Inequalities in the social determinants of health and what it means for the health of Victorians

Findings from the 2014 Victorian Population Health Survey

VICTORIA State Government | Health and Human Services

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Preface

Health is determined by a complex interaction between genetic inheritance, health behaviours, access to quality healthcare and the social determinants of health. It is the social determinants that make the biggest impact on health.

The World Health Organization (WHO) defines the social determinants of health as 'the conditions, in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems' (WHO 2012).

The social determinants are shaped by the distribution of money, power and resources and are mostly responsible for health inequities – the health inequalities that are unfair and avoidable.

This report is the third in a series based on analysis of the 2014 Victorian Population Health Survey. The report investigates inequalities in the social determinants of health and how these impact on the health of Victorians, mainly focusing on the social determinants referred to collectively as 'social capital'. Social capital is defined as the 'resources that are accessed by individuals as a result of their membership of a network or a group' (Berkman, Kawachi et al. 2014).

Research shows that higher levels of social capital are associated with higher productivity, greater educational achievement, lower crime rates and better health outcomes.

While, we have reported on indicators of social capital since 2001, this is the first time we have investigated the link between social capital and health. We discuss the findings in the context of the current international literature.

Contents

Executive summary

Aim

To investigate inequalities in the social determinants of health, with a specific focus on social capital, for the purpose of informing policymaking and planning in Victoria.

Objectives

- To describe measures of social capital by demography and socioeconomic status.
- To quantify the impact of social capital on mental and physical health.
- To interpret the data in the context of the current literature.
- To make recommendations on future directions for policy and research.

Methods

The report is based on the analysis of data collected in the 2014 Victorian Population Health Survey. Indicators of social capital include measures of the social environment, social and support networks, social and civic trust, and community and civic engagement. All measures are analysed by age, sex, geography (local government area), socioeconomic status (household income) and mental and physical health. We use psychological distress as a measure of mental health and self-reported health status as a measure of physical health.

Key findings

- Social isolation is strongly associated with poor mental and physical health.
- Declining levels of social support and trust, intolerance of diversity and non-engagement with the local community are associated with poorer mental and physical health.
- Compared with the lifestyle risk factors of smoking and obesity, lack of (or low levels of) social support and trust are more strongly associated with both mental and physical ill-health.
- Almost all of the social capital measures investigated in this report show strong socioeconomic gradients, where lower social capital is associated with lower socioeconomic status.

Conclusions and recommendations

Social capital is strongly associated with both mental and physical health in Victoria. The evidence supports the need for policies that address lack of social support, lack of social/civic trust, intolerance of diversity and social isolation as a means of improving the mental and physical health of Victorians.

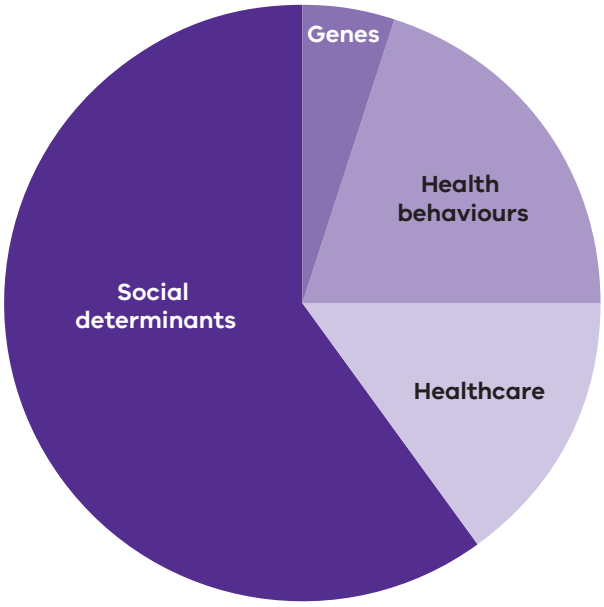
1. Introduction

What are the determinants of health?

Health is determined by a complex interaction between genetic inheritance, health behaviours, access to quality healthcare and the social determinants of health. The 2011 Australian Burden of Disease Study showed that 31 per cent of the burden of disease is attributable to 29 lifestyle risk factors (health behaviours of individuals) such as smoking, overeating and physical inactivity (Australian Institute of Health and Welfare 2016). As can be seen from Figure 1-1, the social determinants make the largest impact on health. Moreover, it is the social determinants that are largely responsible for inequalities in health outcomes across populations. However, across Australia, primary prevention of ill-health is dominated by seeking to address the health behaviours of individuals, largely ignoring the social determinants of health.

This report focuses on the social determinants, providing examples of policies and interventions that have been used successfully in other parts of the world to address the social determinants.

Figure 1-1: Determinants of health



Adapted from Tarlov 1999

What are the social determinants of health?

The World Health Organization (WHO) defines the social determinants of health as 'the conditions, in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems' (WHO 2012).

The social determinants are shaped by the distribution of money, power and resources and are mostly responsible for health inequities – the health inequalities that are unfair and avoidable. Social determinants include but are not limited to

- socioeconomic status
- education
- housing
- transportation
- food security
- psychosocial risk factors
- the social environment
- social support networks
- community and civic engagement
- social and civic trust
- the physical environment.

Social determinants such as socioeconomic status have long been well understood to have significant impacts on an individual's health status – the lower the socioeconomic status the worse the health status (Marmot 1999).

However, evidence has accumulated over the past 30 years showing that social factors such as social networks and social support, often referred to as 'social capital', also have significant impacts on an individual's health status (Kawachi, Subramanian et al. 2008).

