indicator refers to general attitudes towards alcohol and alcohol culture, specifically the individuals' attitudes towards drunkenness. This is measured by one item scored on a five-point Likert scale ranging from 'Strongly agree' to 'Strongly disagree'. The indicator reflects the percentage of individuals who agree or strongly agree with the question “Do you personally

agree or disagree that getting drunk every now and then is okay?”, where ‘getting drunk’ was defined as the point of losing balance. This question is derived from the Victorian Alcohol Culture Survey (VicHealth 2014).

At risk of short-term harm each month

Age and gender analysis

The proportion of Victorians identified as being at risk of short-term harm from alcohol was 29.4%. This figure rose to 40.1% among males and dropped to 19.1% among females. Both of these were significantly different from the percentage for all Victorians.

There was also a relationship between age and the proportion identified as being at risk of short-term harm from alcohol. Compared to all Victorians, a higher proportion of younger Victorians were identified as being at risk of short-term harm from alcohol, with 44.6% of those aged 18–24 being at risk. Fewer older Victorians were identified as being at risk of short-term harm from alcohol, with just 6.3% of those aged 75 years or older at risk of short-term harm, about a seventh of the rate for the younger cohort. This age-related pattern was observed for both males and females. Of note was that one in two (50.8%) males aged 18–24, and just under two in five (38.1%) females, were identified as being at risk of short-term harm from alcohol.

A very similar pattern was seen for those identified as being at very high risk of short-term harm from alcohol. Overall, 9.2% of Victorians were identified as being at very high risk of short-term harm from alcohol. Again, rates were higher for males (14.5%) and lower for females (4.1%). The proportion of those aged 18–24 who were identified as being at very high risk was 18.2%. The rate was just 0.6%¹ among those aged 75 or more years. Among males, 23.7% of those aged 18 to 24 were identified as being at very high risk, compared with just 1.4%¹ of males aged 75 or more years. Among females, 12.4% were identified as being at very high risk – some three times the level reported for females overall (4.1%).

Table 6.1 Proportion of Victorians at risk of short-term harm from alcohol each month, by age and gender

Age group (years)	Alcohol consumption – at risk of short-term harm each month								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	50.8	46.4	55.1	38.1	33.8	42.5	44.6	41.6	47.7
25–34	46.4	42.9	50.0	28.2	25.2	31.3	37.3	35.0	39.7
35–44	43.2	39.7	46.7	20.4	17.9	23.0	31.6	29.5	33.9
45–54	44.4	41.4	47.5	18.3	16.3	20.5	31.2	29.3	33.1
55–64	34.7	31.9	37.7	11.7	10.0	13.7	23.0	21.2	24.7
65–74	28.8	26.0	31.7	6.0	4.5	7.7	17.0	15.4	18.8
75+	12.5	9.9	15.5	1.7	1.0	2.6	6.3	5.1	7.7
Total	40.1	38.7	41.4	19.1	18.1	20.2	29.4	28.5	30.2

¹ RSE is between 25% and 50% – treat estimate with caution.

6. ALCOHOL

Table 6.2 Proportion of Victorians at very high risk of short-term harm from alcohol each month, by age and gender

Age group (years)	Alcohol consumption – at very high risk of short-term harm each month								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	23.7	20.2	27.6	12.4	9.6	15.7	18.2	15.9	20.7
25–34	19.8	17.0	22.7	7.3	5.7	9.3	13.5	11.9	15.3
35–44	16.5	13.9	19.3	2.6	1.6	3.8	9.4	8.0	11.0
45–54	14.1	12.1	16.2	3.8	2.8	5.1	8.9	7.7	10.1
55–64	9.9	8.1	11.9	0.7*	0.3	1.5	5.2	4.3	6.2
65–74	5.7	4.4	7.3	0.2*	0.1	0.4	2.9	2.2	3.6
75+	1.4*	0.7	2.5	No data	-	-	0.6*	0.3	1.1
Total	14.5	13.5	15.5	4.1	3.6	4.7	9.2	8.6	9.8

* Sampling variability high, use with caution (relative standard error 25–50%)
No data = Relative standard error above 50%, estimate not reported

Other demographic analysis

The results were very similar across a number of demographic characteristics for being at risk, and for being at very high risk of short-term harm from alcohol.

Compared to all Victorians (29.4% at risk), demographic groups with a **lower** proportion identified as being at risk of short-term harm from alcohol were those:

- who had completed some high school or less (21.6%)
- who reported their main activity as ‘home duties’ (13.5%) and retired persons (12.5%)
- mainly speaking a language other than English at home (17.5%)
- from a non-English-speaking country (16.0%)
- over 65 with a reported disability (9.8%)
- with a household annual income of \$20,000–\$39,999 (19.6%)
- living in single-person (24.9%) or couple (26.3%) households
- living in outer metropolitan geographic regions (25.9%)
- with a low SEIFA (1 – most disadvantaged) (25.3%).

Compared to all Victorians (9.2% at very high risk), demographic groups with a **lower** proportion identified as being at very high risk of short-term harm from alcohol were those:

- with university qualifications (7.1%)
- who reported their main activity as ‘home duties’ (3.1%) and retired persons (1.9%)
- mainly speaking a language other than English at home (4.5%)
- from a non-English-speaking country (3.6%)
- over 65 with a reported disability (2.0%)
- with a household income of \$20,000–\$39,999 annually (6.9%)
- living in couple households (7.2%).

Compared to all Victorians (29.4% at risk), demographic groups with a **higher** proportion identified as being at risk of short-term harm from alcohol were those:

- with a high school qualification only (34.0%) or with TAFE, Certificate or Diploma qualifications (33.9%)
- who were employed (36.0%) or students (34.4%)
- mainly speaking English at home (33.6%)
- who were Australian-born (34.0%) and those from an English-speaking country (33.9%)
- with no reported disability (31.4%)
- whose sexuality was reported as something other than heterosexual (34.5%)
- with a household annual income of \$60,000–\$79,999 (33.8%), \$80,000–\$99,999 (34.0%) or \$100,000 or more (38.7%)
- living in share or group households (42.5%)
- living in inner metropolitan geographic regions (42.9%)
- with a high SEIFA (5 – least disadvantaged) (32.5%).

Compared to all Victorians (9.2% at very high risk), demographic groups with a **higher** proportion identified as being at very high risk of short-term harm from alcohol were those:

- with a high school qualification only (12.1%) or with TAFE, Certificate or Diploma qualifications (11.8%)
- who were employed (11.6%) or unemployed (14.0%)
- mainly speaking English at home (10.9%)
- who were Australian-born (11.1%)
- with a household annual income of \$100,000 or more (11.7%)
- living in share or group households (16.1%)
- living in inner metropolitan geographic regions (16.3%).