Given that the topic of social determinants is vast, this report will narrow its focus to social capital. The report will show that inequalities in social capital translate into inequalities in health and wellbeing.

What is social capital?

There is no universally agreed definition of social capital because it is a concept that traverses many disciplines such as sociology, economics, political science, psychology and population health. However, a simple definition of social capital is the 'resources that are accessed by individuals as a result of their membership of a network or a group' (Berkman, Kawachi et al. 2014).

The concept of social capital originated in the field of sociology in the late 1980s with the work of Bourdieu, who posited that social capital is made up of social obligations and connections that are convertible, in certain conditions, to economic capital that can be accumulated by the individual. In contrast, Coleman defined social capital by its function, citing the trustworthiness of the social environment that makes possible the mutual non-market exchange of goods, labour and favours as well as societal norms and sanctions (Bird, Conrad et al. 2010). Coleman's definition is described as the 'social cohesion approach'. Within the field of population health, Coleman's social cohesion approach is dominant.

In 1993 Robert Putnam further defined social capital by dividing it into two subtypes: bonding and bridging (Szreter and Woolcock 2004). Bonding social capital describes close connections that are based on trusting cooperative relationships between members of a network who see themselves as similar – that is, relations between relatively homogenous groups such as families and ethnic groups. Bonding social capital is considered good for 'getting by' in life.

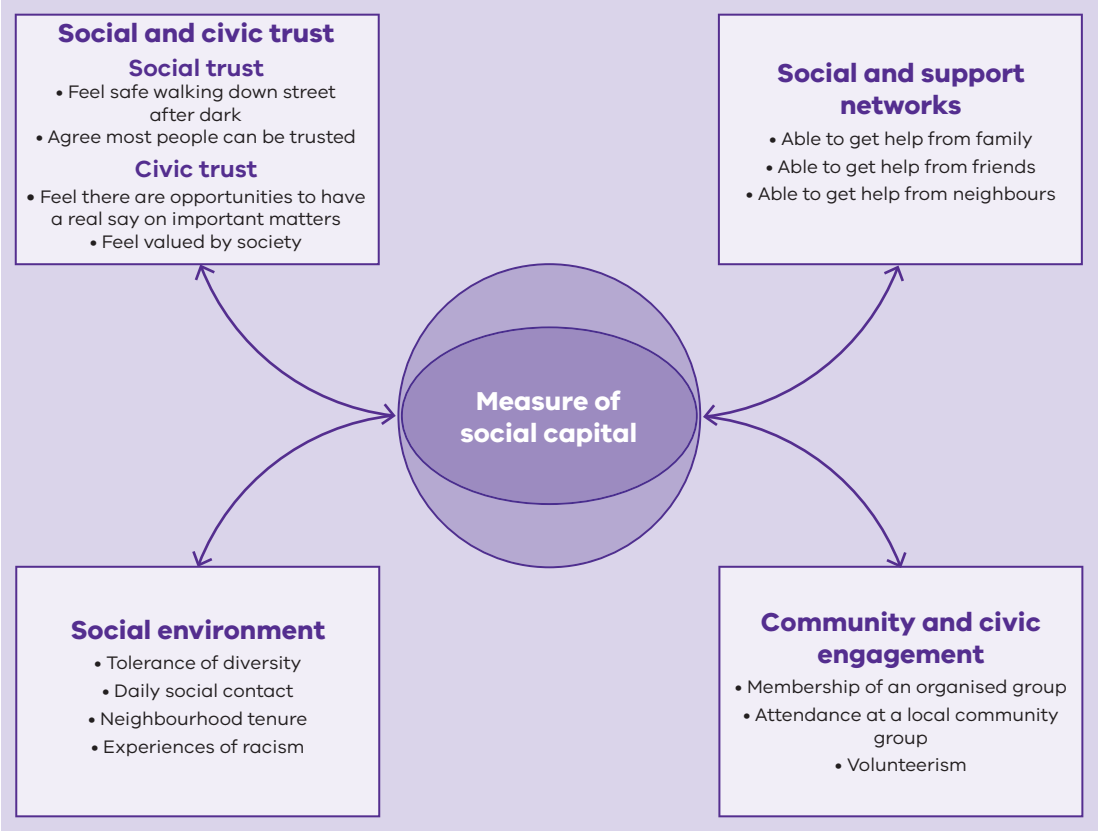
In contrast, bridging social capital describes weaker but more cross-cutting connections consisting of trusting, cooperative relationships between members of a network who do not see themselves as similar. For example, they might differ by age, socioeconomic status or ethnicity, such as friends and colleagues. Bridging social capital is considered good for 'getting ahead' in life.

Szreter and Woolcock introduced a third subtype, 'linking social capital', which describes connections with people in positions of power, consisting of trusting, cooperative relationships between people within a hierarchy with different levels of power. In other words, linking social capital is connections across social strata that are good for accessing support from formal institutions. Linking social capital thereby brings state–society relations and considerations of power into the social capital framework (Szreter and Woolcock 2004).

How is social capital measured?

Social capital can be measured at the individual as well as group level. There are many indicators of social capital but no universal consensus on what constitutes a measure of social capital or the taxonomy under which indicators of social capital are classified. The indicators of social capital used in this report, with the exception of experiences of racism which is the subject of a separate report, are shown in Figure 1-2.

Figure 1-2: Selected indicators of social capital



Why is social capital important?

Research shows that higher levels of social capital are associated with:

- higher productivity of individuals and groups
- higher educational achievement
- lower crime rates
- better health outcomes.

Is social capital always good?