There were no differences by Aboriginal and/or Torres Strait Islander status for being at risk or at very high risk of short-term harm from alcohol.

6. ALCOHOL

Alcohol culture – “getting drunk every now and then is okay”

Age and gender analysis

Just over one-quarter (27.9%) of Victorians agreed that “getting drunk every now and then is okay”, where ‘getting drunk’ was defined as the point of losing balance. Similar to other alcohol indicators included in this survey, males (31.2%) were more likely to agree with the statement, while females (24.7%) were less likely to agree. There was a strong relationship between levels of agreement and age, with only 4.5% of those aged 75 or over agreeing with the statement, compared with 49.6% of those aged 18 to 24 years.

Compared with all males, those aged under 44 were more likely to agree with the statement: 51.4% of those aged 18–24, 41.6% of those aged 25–34, and 36.5% of those aged 35–44. Conversely, males aged 55 or over were less likely to agree with the statement: 19.4% of those aged 55–64, 9.8% of those aged 65–74, and only 5.7% of those aged 75 or over.

Similarly, compared with all females, those aged under 44 were more likely to agree with the statement: 47.5% of those aged 18–24, 38.8% of those aged 25–34, and 30.2% of those aged 35–44. Conversely, females aged 55 or over were less likely to agree with the statement: 10.8% of those aged 55–64, 6.5% of those aged 65–74, and only 3.6% of those aged 75 or over.

Other demographic analysis

Compared to all Victorians (27.9% agreed), demographic groups with a **lower** proportion of people agreeing that “getting drunk every now and then is okay” were those:

- who had completed some high school or less (20.1%)
- who reported their main activity as ‘home duties’ (23.0%) and retired persons (7.5%)
- mainly speaking a language other than English at home (17.0%)
- from a non-English-speaking country (14.2%)
- over 65 with a reported disability (5.9%)
- with a household annual income of \$20,000–\$39,999 (18.4%)
- living in single-person (23.3%) or couple (21.5%) households
- living in small shire geographic regions (23.3%).

Compared to all Victorians (27.9% agreed), demographic groups with a **higher** proportion of people agreeing that “getting drunk every now and then is okay” were those:

- with a high school qualification only (34.2%) or with TAFE, Certificate or Diploma qualifications (31.2%)
- who were employed (33.6%), unemployed (35.0%) or students (35.4%)
- mainly speaking English at home (31.7%)
- who were Australian-born (32.9%)
- whose sexuality was reported as something other than heterosexual (38.2%)
- with a household annual income of \$80,000–\$99,999 (32.3%) or \$100,000 or more (36.4%)
- living in households with children (30.3%), in couple parent households with dependent children (30.9%) or in share or group households (38.5%)
- living in inner metropolitan geographic regions (38.8%).

There were no observed differences for Aboriginal and/or Torres Strait Islander status or SEIFA quintiles in levels of agreement with the statement.

Table 6.3 Proportion of Victorians agreeing with that “getting drunk every now and then is okay”, by age and gender

Age group (years)	Alcohol culture – getting drunk every now and then is OK								
	Males			Females			Persons		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
18–24	51.4	47.1	55.7	47.5	43.0	52.0	49.6	46.5	52.7
25–34	41.6	38.1	45.2	38.8	35.5	42.2	40.2	37.8	42.7
35–44	36.5	33.1	40.0	30.2	27.4	33.1	33.2	31.0	35.5
45–54	31.9	29.1	34.8	22.1	19.8	24.5	26.9	25.1	28.8
55–64	19.4	17.0	22.0	10.8	9.2	12.6	15.0	13.5	16.5
65–74	9.8	8.0	11.8	6.5	4.9	8.5	8.2	7.0	9.5
75+	5.7	3.6	8.4	3.6	2.3	5.4	4.5	3.3	6.0
Total	31.2	29.9	32.5	24.7	23.6	25.9	27.9	27.0	28.8

6. ALCOHOL

Table 6.4 Summary of alcohol indicators, by demographic

	At risk of short-term harm each month			At very high risk of short-term harm each month			Alcohol culture – getting drunk every now and then is OK		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	29.4	28.5	30.2	9.2	8.6	9.8	27.9	27.0	28.8
Gender									
Male	40.1	38.7	41.4	14.5	13.5	15.5	31.2	29.9	32.5
Female	19.1	18.1	20.2	4.1	3.6	4.7	24.7	23.6	25.9
Age									
18–24	44.6	41.6	47.7	18.2	15.9	20.7	49.6	46.5	52.7
25–34	37.3	35.0	39.7	13.5	11.9	15.3	40.2	37.8	42.7
35–44	31.6	29.5	33.9	9.4	8.0	11.0	33.2	31.0	35.5
45–54	31.2	29.3	33.1	8.9	7.7	10.1	26.9	25.1	28.8
55–64	23.0	21.2	24.7	5.2	4.3	6.2	15.0	13.5	16.5
65–74	17.0	15.4	18.8	2.9	2.2	3.6	8.2	7.0	9.5
75+	6.3	5.1	7.7	0.6*	0.3	1.1	4.5	3.3	6.0
Education									
Some high school or less	21.6	19.8	23.5	7.9	6.6	9.3	20.1	18.3	22.0
Completed high school	34.0	31.3	36.6	12.1	10.3	14.1	34.2	31.5	36.9
TAFE/Certificate/Diploma	33.9	32.3	35.6	11.8	10.6	13.0	31.2	29.6	32.9
University	28.4	27.0	29.8	7.1	6.3	8.0	27.5	26.1	29.0
Main activity									
Employed	36.0	34.8	37.2	11.6	10.8	12.5	33.6	32.5	34.8
Unemployed	31.9	26.5	37.7	14.0	9.8	19.2	35.0	29.4	40.9
Student	34.4	30.4	38.5	11.5	8.9	14.5	35.4	31.4	39.5
Home duties	13.5	11.1	16.2	3.1	2.0	4.6	23.0	19.7	26.6
Retired	12.5	11.4	13.7	1.9	1.5	2.4	7.5	6.6	8.5
Main language spoken at home									
English	33.6	32.6	34.6	10.9	10.2	11.6	31.7	30.7	32.8
Other	17.5	16.0	19.1	4.5	3.7	5.4	17.0	15.5	18.7
Country of birth									
Australian born	34.0	32.9	35.1	11.1	10.4	11.9	32.9	31.8	34.0
English-speaking country	33.9	30.8	37.1	11.1	9.0	13.5	30.3	27.2	33.5
Non-English speaking country	16.0	14.6	17.5	3.6	2.9	4.5	14.2	12.8	15.7
Self-reported disability									
Reported disability – under 65 years	27.7	25.4	30.0	10.4	8.8	12.2	30.2	27.8	32.6
Reported disability – over 65 years	9.8	8.2	11.6	2.0	1.3	2.9	5.9	4.7	7.3
No disability reported	31.4	30.4	32.5	9.6	9.0	10.3	29.4	28.4	30.4
Aboriginal and/or Torres Strait Islander status									
Aboriginal and/or Torres Strait Islander	23.0	15.5	32.0	7.4*	3.3	13.9	28.9	20.1	39.0
Non-Aboriginal and/or Torres Strait Islander	29.4	28.6	30.3	9.2	8.7	9.8	27.9	27.0	28.8
Sexuality									
Heterosexual	29.5	28.6	30.4	9.3	8.7	9.9	27.5	26.6	28.4
Other	34.5	30.3	38.9	10.3	7.7	13.4	38.2	33.8	42.7
Income									
Less than \$20,000	25.7	22.3	29.4	7.5	5.5	10.0	24.6	21.2	28.3
\$20,000–\$39,999	19.6	17.8	21.4	6.9	5.7	8.3	18.4	16.6	20.3
\$40,000–\$59,999	28.7	26.4	31.2	9.4	7.9	11.2	26.2	23.9	28.7
\$60,000–\$79,999	33.8	31.0	36.7	9.6	7.9	11.6	29.5	26.8	32.3
\$80,000–\$99,999	34.0	31.1	37.1	11.5	9.5	13.8	32.3	29.3	35.4
\$100,000 or more	38.7	36.8	40.5	11.7	10.5	13.1	36.4	34.6	38.3
Household structure									
Single person household	24.9	22.7	27.1	7.5	6.1	9.0	23.3	21.1	25.6
Couple household	26.3	24.8	27.9	7.2	6.2	8.2	21.5	20.0	23.0
Household with children	29.6	28.3	31.0	8.9	8.1	9.8	30.3	28.9	31.7
– Single parent with dependent children	28.2	23.3	33.5	11.6	8.0	16.0	31.5	26.5	36.9
– Couple parent with dependent children	29.2	27.5	30.9	8.3	7.3	9.4	30.9	29.2	32.6
Share or group household	42.5	39.4	45.7	16.1	13.8	18.6	38.5	35.4	41.6

6. ALCOHOL

Table 6.4 Summary of alcohol indicators, by demographic

	At risk of short-term harm each month			At very high risk of short-term harm each month			Alcohol culture – getting drunk every now and then is OK		
	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI	Score (%)	Lower 95% CI	Higher 95% CI
Victoria	29.4	28.5	30.2	9.2	8.6	9.8	27.9	27.0	28.8
Geography									
Metropolitan	29.6	28.4	30.9	9.2	8.4	10.1	28.5	27.3	29.8
– Inner metro	42.9	39.5	46.3	16.3	13.7	19.2	38.8	35.5	42.2
– Middle metro	27.7	26.1	29.3	7.8	6.8	8.8	27.1	25.6	28.8
– Outer metro	25.9	23.3	28.5	8.1	6.4	10.0	25.3	22.8	28.0
Interface	27.4	25.5	29.4	8.4	7.2	9.7	25.9	24.0	27.8
Regional city	30.8	28.4	33.2	9.9	8.3	11.6	30.0	27.5	32.5
Large shire	31.5	29.7	33.4	10.3	9.0	11.7	28.0	26.2	29.8
Small shire	27.8	25.9	29.8	9.7	8.3	11.3	23.3	21.4	25.3
Location									
Capital city	29.0	28.0	30.1	9.0	8.3	9.7	27.7	26.7	28.8
Rest of state	30.5	29.1	32.0	10.0	9.0	11.0	28.4	26.9	29.9
Internet at home									
Yes	31.0	30.1	31.9	9.5	8.9	10.2	29.4	28.5	30.3
SEIFA (index of disadvantage)									
1 – Low (most disadvantaged)	25.3	23.5	27.2	8.3	7.1	9.6	25.3	23.4	27.3
2	27.4	25.4	29.4	8.7	7.4	10.1	27.0	24.9	29.1
3	29.4	27.5	31.4	8.7	7.5	10.0	27.8	25.8	29.8
4	30.2	28.2	32.4	9.7	8.3	11.2	29.4	27.3	31.5
5 – High (least disadvantaged)	32.5	30.7	34.3	10.1	9.0	11.4	29.1	27.4	30.9

Summary and conclusion

Alcohol is a significant cause of morbidity and mortality in Victoria and a substantial proportion of Victorians are drinking at levels that place them at risk of harm. This survey shows that 40.1% of males and 19.1% of females aged 18 and over are at risk of short-term harm related to their alcohol consumption each month. Short-term harm from alcohol includes acute toxicity, self-injury, road traffic accidents and significant harm to others (Laslett et al. 2011). Young Victorians aged 18–24 are the age group at highest risk of short-term harm, compared with adults aged 75 and over (44.6% and 6.3% respectively). On a monthly basis, half (50.8%) of all young males aged 18–24 and two in five (38.1%) of young females drink alcohol at levels associated with short-term harm.

Alcohol consumption behaviour that carries a risk of short-term harm is generally more prevalent among more advantaged population groups (AIHW 2014). However, while some markers of social position (for instance higher income) are associated with higher rates of risky single-session alcohol consumption, for other markers of social position (such as education) higher levels of advantage are associated with lower rates of risky single-session alcohol consumption. Furthermore, prior research has found that more disadvantaged individuals experience greater levels of actual alcohol-related harm due to a confluence of other risk factors (Jones et al. 2015, Mäkelä & Paljärvi 2008). These findings, combined, confirm the complex relationship that exists between alcohol-related harm and socioeconomic inequality.

Cultural and societal perceptions, knowledge, attitudes and beliefs about alcohol significantly influence the patterns of alcohol consumption in populations (Savic et al. 2016). This survey shows that more than one-quarter of Victorians agree that getting drunk every now and then, to the point of losing balance, is acceptable. This perception is most prevalent among young Victorians, with almost half (49.6%) of young adults aged 18–24 agreeing that is acceptable. The influence of peer pressure among young people is significant, and intoxicated people are often admired and applauded by their peers (Lyvers et al. 2010). Governments, health organisations and researchers recognise the importance of tackling drinking cultures as a means to prevent and reduce alcohol-related harm (National Preventative Health Taskforce 2009, Room et al. 2015, Savic et al. 2016).

A VicHealth guide providing evidence-informed actions that can help reduce harm from alcohol, particularly at a local level, is available at www.vichealth.vic.gov.au/localgovernmentguides.