Social capital can have both positive and negative effects, depending on the balance of the different types of social capital. For example, bonding social capital (ties between people who are similar) can sometimes function in a socially exclusive manner, having positive effects for some and negative effects for others. Negative effects can include the exclusion of outsiders, excessive claims on group members, restrictions on the freedom of individuals and the downward levelling of social norms.

Societies that are high in **bonding** social capital but low in **bridging** and **linking** social capital are often troubled and segregated because cooperation is fostered and potentially maximised by the presence of social networks that cross social cleavages (Szreter and Woolcock 2004). This is a particular problem in less egalitarian countries that have a high level of income inequality (Wilkinson and Pickett 2009). Therefore, getting the right balance of the three types of social capital is essential for societal cohesion.

Social capital and health

There is clear and robust evidence of a strong causal link between social capital and health, both physical and mental (Ikeda and Kawachi 2010). Higher levels of social capital have consistently been shown to be associated with a lower incidence of, and mortality due to, cardiovascular disease, as well as a better prognosis when survival is the endpoint being considered. There is also strong evidence of a protective effect of social capital on cognitive decline. However, the findings with cancer are mixed, with some studies showing a protective effect and others not. Overall, a dose–response relationship between all-cause mortality and the level of social capital has been observed, where the higher the level of social capital an individual has, the lower their risk of mortality.

A meta-analytic review of 148 studies with 308,849 participants not only showed a 50 per cent increased likelihood of survival among people with strong social capital but that social capital is as strong a risk factor for mortality as many of the other well-established health risk factors including smoking, physical exercise and obesity (Holt-Lunstad, Smith et al. 2010).

Social capital has also been shown to be associated with better mental health in children and adolescents, as well as adults (McPherson, Kerr et al. 2014); (Welsh and Berry 2009). Moreover, a recent systematic review (the highest level of evidence) of 39 studies showed that social capital significantly reduces the risk of developing a common mental health disorder such as anxiety or depression (Ehsan and De Silva 2015).

There is also direct evidence that social capital may produce differences in an individual's immune, inflammatory and neuroendocrine responses. For example, an experimental study in which 276 healthy adults were deliberately infected with the common cold virus found that those with more social ties were less likely to develop symptoms of the common cold (Cohen, Doyle et al. 1997). The authors concluded that having diverse and more social ties was associated with greater resistance to upper respiratory illnesses. Moreover, poor quality and low quantity of social ties has been shown to be associated with inflammatory biomarkers and impaired immune function (Kiecolt-Glaser, McGuire et al. 2002).

Source of data

This report is based on an analysis of the data collected in the 2014 Victorian Population Health Survey and is the third in a series of reports. The Victorian Population Health Survey is an important component of the population health surveillance capacity of Victoria's Department of Health and Human Services and is conducted annually to collect information on the health and wellbeing of Victorians, 18 years of age or older.

About this report

The report is structured to evaluate various indicators and dimensions of social capital by:

- age, sex and geographic distribution across Victoria
- socioeconomic status – using total annual household income as a measure of socioeconomic status
- mental and physical health – using psychological distress as a measure of mental health and self-reported health status as a measure of physical health.

We measured psychological distress using the Kessler 10 Psychological Distress scale, a tool that is used by general practitioners across Australia to assess people for affective disorders such as depression and anxiety (Kessler, Barker et al. 2003). Self-reported health status is an internationally validated and robust indicator of a person's overall health that has been shown to be strongly associated with both morbidity and mortality (Idler and Benyamini 1997); (Manor, Matthews et al. 2001).

Each section of each chapter is followed by a discussion section entitled 'Interpretation of the findings'. The findings are interpreted in the context of the current literature. We sought the highest level of evidence from the literature and where a systematic review was not available, report on the next highest level of evidence.

The final chapter is an overall discussion of all the social capital indicators and how they ranked against each other for the magnitude of their association with health outcomes. Given that the current public health model is primarily guided by the biomedical model, which almost solely focuses on the lifestyle risk factors, we also compared the social capital indicators with two lifestyle risk factors: smoking and obesity. We finish with a framework for understanding how social capital influences health.

2. Social and civic trust

Key messages

- **Low social and civic trust is strongly associated with poor mental and physical health.**
- **Social and civil trust declines with declining socioeconomic status.**
- **The literature shows that communities that are high in income inequality are low in social and civic trust, with income inequality preceding the decline in trust. This provides evidence for a direct causal link between income inequality and low levels of social and civic trust.**
- **Policies that seek to increase social and civic trust are likely to improve the health of the population.**

Introduction

'Social trust' refers to trust among casual acquaintances or strangers in everyday social interaction, while 'civic trust' refers to trust in public institutions and the respect that citizens are accorded in their relationships with those institutions.

Trust has been defined as a set of socially learnt and confirmed expectations that people have of each other, of the organisations and institutions in which they live, and of the natural and moral social orders that set the fundamental understandings for their lives (Kramer 1999). Conversely, distrust has been defined as a lack of confidence in 'the other' – a concern that 'the other' may act to cause harm.

Trust is essential within social systems to enable cooperative and altruistic behaviours that enhance collective wellbeing and the attainment of collective goals. Trust in our civic institutions, such as our healthcare system, and the people who run them is essential in order to maximise an individual's health and wellbeing (Kramer 1999). Trust is probably the main component of social capital, and social capital is a necessary condition for social integration, economic efficiency and democratic stability (Newton 2001).

Trust may be the one measure that comes closest to being a single measure of social capital. Whether individuals take up opportunities for social interaction and community engagement is likely to depend on the level and extent of both social and civic trust.

The Victorian Population Health Survey asks four questions related to this: two on social trust and two on civic trust. This chapter focuses on the extent to which these enabling conditions are present in Victoria's adult population.

Social trust

We measured social trust by asking survey respondents the following two questions: 'Do you agree that most people can be trusted?' and 'Do you feel safe walking alone down your street after dark?'

By age and sex

Table 2-1 shows that almost one in three women (29 per cent) feel unsafe walking down their street alone after dark compared with only one in 12 men (8 per cent). Feeling unsafe increases with age in both men and women and is significantly higher for Victorian adults 65 years of age or older.

Table 2-1: Proportion of Victorian adults, by whether or not they feel safe walking down their street alone after dark, age and sex

Age group (years)	No or not often			Sometimes			Yes, definitely			Not applicable		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
Males												
18–24	**5.8**	3.6	9.3	**13.9**	10.0	19.0	**79.5**	73.9	84.2	**		
25–34	**6.1**	4.0	9.3	**15.4**	11.1	20.9	**78.3**	72.5	83.1	**0.2***	0.1	0.4
35–44	**5.1**	3.9	6.8	**14.2**	11.7	17.1	**79.6**	76.4	82.4	**0.5***	0.2	1.2
45–54	**6.1**	4.8	7.7	**9.4**	7.7	11.4	**83.1**	80.6	85.3	**1.1**	0.7	1.6
55–64	**8.8**	7.4	10.5	**10.8**	9.2	12.7	**77.5**	75.3	79.7	**2.0**	1.5	2.8
65–74	**15.1**	13.3	17.0	**9.2**	7.9	10.8	**71.1**	68.8	73.3	**3.7**	3.0	4.5
75–84	**20.3**	17.9	23.0	**10.1**	8.3	12.1	**58.4**	55.3	61.5	**8.3**	6.8	10.2
85+	**32.8**	27.0	39.1	**4.7***	2.5	8.5	**44.9**	38.7	51.2	**16.1**	11.8	21.5
18+	**8.4**	**7.6**	**9.2**	**12.2**	**10.9**	**13.6**	**77.1**	**75.6**	**78.5**	**1.7**	**1.5**	**1.9**
Females												
18–24	**21.2**	16.6	26.6	**29.6**	23.9	36.0	**47.6**	41.1	54.2	**		
25–34	**26.9**	22.6	31.7	**28.3**	24.2	32.8	**43.6**	38.7	48.7	**1.0***	0.5	2.2
35–44	**23.4**	21.3	25.7	**23.7**	21.5	26.1	**51.2**	48.6	53.9	**1.1**	0.7	1.7
45–54	**25.4**	23.4	27.7	**20.3**	18.4	22.4	**50.9**	48.5	53.3	**2.4**	1.8	3.2
55–64	**28.8**	26.9	30.8	**15.7**	14.2	17.3	**49.6**	47.5	51.8	**3.6**	3.0	4.4
65–74	**39.5**	37.4	41.6	**11.7**	10.3	13.1	**38.1**	36.1	40.2	**8.1**	7.1	9.3
75–84	**45.6**	43.0	48.3	**6.8**	5.7	8.3	**25.9**	23.7	28.2	**17.8**	15.9	19.8
85+	**45.5**	40.8	50.4	**3.3***	2.0	5.4	**20.5**	16.7	24.8	**25.5**	21.7	29.7
18+	**28.6**	**27.4**	**29.9**	**20.7**	**19.5**	**22.0**	**45.4**	**43.9**	**46.8**	**4.0**	**3.6**	**4.3**
Persons												
18–24	**13.3**	10.7	16.5	**21.6**	18.0	25.7	**64.0**	59.5	68.2	**0.7***	0.3	1.7
25–34	**16.5**	13.9	19.5	**21.9**	18.8	25.3	**60.9**	57.1	64.7	**0.6***	0.3	1.2
35–44	**14.4**	13.0	15.8	**19.0**	17.3	20.9	**65.2**	63.1	67.3	**0.8**	0.6	1.2
45–54	**15.9**	14.6	17.3	**14.9**	13.6	16.4	**66.8**	64.9	68.5	**1.8**	1.4	2.2
55–64	**19.0**	17.8	20.3	**13.3**	12.2	14.5	**63.3**	61.7	64.9	**2.8**	2.4	3.4
65–74	**28.2**	26.8	29.7	**10.5**	9.6	11.6	**53.3**	51.7	54.9	**6.1**	5.4	6.8
75–84	**33.9**	32.0	35.8	**8.3**	7.3	9.5	**41.0**	39.0	43.0	**13.4**	12.1	14.8
85+	**40.1**	36.4	44.0	**3.9**	2.6	5.7	**30.8**	27.3	34.6	**21.5**	18.6	24.8
18+	**18.7**	**17.9**	**19.5**	**16.6**	**15.7**	**17.5**	**60.9**	**59.8**	**62.0**	**2.9**	**2.7**	**3.1**

Data are crude estimates (not age-standardised).
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

Table 2-2 shows that approximately 39 per cent of Victorian adults agree that most people can be trusted. This is significantly higher for men (42 per cent) than women (35 per cent) and in those 45 years of age or older.

In contrast, 16 per cent of Victorian adults do not believe most people can be trusted, higher for women (18 per cent) than men (15 per cent). Of particular note was the finding that almost one-quarter (23 per cent) of women 25–34 years of age do not believe that most people can be trusted compared with all Victorian women (18 per cent).