Further information

This chapter reports prevalence data about Victorians consuming alcohol at levels that pose a high, or very high, risk of short-term harm. It also reports on Victorians' acceptance of intoxication a proxy measure of alcohol culture. Complementary information about Victorians' alcohol consumption is presented in the Victorian Population Health Survey 2014 (DHHS 2016).

References

- Ahlström, SK & Österberg, EL 2004, 'International perspectives on adolescent and young adult drinking', *Alcohol Research and Health*, vol. 28, issue 4, p. 258.
- Australian Institute of Health and Welfare (AIHW) 2014, *National Drug Strategy Household Survey detailed report: 2013*, Drug statistics series no. 28, AIHW cat. no. PHE 183, AIHW, Canberra.
- Australian Institute of Health and Welfare (AIHW) 2016, *National Drug Strategy Household Survey detailed report: 2013: Supplementary tables*, AIHW, Canberra, viewed 14 September 2016, <www.aihw.gov.au/publication-detail/?id=60129549469>.
- Collins, D & Lapsley, H 2008, *The costs of tobacco, alcohol and illicit drug abuse to Australian society in 2004/05*, Department of Health, Canberra.
- Department of Health 2013, *Victorian Population Health Survey 2011–12: Selected findings — 10. Social inequalities in health*, Department of Health Victoria, Melbourne.
- Department of Health 2014, *Victorian Population Health Survey 2011–12, survey findings*, Department of Health Victoria, Melbourne.
- Department of Health and Human Services (DHHS) 2016, *Victorian Population Health Survey 2014: Modifiable risk factors contributing to chronic disease in Victoria*, DHHS Victoria, Melbourne.
- Foundation for Alcohol Research and Education (FARE) 2016, *Risky business: The alcohol industry's dependence on Australia's heaviest drinkers*, FARE, Deakin ACT.
- Gao, C, Ogeil, R & Lloyd, B 2014, *Alcohol's burden of disease in Australia*, Foundation for Alcohol Research and Education, Canberra and Victorian Health Promotion Foundation, Melbourne.
- Graham, K, Bernards, S, Osgood, DW & Wells, S 2006, 'Bad nights or bad bars? Multi-level analysis of environmental predictors of aggression in late-night large-capacity bars and clubs', *Addiction*, vol. 101, no. 11, pp. 1569–80.
- Jones, L, Bates, G, Mccoy, E & Bellis, MA 2015, 'Relationship between alcohol-attributable disease and socioeconomic status, and the role of alcohol consumption in this relationship: A systematic review and meta-analysis', *BMC Public Health*, vol. 15, pp. 1–14.
- Laslett, AM, Room, R, Ferris, J, Wilkinson, C, Livingston, M & Mugavin, J 2011, 'Surveying the range and magnitude of alcohol's harm to others in Australia', *Addiction*, vol. 106, no. 11, pp. 1603–11.
- Livingston, M 2015, *Understanding recent trends in Australian alcohol consumption*, Foundation for Alcohol Research and Education, Canberra.
- Lyvers, M, Hasking, P, Hani, R, Rhodes, M, & Trew, E 2010, 'Drinking motives, drinking restraint and drinking behaviour among young adults', *Addictive Behaviors*, vol. 35, no. 2, pp. 116–122.
- Mäkelä, P & Paljärvi, T 2008, 'Do consequences of a given pattern of drinking vary by socioeconomic status? A mortality and hospitalisation follow-up for alcohol-related causes of the Finnish Drinking Habits Surveys', *Journal of Epidemiology and Community Health*, vol 62, no. 8, pp. 728–33.
- National Health And Medical Research Council (NHMRC) 2009, *Australian guidelines to reduce health risks from drinking alcohol*, NHMRC, Canberra.
- National Preventative Health Taskforce 2009, *Australia: The healthiest country by 2020: National preventative health strategy – the roadmap for action*, National Preventative Health Taskforce, Canberra.
- Rehm, J, Baliunas, D, Borges, GL, Graham, K, Irving, H, Kehoe, T, Parry, CD, Patra, J, Popova, S, Poznyak, V, Roerecke, M, Room, R, Samokhvalov, AV & Taylor, B 2010, 'The relation between different dimensions of alcohol consumption and burden of disease: An overview', *Addiction*, vol. 105, no. 5, pp. 817–43.
- Room, R, Mäkelä, P, Schmidt, L & Rehm, J 2006, *Alcohol, health disparities and development*, World Health Organization, Geneva.
- Room, R, Callinan, S & Dietze, P 2015, 'Influences on the drinking of heavier drinkers: Interactional realities in seeking to "change drinking cultures"', *Drug and Alcohol Review*, vol. 35, pp. 13–21.
- Savic, M, Room, R, Mugavin, J, Pennay, A & Livingston, M 2016, 'Defining "drinking culture": A critical review of its meaning and connotation in social research on alcohol problems', *Drugs: Education, Prevention and Policy*, pp. 1–13.
- Schmidt, LA, Mäkelä, P, Rehm, J & Room, R 2010, '2. Alcohol: Equity and social determinants', in *Equity, social determinants and public health programmes*, eds E Blas & AS Kurup, World Health Organization, Geneva, pp. 11–29.
- Smith, K & Foster, J 2014, *Alcohol, health inequalities and the harm paradox: Why some groups face greater problems despite consuming less alcohol*, Institute of Alcohol Studies, London.
- VicHealth 2014, *A snapshot of Victoria's alcohol culture*, Victorian Health Promotion Foundation, Melbourne, viewed 18 May 2016, <www.vichealth.vic.gov.au/media-and-resources/publications/a-snapshot-of-victorias-alcohol-culture>.
- World Health Organization 2014, *Global status report on alcohol and health*, World Health Organization, Geneva.