Table 2-2: Proportion of Victorian adults, by whether or not they agree that most people can be trusted, age and sex

Age group (years)	No or not often			Sometimes			Yes, definitely		
	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL
Males									
18–24	**14.0**	10.0	19.2	**49.3**	42.7	55.9	**35.9**	29.7	42.5
25–34	**19.5**	15.1	24.9	**49.5**	43.4	55.6	**30.3**	25.1	36.1
35–44	**11.5**	9.4	13.9	**44.2**	40.6	47.9	**43.2**	39.6	46.8
45–54	**14.1**	12.1	16.3	**40.4**	37.4	43.4	**44.0**	41.0	47.0
55–64	**11.9**	10.4	13.7	**35.5**	33.1	37.9	**51.0**	48.5	53.5
65–74	**14.1**	12.4	16.0	**34.1**	31.9	36.4	**49.8**	47.4	52.2
75–84	**16.6**	14.4	19.2	**29.7**	27.0	32.6	**50.5**	47.4	53.6
85+	**11.3**	8.2	15.4	**25.4**	20.3	31.4	**55.9**	49.6	62.1
18+	**14.5**	**13.2**	**15.8**	**41.9**	**40.1**	**43.7**	**42.2**	**40.5**	**43.9**
Females									
18–24	**21.4**	16.7	27.0	**56.8**	50.3	63.2	**20.7**	15.8	26.6
25–34	**22.9**	19.0	27.3	**53.3**	48.3	58.2	**23.4**	19.6	27.6
35–44	**16.0**	14.1	18.1	**47.6**	45.0	50.3	**35.8**	33.3	38.3
45–54	**14.7**	13.0	16.5	**42.7**	40.3	45.0	**41.6**	39.3	43.9
55–64	**13.6**	12.2	15.2	**41.5**	39.4	43.6	**43.1**	41.0	45.2
65–74	**16.4**	14.8	18.1	**39.5**	37.4	41.6	**41.1**	39.0	43.1
75–84	**17.2**	15.3	19.4	**34.4**	31.9	37.0	**43.1**	40.5	45.7
85+	**15.0**	11.7	19.0	**26.8**	22.8	31.3	**52.3**	47.4	57.1
18+	**17.5**	**16.4**	**18.7**	**46.0**	**44.5**	**47.4**	**35.0**	**33.7**	**36.3**
Persons									
18–24	**17.6**	14.4	21.3	**53.0**	48.3	57.6	**28.5**	24.4	32.9
25–34	**21.2**	18.2	24.6	**51.4**	47.4	55.3	**26.8**	23.6	30.4
35–44	**13.8**	12.3	15.3	**45.9**	43.7	48.2	**39.4**	37.3	41.6
45–54	**14.4**	13.1	15.8	**41.5**	39.7	43.5	**42.8**	40.9	44.7
55–64	**12.8**	11.7	13.9	**38.6**	37.0	40.2	**47.0**	45.3	48.6
65–74	**15.3**	14.2	16.6	**37.0**	35.5	38.6	**45.1**	43.5	46.7
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Data are crude estimates (not age-standardised).
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
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* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

By geographic location

Table 2-3 shows that adults who live in the metropolitan local government areas of Brimbank, Hume, Melton, Whittlesea, Wyndham, Cardinia and Greater Dandenong are more likely not to feel safe walking alone down their street after dark compared with all Victorian adults.

In contrast, adults who live in the local government areas of Boroondara, Nillumbik, Bayside, Mornington Peninsula and Port Phillip are more likely to feel safe walking alone down their street after dark compared with all Victorian adults.

Table 2-3: Proportion of adults, by whether or not they feel safe walking alone down their street after dark, region and local government area in metropolitan Victoria