Appendix A:

Indicator, indicator question, response frame, and score processing

Indicator	Question	Response frame	Score processing	Base
Wellbeing and safety				
Subjective wellbeing [range 0–100]	<p>[Thinking about your own life and your personal circumstances, how satisfied are you with your life as a whole?]</p> <p>Turning now to various areas of your life...How satisfied are you with...</p> <ol style="list-style-type: none"> your standard of living? your health? what you are currently achieving in life? your personal relationships? how safe you feel? feeling part of your community? your future security? 	<p>Scale from 0–10, where 0 is completely dissatisfied and 10 is completely satisfied, answered for each domain area.</p> <ol style="list-style-type: none"> Record number Don't know Refused 	<p>Average scale score.</p> <p>Average score of 7 domains is combined into a Personal Wellbeing Index score, and converted into a scale maximum score with a range of 0 (completely dissatisfied) to 100 (completely satisfied).</p>	<p>All respondents (excluding 'Don't know' and 'Refused')</p>
Satisfaction with life as a whole [range 0–10]	<p>Thinking about your own life and your personal circumstances, how satisfied are you with your life as a whole?</p>	<p>Scale from 0–10, where 0 is completely dissatisfied and 10 is completely satisfied</p> <ol style="list-style-type: none"> Record number Don't know Refused 	<p>Average scale score.</p>	<p>All respondents (excluding 'Don't know' and 'Refused')</p>
Perceptions of safety – walking alone during day	<p>How safe or unsafe do you feel when you are in the following situations? How safe do you feel...?</p> <ul style="list-style-type: none"> walking in your local area alone during the day? walking in your local area alone after dark? 	<ol style="list-style-type: none"> Very safe Safe Neither safe nor unsafe Unsafe Very unsafe Never alone in this situation Don't know Refused 	<p>The percentage of respondents who feel 'safe' or 'very safe' walking alone in their local area during the day.</p>	<p>All respondents</p>
Perceptions of safety – walking alone after dark	<p>How safe or unsafe do you feel when you are in the following situations? How safe do you feel...?</p> <ul style="list-style-type: none"> walking in your local area alone during the day? walking in your local area alone after dark? 	<ol style="list-style-type: none"> Very safe Safe Neither safe nor unsafe Unsafe Very unsafe Never alone in this situation Don't know Refused 	<p>The percentage of respondents who feel 'safe' or 'very safe' walking alone in their local area after dark.</p>	<p>All respondents</p>

Indicator	Question	Response frame	Score processing	Base
Mental wellbeing				
Resilience [range 0–8]	<p>Able to adapt to change...</p> <p>Tend to bounce back after illness or hardship*</p> <p>* actual question text is proprietary to CD-RISC 2 questionnaire and thus cannot be reproduced here.</p>	<ol style="list-style-type: none"> 1. Not true at all (scored 0) 2. Rarely true (scored 1) 3. Sometimes true (scored 2) 4. Often true (scored 3) 5. True nearly all the time (scored 4) 6. Don't know 7. Refused 	<p>Average scale score.</p> <p>Scale score is sum of the two item scores for the two items on a scale of 0–8.</p>	All respondents (excluding 'Don't know' and 'Refused')
Perceptions of neighbourhood – 'people are willing to help each other'	<p>Now some general questions about your neighbourhood:</p> <p>On a scale of 1 to 7, where 1 is 'strongly disagree' and 7 is 'strongly agree', do you agree or disagree that...?</p> <ol style="list-style-type: none"> a. "People around here are willing to help their neighbours." b. "This is a close-knit neighbourhood." c. "People in this neighbourhood can be trusted." 	<p>Scale from 1–7, where 1 is strongly disagree and 7 is strongly agree</p> <ol style="list-style-type: none"> 1. Record number 2. Don't know 3. Refused 	The percentage of respondents who agree with statement a (score = 5 6 7).	All respondents
Perceptions of neighbourhood – 'this is a close-knit neighbourhood'	<p>Now some general questions about your neighbourhood:</p> <p>On a scale of 1 to 7, where 1 is strongly disagree and 7 is strongly agree, do you agree or disagree that...?</p> <ol style="list-style-type: none"> a. "People around here are willing to help their neighbours." b. "This is a close-knit neighbourhood." c. "People in this neighbourhood can be trusted." 	<p>Scale from 1–7, where 1 is strongly disagree and 7 is strongly agree</p> <ol style="list-style-type: none"> 1. Record number 2. Don't know 3. Refused 	The percentage of respondents who agree with statement b (score = 5 6 7).	All respondents
Perceptions of neighbourhood – 'people can be trusted'	<p>Now some general questions about your neighbourhood:</p> <p>On a scale of 1 to 7, where 1 is strongly disagree and 7 is strongly agree, do you agree or disagree that...?</p> <ol style="list-style-type: none"> a. "People around here are willing to help their neighbours." b. "This is a close-knit neighbourhood." c. "People in this neighbourhood can be trusted." 	<p>Scale from 1–7, where 1 is strongly disagree and 7 is strongly agree</p> <ol style="list-style-type: none"> 1. Record number 2. Don't know 3. Refused 	The percentage of respondents who agree with statement c (score = 5 6 7)	All respondents

Indicator	Question	Response frame	Score processing	Base
Low gender equality in relationships score	<p>The statements I'm about to read out describe different attitudes that people have. Please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree.</p> <p>"Men should take control in relationships and be the head of the household."</p> <p>"Women prefer a man to be in charge of the relationship."</p>	<p>Scale from 1–5, where 1 is strongly agree and 5 is strongly disagree</p> <ol style="list-style-type: none"> 1. Record number 2. Don't know 3. Refused 	<p>Percentage with low gender equality score.</p> <p>Score for each question multiplied by 10, then both question scores summed. Low gender equality is score <70.</p>	<p>All respondents (excluding those for whom gender equality could not be calculated due to 'Don't know' or 'Refused')</p>

Physical activity and sedentary behaviour

Physical activity frequency

0 days per week	<p>In a usual week, on how many days do you do a total of 30 min or more of physical activity, which was enough to raise your breathing rate?</p> <p>This may include sport, exercise and brisk walking or cycling for recreation or to get to and from places, but should not include housework, gardening or physical activity that may be part of your job.</p>	<ol style="list-style-type: none"> 1. None 2. Number of days given (1–7) 3. Not applicable 4. Don't know 5. Refused 	<p>The percentage of respondents selecting 'None'.</p>	<p>All respondents</p>
1 to 3 days per week	<p>In a usual week, on how many days do you do a total of 30 min or more of physical activity, which was enough to raise your breathing rate?</p> <p>This may include sport, exercise and brisk walking or cycling for recreation or to get to and from places, but should not include housework, gardening or physical activity that may be part of your job.</p>	<ol style="list-style-type: none"> 1. None 2. Number of days given (1–7) 3. Not applicable 4. Don't know 5. Refused 	<p>The percentage of respondents reporting 1–3 days.</p>	<p>All respondents</p>
4 or more days per week	<p>In a usual week, on how many days do you do a total of 30 min or more of physical activity, which was enough to raise your breathing rate?</p> <p>This may include sport, exercise and brisk walking or cycling for recreation or to get to and from places, but should not include housework, gardening or physical activity that may be part of your job.</p>	<ol style="list-style-type: none"> 1. None 2. Number of days given (1–7) 3. Not applicable 4. Don't know 5. Refused 	<p>The percentage of respondents reporting 4+ days.</p>	<p>All respondents</p>

Indicator	Question	Response frame	Score processing	Base
Organised physical activity				
Participation in any organised physical activity	Is the [name of sport/physical activity] organised by a club, association or other organisation?	<ul style="list-style-type: none"> a. Yes b. No c. Don't know d. Refused 	The percentage of respondents answering 'Yes'.	All respondents
Organised by a fitness, leisure or indoor sports centre	What type of club, association or organisation organised the [name of sport/physical activity]?	<ul style="list-style-type: none"> 1. Fitness, leisure or indoor sports centre 2. Sports club or association 3. Recreation club or association (e.g. bushwalking club) 4. Work 5. Educational Institution (e.g. Tafe, University) 6. Physical activity courses 7. Private business (e.g. private personal training, pilates or yoga studio) 8. Community fitness programs/events 9. Other (specify) 10. Don't know 11. Refused 	The percentage of respondent participating in sport via a fitness, leisure or indoor sports centre.	All respondents
Organised by a sports club or association	What type of club, association or organisation organised the [name of sport/physical activity]?	<ul style="list-style-type: none"> 1. Fitness, leisure or indoor sports centre 2. Sports club or association 3. Recreation club or association (e.g. bushwalking club) 4. Work 5. Educational Institution (e.g. Tafe, University) 6. Physical activity courses 7. Private business (e.g. private personal training, pilates or yoga studio) 8. Community fitness programs/events 9. Other (specify) 10. Don't know 11. Refused 	The percentage of respondents participating in sport via a sports club or association.	All respondents

Indicator	Question	Response frame	Score processing	Base
Non-organised physical activity				
Participation in any non-organised physical activity	Is the [name of sport/ physical activity] organised by a club, association or other organisation?	a. Yes b. No c. Don't know d. Refused	The percentage of respondents answering 'No'.	All respondents
Activity type – walking	What are the three main types of physical activities that you USUALLY do?	Free response	The percentage of respondents reporting 'Walking' as one of their top three physical activity types AND reporting it as a non-organised activity type.	All respondents
Activity type – jogging or running	What are the three main types of physical activities that you USUALLY do?	Free response	The percentage of respondents reporting 'Jogging' or 'Running' as one of their top three physical activity types AND reporting it as a non-organised activity type.	All respondents
Activity type – cycling	What are the three main types of physical activities that you USUALLY do?	Free response	The percentage of respondents reporting 'Cycling' as one of their top three physical activity types AND reporting it as a non-organised activity type.	All respondents
Activity type – gym or fitness	What are the three main types of physical activities that you USUALLY do?	Free response	The percentage of respondents reporting 'Gym' or 'Fitness' as one of their top three physical activity types AND reporting it as a non-organised activity type.	All respondents
Activity type – swimming	What are the three main types of physical activities that you USUALLY do?	Free response	The percentage of respondents reporting 'Swimming' as one of their top three physical activity types AND reporting it as a non-organised activity type.	All respondents

Indicator	Question	Response frame	Score processing	Base
Participates alone	Who do you usually do the [name of sport/physical activity] with?	<ol style="list-style-type: none"> 1. By yourself 2. With friends/family 3. Other (specify) 4. Don't know 5. Refused 	The percentage of respondents selecting 'By yourself'.	All respondents
Participates with someone	Who do you usually do the [name of sport/physical activity] with?	<ol style="list-style-type: none"> 1. By yourself 2. With friends/family 3. Other (specify) 4. Don't know 5. Refused 	The percentage of respondents selecting 'With friends/family' OR 'Other', where 'other' is not a pet.	All respondents
Sedentary behaviour at work				
Time spent sitting on usual work day (hours: minutes)	The following question is about sitting at work, including meal and snack breaks and time spent sitting at a desk. How much time do you spend sitting at work on a usual work day?	Free response	Average time spent sitting in a typical work day.	Those aged between 18 and 64 years who work 35 or more hours a week
Healthy eating				
Number of serves of vegetables per day	Now some questions about food. How many serves of vegetables do you USUALLY eat each day – a 'serve' is ½ cup of cooked vegetables or 1 cup of salad vegetables. NB: 'Vegetables' includes potatoes, hot potato chips, but excludes potato crisps and excludes vegetable juice.	<ol style="list-style-type: none"> 1. Record number of serves PER DAY 2. Don't know 3. Refused 	Average number of serves per day.	All respondents (excluding 'Don't know' and 'Refused')
Number of serves of fruit per day	How many serves of fruit do you USUALLY eat each day – a 'serve' is 1 medium piece or 2 small pieces of fruit or 1 cup of diced pieces. NB: Excludes fruit juice.	<ol style="list-style-type: none"> 1. Record number of serves PER DAY 2. Don't know 3. Refused 	Average number of serves per day.	All respondents (excluding 'Don't know' and 'Refused')
Eats take-away meals/snacks at least three times a week	How often do you eat take-away meals and snacks that are bought from fast food or take-away food outlets? Examples could be pizza, hamburgers, hot chips.	<ol style="list-style-type: none"> 1. Most days (6–7 times per week) 2. 3–5 times per week 3. 1–2 times per week 4. 2–3 times per month 5. Once per month 6. Less than once per month 7. Never 8. Don't know 9. Refused 	The percentage of respondents selecting 'Most days' or '3–5 times per week'	All respondents

Indicator	Question	Response frame	Score processing	Base
No water consumed per day	How many cups of water do you usually drink in a day? 1 cup = 250ml or a household cup. 1 average 600ml bottle of water = 2.5 cups.	Number of cups per day given or number of litres per day given	Percentage of respondents drinking no water per day.	All respondents
Number of cups of water consumed per day	How many cups of water do you usually drink in a day? 1 cup = 250ml or a household cup. 1 average 600ml bottle of water = 2.5 cups.	Number of cups per day given or number of litres per day given	Average cups per day.	All respondents (excluding 'Don't know' and 'Refused')
Alcohol				
At risk of short-term harm each month	How often do you drink five or more standard drinks in a single session? A standard drink is equal to 1 pot of full strength beer, 1 small glass of wine or 1 pub-sized nip of spirits.	<ol style="list-style-type: none"> 1. Every day 2. 5–6 days a week 3. 3–4 days a week 4. 1–2 days a week 5. 2–3 days a month 6. About 1 day a month 7. Less often 8. Never 9. Don't know 10. Refused 	Percentage of respondents drinking five or more standard drinks in a single session at least once a month.	All respondents
At very high risk of short-term harm each month	How often do you drink 11 or more standard drinks in a single session? A standard drink is equal to 1 pot of full strength beer, 1 small glass of wine or 1 pub-sized nip of spirits.	<ol style="list-style-type: none"> 1. Every day 2. 5–6 days a week 3. 3–4 days a week 4. 1–2 days a week 5. 2–3 days a month 6. About 1 day a month 7. Less often 8. Never 9. Don't know 10. Refused 	Percentage of respondents drinking 11 or more standard drinks in a single session at least once a month.	All respondents
Alcohol culture – “Getting drunk every now and then is okay”	Do you PERSONALLY agree or disagree that getting drunk every now and then is okay? By 'getting drunk' I mean drinking to the point of losing balance.	<p>Scale from 1–5, where 1 is strongly agree and 5 is strongly disagree</p> <ol style="list-style-type: none"> 1. Record number 2. Don't know 3. Refused 	Percentage of respondents agreeing or strongly agreeing with the question statement.	All respondents

Appendix B:

List of demographic variables, report categories and source of demographic variables used in the VicHealth Indicators Survey 2015.