	No or not often			Sometimes			Yes, definitely			Not applicable		
		95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	11.6	8.1	16.4	17.0	12.3	22.9	68.9	62.2	74.8	2.0	1.3	3.2
Knox (C)	18.3	13.8	23.8	14.7	9.8	21.4	63.5	56.1	70.3	2.5	1.7	3.8
Manningham (C)	17.8	13.2	23.6	11.2	7.2	16.9	68.5	61.4	74.8	2.1*	1.2	3.6
Maroondah (C)	20.3	14.1	28.3	20.5	13.3	30.3	56.5	47.4	65.3	1.6	1.0	2.6
Monash (C)	19.8	15.3	25.3	19.1	14.3	25.1	58.4	52.0	64.6	1.4	0.8	2.2
Whitehorse (C)	16.1	12.1	21.2	14.5	9.5	21.4	65.2	58.2	71.7	2.3	1.5	3.5
Yarra Ranges (S)	14.0	9.5	20.1	17.3	10.8	26.4	64.5	55.5	72.6	3.5*	2.0	6.1
Eastern Metropolitan Region	**16.7**	**14.8**	**18.7**	**16.3**	**14.1**	**18.7**	**63.9**	**61.1**	**66.6**	2.2	**1.8**	**2.6**
Banyule (C)	17.3	11.9	24.5	14.5	9.8	21.1	65.4	57.9	72.2	2.0	1.3	3.1
Brimbank (C)	32.4	27.4	37.8	21.1	16.1	27.1	41.2	35.1	47.5	3.7*	2.1	6.4
Darebin (C)	22.1	17.6	27.3	18.4	11.6	27.8	55.0	46.6	63.2	3.6*	2.2	6.0
Hobsons Bay (C)	16.7	12.6	21.8	16.4	10.8	24.1	61.9	54.0	69.1	3.7*	1.9	7.0
Hume (C)	27.1	22.5	32.2	16.6	12.4	21.7	53.4	47.2	59.4	2.4*	1.4	4.2
Maribyrnong (C)	25.0	19.4	31.4	21.6	16.2	28.3	49.0	41.8	56.3	2.7	1.8	4.2
Melbourne (C)	11.2	8.1	15.3	20.5	15.3	26.8	67.5	60.8	73.5	**		
Melton (S)	26.3	21.6	31.7	22.9	16.6	30.8	47.3	39.9	54.8	2.7*	1.5	4.6
Moonee Valley (C)	20.7	15.6	27.1	13.9	9.6	19.8	61.3	54.3	67.8	2.6	1.6	4.1
Moreland (C)	19.2	14.9	24.5	17.2	12.1	24.0	59.4	52.5	66.1	3.6	2.4	5.3
Nillumbik (S)	13.9	9.9	19.0	11.5	7.0	18.3	71.6	64.8	77.5	2.5*	1.5	4.1
Whittlesea (C)	25.6	21.2	30.5	18.7	14.5	23.7	49.8	43.9	55.7	3.7	2.4	5.7
Wyndham (C)	24.2	19.8	29.2	18.9	14.3	24.4	53.6	47.6	59.5	2.4*	1.2	4.4
Yarra (C)	16.8	10.1	26.7	16.0	11.5	21.8	65.3	55.2	74.1	1.6*	1.0	2.7
North & West Metropolitan Region	22.4	**21.0**	**23.9**	**18.2**	**16.6**	**20.0**	55.4	**53.5**	**57.4**	**2.9**	**2.5**	**3.3**
Bayside (C)	9.3	6.6	13.0	14.8	9.2	22.9	74.3	66.3	80.9	1.5	1.0	2.4
Cardinia (S)	25.0	19.8	31.0	18.1	13.0	24.6	50.5	44.0	56.9	5.3	3.4	8.3
Casey (C)	20.3	16.8	24.4	25.3	19.5	32.1	51.3	44.8	57.8	1.6*	0.8	3.0
Frankston (C)	24.1	19.4	29.5	14.3	10.3	19.5	58.2	51.9	64.3	2.7	1.7	4.3
Glen Eira (C)	13.9	9.4	19.9	15.5	11.3	21.0	68.7	61.9	74.9	1.0*	0.5	1.9
Greater Dandenong (C)	37.6	31.2	44.4	19.9	14.6	26.5	39.0	32.1	46.4	3.2*	1.8	5.6
Kingston (C)	17.0	12.3	23.0	17.2	12.2	23.6	63.3	55.8	70.3	1.5*	0.9	2.4
Mornington Peninsula (S)	12.8	8.8	18.3	10.0	6.6	14.9	73.4	66.7	79.1	2.8	1.8	4.3
Port Phillip (C)	13.9*	8.2	22.6	13.5	8.9	19.9	71.2	63.5	77.9	1.2*	0.7	2.2
Stonnington (C)	10.6	7.6	14.6	19.8	13.8	27.7	68.1	60.2	75.0	1.1*	0.6	2.0
Southern Metropolitan Region	**18.5**	**16.8**	**20.2**	**17.6**	**15.7**	**19.7**	**61.0**	**58.5**	**63.3**	2.1	**1.8**	**2.6**
Victoria	**18.7**	**17.9**	**19.5**	**16.6**	**15.7**	**17.6**	**60.8**	**59.6**	**61.9**	**2.9**	**2.7**	**3.1**

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

Table 2-4 shows that the adults who live in 20 of the 48 (42 per cent) rural local government areas in Victoria are *less* likely *not* to feel safe walking alone down their street after dark compared with all Victorian adults.

In contrast, there is not one rural local government area where the residents are *more* likely *not* to feel safe walking alone down their street after dark compared with all Victorian adults.

Table 2-4: Proportion of adults, by whether or not they feel safe walking alone down their street at night, region and local government area in rural Victoria

	No or not often			Sometimes			Yes, definitely			Not applicable		
		95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	**16.5**	11.0	24.0	**16.0***	9.3	26.1	**63.0**	54.6	70.6	**4.0**	2.8	5.7
Corangamite (S)	**13.8***	7.8	23.2	**7.3***	3.1	16.3	**68.5**	59.1	76.6	**9.5**	6.2	14.3
Glenelg (S)	**13.8**	10.1	18.5	**16.8**	11.0	24.8	**64.1**	56.3	71.3	**4.3**	2.8	6.6
Greater Geelong (C)	**20.0**	14.2	27.5	**16.5**	11.1	23.9	**59.5**	51.2	67.3	**3.0**	1.9	4.5
Moyne (S)	**7.6**	5.1	11.1	**10.1**	6.2	15.9	**75.9**	69.0	81.6	**6.3***	3.8	10.4
Queenscliffe (B)	**3.0**	2.1	4.4	**19.5***	8.4	39.2	**75.7**	57.4	87.8	**1.2***	0.7	2.1
Southern Grampians (S)	**14.2***	7.8	24.4	**12.9***	7.1	22.3	**67.8**	59.0	75.6	**4.5**	3.1	6.6
Surf Coast (S)	**6.4**	4.5	8.9	**10.7***	5.8	19.1	**78.0**	70.3	84.2	**4.0***	1.9	8.3
Warrnambool (C)	**17.2**	11.7	24.5	**13.9**	9.0	21.0	**65.1**	56.9	72.4	**3.0**	2.0	4.6
Barwon-South Western Region	**17.4**	**13.3**	**22.4**	**14.5**	**11.0**	**19.0**	**63.6**	**58.2**	**68.6**	**3.6**	**2.9**	**4.5**
Bass Coast (S)	**16.6***	11.0	24.4	**8.1**	5.0	13.0	**69.8**	61.1	77.3	**2.7**	1.8	4.1
Baw Baw (S)	**16.4**	11.5	22.8	**10.5**	6.4	16.6	**69.5**	61.6	76.4	**2.7**	1.9	3.9
East Gippsland (S)	**9.8**	7.3	12.9	**22.2**	14.7	32.0	**62.5**	52.8	71.3	**4.0**	2.6	6.1
Latrobe (C)	**20.9**	15.3	27.9	**17.3**	10.6	27.0	**57.6**	48.0	66.7	**3.2**	2.1	4.8
South Gippsland (S)	**11.5**	7.2	17.9	**10.1***	6.0	16.6	**69.8**	61.9	76.7	**7.3***	4.4	11.9
Wellington (S)	**18.3**	11.5	27.8	**12.9***	7.5	21.5	**62.9**	54.8	70.4	**5.0**	3.6	6.7
Gippsland Region	**16.3**	**13.6**	**19.4**	**13.8**	**10.8**	**17.6**	**64.7**	**60.4**	**68.7**	**3.9**	**3.3**	**4.6**
Ararat (RC)	**19.0**	12.4	28.0	**8.8**	5.4	14.0	**62.1**	52.6	70.7	**4.8**	3.3	7.1
Ballarat (C)	**22.0**	16.4	28.9	**20.1**	14.1	27.9	**53.0**	45.9	60.0	**4.4**	3.0	6.4
Golden Plains (S)	**9.7**	7.1	13.1	**8.9***	4.8	16.0	**71.6**	63.7	78.4	**8.9***	4.6	16.3
Hepburn (S)	**10.9***	6.3	18.2	**13.5***	6.8	25.0	**67.0**	55.4	76.9	**6.1**	4.1	8.9
Hindmarsh (S)	**6.7**	4.5	9.7	**15.6***	9.3	24.9	**68.1**	59.1	75.9	**9.0***	3.7	20.1
Horsham (RC)	**15.2**	10.0	22.3	**22.1**	13.3	34.4	**58.4**	46.3	69.5	**3.7**	2.3	5.8
Moorabool (S)	**16.2**	11.8	21.9	**9.3***	5.5	15.3	**70.0**	63.2	76.0	**3.3**	2.2	4.9
Northern Grampians (S)	**14.0**	8.8	21.5	**13.7***	7.9	22.7	**67.1**	58.0	75.1	**4.7**	3.3	6.8
Pyrenees (S)	**15.3**	10.7	21.4	**9.3***	5.1	16.5	**66.2**	58.0	73.6	**8.9**	6.3	12.4
West Wimmera (S)	**4.1**	2.6	6.5	**7.2***	3.6	13.8	**80.6**	74.3	85.7	**7.7**	5.3	11.1
Yarriambiack (S)	**11.6**	7.5	17.6	**8.3***	4.9	13.6	**74.6**	67.3	80.8	**4.8**	3.2	7.1
Grampians Region	**17.6**	**14.3**	**21.4**	**16.1**	**12.5**	**20.4**	**60.3**	**56.2**	**64.3**	**5.0**	**4.2**	**6.0**
Alpine (S)	**7.0**	4.8	10.1	**3.8***	2.2	6.2	**85.3**	81.4	88.5	**3.7**	2.4	5.4
Benalla (RC)	**16.3**	11.2	23.1	**12.8**	8.0	19.9	**66.5**	58.2	73.9	**3.5**	2.2	5.4
Greater Shepparton (C)	**23.3**	17.9	29.8	**12.3**	8.1	18.3	**59.4**	51.3	67.1	**4.2***	2.1	8.2
Indigo (S)	**5.9**	4.3	8.0	**4.7***	2.4	8.9	**81.3**	73.6	87.2	**7.5***	3.4	16.0
Mansfield (S)	**5.0**	3.1	7.9	**4.6***	2.4	8.5	**85.8**	81.2	89.4	**4.5**	3.0	6.6
Mitchell (S)	**14.0**	10.0	19.5	**15.3**	9.8	23.1	**66.2**	57.7	73.7	**3.4**	2.3	5.2
Moira (S)	**8.9**	6.6	11.9	**10.8***	6.1	18.3	**74.4**	67.0	80.5	**5.2**	3.2	8.3
Murrindindi (S)	**9.8***	5.9	15.8	**3.3***	1.6	6.7	**80.9**	74.0	86.3	**5.7***	3.2	10.0
Strathbogie (S)	**7.9***	4.4	13.8	**4.7**	2.8	7.5	**79.9**	72.6	85.6	**6.4***	3.5	11.4
Towong (S)	**7.2**	4.5	11.3	**3.7***	2.1	6.3	**80.4**	75.1	84.7	**8.4**	5.5	12.6
Wangaratta (RC)	**14.5**	8.9	22.6	**9.7***	5.6	16.3	**70.3**	60.9	78.2	**4.7***	2.6	8.3
Wodonga (RC)	**14.7**	10.8	19.8	**14.2**	9.4	20.9	**66.8**	59.6	73.3	**4.1**	2.8	5.9
Hume Region	**14.4**	**12.5**	**16.5**	**11.0**	**9.1**	**13.3**	**69.4**	**66.5**	**72.2**	**4.5**	**3.7**	5.5
Buloke (S)	**8.5***	4.8	14.7	**9.2***	4.0	19.8	**78.7**	68.9	86.1	**3.2**	2.1	5.0
Campaspe (S)	**20.2**	13.9	28.4	**18.4**	11.5	28.2	**54.7**	46.2	62.9	**4.2**	2.8	6.1
Central Goldfields (S)	**17.4**	11.1	26.2	**6.2**	4.0	9.6	**69.5**	60.8	77.1	**6.1**	4.0	9.2
Gannawarra (S)	**15.0***	7.0	29.3	**12.2**	7.6	19.2	**67.9**	54.6	78.7	**4.4**	2.8	7.0
Greater Bendigo (C)	**13.7**	10.1	18.2	**15.4**	10.0	22.8	**65.9**	58.3	72.8	**4.5**	3.1	6.3
Loddon (S)	**6.9***	4.2	11.3	**14.3***	5.8	31.4	**69.5**	56.1	80.3	**7.9**	6.1	10.1
Macedon Ranges (S)	**8.3**	5.7	11.9	**			**74.2**	60.8	84.1	**5.4**	3.4	8.4
Mildura (RC)	**20.9**	16.7	25.8	**15.2**	9.1	24.2	**59.9**	51.4	67.8	**3.5**	2.4	5.1
Mount Alexander (S)	**5.3**	3.7	7.6	**9.0***	4.8	16.2	**81.4**	74.8	86.7	**3.8**	2.5	5.8
Swan Hill (RC)	**24.2**	16.0	34.8	**10.3**	7.2	14.6	**60.2**	49.9	69.8	**4.3**	2.8	6.5
Loddon Mallee Region	**14.9**	**12.9**	**17.2**	**13.8**	**10.7**	**17.6**	**66.1**	**62.1**	**69.9**	**4.4**	**3.8**	**5.1**
Victoria	**18.7**	**17.9**	**19.5**	**16.6**	**15.7**	**17.6**	**60.8**	**59.6**	**61.9**	**2.9**	**2.7**	**3.1**