Demographic	Categories	Notes
Gender	Male	Categories align with VicHealth indicators surveys 2007 and 2011
	Female	
Age	18–24 years	Categories align with VicHealth indicators surveys 2007 and 2011
	25–34 years	
	35–44 years	
	45–54 years	
	55–64 years	
	65–74 years	
	75+ years	
Household structure	Single person household	Categories align with VicHealth indicators surveys 2007 and 2011
	Couple only household	
	Household with children	
	Single parent with dependent children	
	Couple parent with dependent children	
	Share or group household	
Aboriginal and/or Torres Strait Islander status	Aboriginal and/or Torres Strait Islander	Categories align with VicHealth indicators surveys 2007 and 2011
	Non-Aboriginal and/or Torres Strait Islander	
Sexuality	Heterosexual	First time use in VicHealth indicators survey
	Other	
°Country of birth	Australian born	Categories align with VicHealth indicators surveys 2007 and 2011
	English-speaking country	
	Non-English speaking country	
Main language spoken at home	English	Categories align with VicHealth indicators surveys 2007 and 2011
	Other	
Education	Some high school or less	Categories align with VicHealth indicators surveys 2007 and 2011
	Completed high school	
	TAFE/Certificate/Diploma	
	University	

Demographic	Categories	Notes
Household income	Less than \$20,000	Categories align with VicHealth indicators surveys 2007 and 2011
	\$20,000–\$39,999	
	\$40,000–\$59,999	
	\$60,000–\$79,999	
	\$80,000–\$99,999	
	\$100,000 or more	
Main activity	Employed	Categories align with VicHealth indicators surveys 2007 and 2011
	Unemployed	
	Student	
	Home duties	
	Retired	
Geography	Metropolitan	Municipal Association of Victoria (MAV) geographic LGA concordance
	Inner metro	VicHealth Indicators 2011 concordance
	Middle metro	VicHealth Indicators 2011 concordance
	Outer metro	VicHealth Indicators 2011 concordance
	Interface	Municipal Association of Victoria (MAV) LGA concordance
	Regional city	Municipal Association of Victoria (MAV) LGA concordance
	Large shire	Municipal Association of Victoria (MAV) LGA concordance
	Small shire	Municipal Association of Victoria (MAV) LGA concordance
Region	Capital city	Postcode concordance with ABS Greater Capital City Statistical Areas (GCCSA)
	Rest of Victoria	Postcode concordance with ABS Greater Capital City Statistical Areas (GCCSA)
SEIFA (index of disadvantage)	1 – Low (most disadvantaged)	ABS postcode concordance
	2	ABS postcode concordance
	3	ABS postcode concordance
	4	ABS postcode concordance
	5 – High (least disadvantaged)	ABS postcode concordance
Internet access	Yes	First time use as a predictor variable in VicHealth indicators survey
	No	

Appendix C:

VicHealth Indicators geographic classification concordances

Local Government Area	Location (according to Australian Bureau of Statistics Greater Capital City Statistical Area [GCCSA] classification)	2015 VicHealth Indicators region*	2011 VicHealth Indicators regions	Department of Health Regions	Accessibility/ Remoteness Index of Australia (ARIA)	Municipal Association of Victoria (MAV) regions
Alpine	Rest of state	small shire	regional other	Hume	Inner regional Australia / Outer regional Australia	small shire
Ararat	Rest of state	small shire	regional other	Grampians	Inner Regional Australia	small shire
Ballarat	Rest of state	regional city	regional cities	Grampians	Inner Regional Australia	regional city
Banyule	Capital city	middle metro	middle metro	North and West	Major Cities of Australia	Metropolitan
Bass Coast	Rest of state	large shire	peri urban areas	Gippsland	Inner Regional Australia	large shire
Baw Baw	Rest of state	large shire	peri urban areas	Gippsland	Inner Regional Australia	large shire
Bayside	Capital city	middle metro	middle metro	Southern	Major Cities of Australia	Metropolitan
Benalla	Rest of state	small shire	regional other	Hume	Inner Regional Australia	small shire
Boroondara	Capital city	middle metro	middle metro	Eastern	Major Cities of Australia	Metropolitan
Brimbank	Capital city	outer metro	outer metro	North and West	Major Cities of Australia	Metropolitan
Buloke	Rest of state	small shire	regional other	Loddon Mallee	Outer Regional Australia	small shire
Campaspe	Rest of state	large shire	regional other	Loddon Mallee	Inner Regional Australia	large shire
Cardinia	Capital city	Interface	growth areas	Southern	Major Cities of Australia / Inner Regional Australia	Interface
Casey	Capital city	Interface	growth areas	Southern	Major Cities of Australia	Interface
Central Goldfields	Rest of state	small shire	regional other	Loddon Mallee	Inner Regional Australia	small shire
Colac-Otway	Rest of state	large shire	regional other	Barwon South West	Inner Regional Australia	large shire
Corangamite	Rest of state	large shire	regional other	Barwon South West	Inner regional Australia / Outer regional Australia	large shire
Darebin	Capital city	middle metro	middle metro	North and West	Major Cities of Australia	Metropolitan
East Gippsland	Rest of state	large shire	regional other	Gippsland	Outer Regional Australia	large shire
Frankston	Capital city	outer metro	outer metro	Southern	Major Cities of Australia	Metropolitan
Gannawarra	Rest of state	small shire	regional other	Loddon Mallee	Outer Regional Australia	small shire
Glen Eira	Capital city	middle metro	middle metro	Southern	Major Cities of Australia	Metropolitan
Glenelg	Rest of state	large shire	regional other	Barwon South West	Outer Regional Australia	large shire
Golden Plains	Rest of state	large shire	peri urban areas	Grampians	Inner Regional Australia	large shire
Greater Bendigo	Rest of state	regional city	regional cities	Loddon Mallee	Inner Regional Australia	regional city
Greater Dandenong	Capital city	outer metro	outer metro	Southern	Major Cities of Australia	Metropolitan
Greater Geelong	Rest of state	regional city	regional cities	Barwon South West	Major Cities of Australia / Inner Regional Australia	regional city
Greater Shepparton	Rest of state	regional city	regional cities	Hume	Inner Regional Australia	regional city
Hepburn	Rest of state	small shire	regional other	Grampians	Inner Regional Australia	small shire
Hindmarsh	Rest of state	small shire	regional other	Grampians	Outer Regional Australia	small shire
Hobsons Bay	Capital city	middle metro	middle metro	North and West	Major Cities of Australia	Metropolitan
Horsham	Rest of state	regional city	regional cities	Grampians	Outer Regional Australia	regional city
Hume	Capital city	Interface	growth areas	North and West	Major Cities of Australia	Interface
Indigo	Rest of state	small shire	regional other	Hume	Inner Regional Australia	small shire
Kingston	Capital city	middle metro	middle metro	Southern	Major Cities of Australia	Metropolitan
Knox	Capital city	outer metro	outer metro	Eastern	Major Cities of Australia	Metropolitan
Latrobe	Rest of state	regional city	regional cities	Gippsland	Inner Regional Australia	regional city

Local Government Area	Location (according to Australian Bureau of Statistics Greater Capital City Statistical Area [GCCSA] classification)	2015 VicHealth Indicators region*	2011 VicHealth Indicators regions	Department of Health Regions	Accessibility/ Remoteness Index of Australia (ARIA)	Municipal Association of Victoria (MAV) regions
Loddon	Rest of state	small shire	regional other	Loddon Mallee	Inner regional Australia / Outer regional Australia	small shire
Macedon Ranges	Capital city / Rest of state	large shire	peri urban areas	Loddon Mallee	Inner Regional Australia	large shire
Manningham	Capital city	middle metro	middle metro	Eastern	Major Cities of Australia	Metropolitan
Mansfield	Rest of state	small shire	regional other	Hume	Outer Regional Australia	small shire
Maribyrnong	Capital city	middle metro	middle metro	North and West	Major Cities of Australia	Metropolitan
Maroondah	Capital city	outer metro	outer metro	Eastern	Major Cities of Australia	Metropolitan
Melbourne	Capital city	inner metro	inner metro	North and West	Major Cities of Australia	Metropolitan
Melton	Capital city	Interface	growth areas	North and West	Major Cities of Australia	Interface
Mildura	Rest of state	regional city	regional cities	Loddon Mallee	Outer Regional Australia	regional city
Mitchell	Capital city / Rest of state	large shire	peri urban areas	Hume	Inner Regional Australia	large shire
Moira	Rest of state	large shire	regional other	Hume	Inner Regional Australia	large shire
Monash	Capital city	middle metro	middle metro	Eastern	Major Cities of Australia	Metropolitan
Moonee Valley	Capital city	middle metro	middle metro	North and West	Major Cities of Australia	Metropolitan
Moorabool	Capital city / Rest of state	large shire	peri urban areas	Grampians	Inner Regional Australia	large shire
Moreland	Capital city	middle metro	middle metro	North and West	Major Cities of Australia	Metropolitan
Mornington Peninsula	Capital city	Interface	outer metro	Southern	Major Cities of Australia	Interface
Mount Alexander	Rest of state	large shire	regional other	Loddon Mallee	Inner Regional Australia	large shire
Moyne	Rest of state	large shire	regional other	Barwon South West	Inner regional Australia / Outer regional Australia	large shire
Murrindindi	Capital city / Rest of state	small shire	peri urban areas	Hume	Inner regional Australia / Outer regional Australia	small shire
Nillumbik	Capital city	Interface	outer metro	North and West	Major Cities of Australia	Interface
Northern Grampians	Rest of state	small shire	regional other	Grampians	Inner regional Australia / Outer regional Australia	small shire
Port Phillip	Capital city	inner metro	inner metro	Southern	Major Cities of Australia	Metropolitan
Pyrenees	Rest of state	small shire	regional other	Grampians	Inner Regional Australia	small shire
Queenscliffe	Rest of state	small shire	regional other	Barwon South West	Inner Regional Australia	small shire
South Gippsland	Rest of state	large shire	peri urban areas	Gippsland	Inner Regional Australia	large shire
Southern Grampians	Rest of state	large shire	regional other	Barwon South West	Inner regional Australia / Outer regional Australia	large shire
Stonnington	Capital city	inner metro	inner metro	Southern	Major Cities of Australia	Metropolitan
Strathbogie	Rest of state	small shire	regional other	Hume	Inner Regional Australia	small shire
Surf Coast	Rest of state	large shire	peri urban areas	Barwon South West	Inner Regional Australia	large shire
Swan Hill	Rest of state	large shire	regional other	Loddon Mallee	Outer Regional Australia	large shire
Towong	Rest of state	small shire	regional other	Hume	Inner regional Australia / Outer regional Australia	small shire
Wangaratta	Rest of state	regional city	regional cities	Hume	Inner Regional Australia	regional city
Warrnambool	Rest of state	regional city	regional cities	Barwon South West	Inner Regional Australia	regional city
Wellington	Rest of state	large shire	regional other	Gippsland	Inner Regional Australia	large shire
West Wimmera	Rest of state	small shire	regional other	Grampians	Outer Regional Australia	small shire
Whitehorse	Capital city	middle metro	middle metro	Eastern	Major Cities of Australia	Metropolitan
Whittlesea	Capital city	Interface	growth areas	North and West	Major Cities of Australia	Interface
Wodonga	Rest of state	regional city	regional cities	Hume	Inner Regional Australia	regional city
Wyndham	Capital city	Interface	growth areas	North and West	Major Cities of Australia	Interface
Yarra	Capital city	inner metro	inner metro	North and West	Major Cities of Australia	Metropolitan
Yarra Ranges	Capital city	Interface	outer metro	Eastern	Major Cities of Australia / Inner Regional Australia	Interface
Yarriambiack	Rest of state	small shire	regional other	Grampians	Outer Regional Australia	small shire

* The geographic classification for regions was broadened for VicHealth Indicators 2015 to align more closely with the Municipal Association of Victoria (MAV) geographic classification.



Victorian Health Promotion Foundation
PO Box 154 Carlton South
Victoria 3053 Australia
T +61 3 9667 1333 F +61 3 9667 1375

vichealth@vichealth.vic.gov.au
vichealth.vic.gov.au



VicHealth acknowledges the support
of the Victorian Government.

© VicHealth 2016
November 2016 P-KN-415