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

Table 2-5 shows that adults who live in the local government areas of Brimbank, Hume, Melton, Moreland, Whittlesea and Greater Dandenong are more likely *not* to agree that most people can be trusted compared with all Victorian adults. Overall, adults who live in North & West Metropolitan Region are more likely *not* to agree that most people can be trusted.

In contrast, adults who live in the local government areas of Boroondara, Whitehorse, Nillumbik, Bayside, Glen Eira and Stonnington are more likely to agree that most people can be trusted. Overall, adults who live in the Eastern Metropolitan Region are more likely to agree that most people can be trusted.

Table 2-5: Proportion of adults, by whether or not they agree that most people can be trusted, region and local government area in metropolitan Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	7.5*	4.3	12.7	41.9	34.7	49.4	50.4	43.3	57.5
Knox (C)	18.2	12.2	26.4	46.9	39.5	54.4	33.4	28.5	38.6
Manningham (C)	14.4	10.8	18.9	44.3	36.7	52.1	39.6	32.4	47.2
Maroondah (C)	19.5	12.9	28.4	44.4	36.1	53.1	35.0	30.0	40.4
Monash (C)	16.0	11.5	21.9	36.7	30.6	43.4	44.9	38.6	51.4
Whitehorse (C)	9.5	5.9	15.0	40.9	33.7	48.7	48.0	40.5	55.6
Yarra Ranges (S)	7.9	5.3	11.6	45.8	37.2	54.6	43.9	35.5	52.6
Eastern Metropolitan Region	**13.1**	**11.1**	**15.4**	**42.6**	**39.6**	**45.6**	**42.7**	**39.9**	**45.5**
Banyule (C)	11.0	7.1	16.7	45.4	37.8	53.1	41.5	34.9	48.4
Brimbank (C)	25.8	20.8	31.5	44.5	38.3	50.8	26.3	21.3	32.1
Darebin (C)	18.6	14.3	23.9	47.0	39.5	54.7	33.2	27.1	39.9
Hobsons Bay (C)	16.1	10.7	23.4	39.4	31.2	48.2	43.6	35.0	52.6
Hume (C)	26.1	20.8	32.3	44.0	37.8	50.4	28.0	22.8	33.9
Maribyrnong (C)	21.9	15.9	29.4	42.4	35.3	49.9	34.2	28.0	40.9
Melbourne (C)	7.9*	4.7	13.1	48.2	41.2	55.3	42.4	35.8	49.2
Melton (S)	27.9	21.7	34.9	45.1	38.1	52.3	25.9	21.2	31.1
Moonee Valley (C)	16.9	12.2	22.8	41.7	35.0	48.8	39.7	33.2	46.7
Moreland (C)	23.2	17.2	30.5	37.0	30.2	44.3	37.4	30.9	44.4
Nillumbik (S)	8.4	5.5	12.6	40.5	33.8	47.5	49.4	42.9	55.9
Whittlesea (C)	25.1	20.2	30.8	44.2	38.4	50.1	28.4	23.8	33.6
Wyndham (C)	19.5	15.4	24.4	46.5	40.5	52.7	31.9	26.4	38.0
Yarra (C)	10.0	6.7	14.7	46.9	35.9	58.1	42.3	31.7	53.6
North & West Metropolitan Region	**19.6**	**18.1**	**21.2**	**44.1**	**42.2**	**46.1**	**34.4**	**32.6**	**36.3**
Bayside (C)	8.7*	4.3	16.9	36.6	28.5	45.6	53.2	45.2	61.1
Cardinia (S)	18.6	14.0	24.3	46.4	39.8	53.1	34.2	28.4	40.5
Casey (C)	20.4	15.5	26.5	49.0	42.5	55.6	28.9	24.1	34.3
Frankston (C)	12.9	9.5	17.2	50.8	44.3	57.3	34.8	28.9	41.3
Glen Eira (C)	10.9	7.6	15.4	40.7	33.2	48.7	47.3	39.5	55.3
Greater Dandenong (C)	26.7	21.2	33.1	50.1	43.3	56.8	21.0	16.0	27.2
Kingston (C)	13.5	9.5	19.0	47.5	39.5	55.6	38.2	30.7	46.2
Mornington Peninsula (S)	11.3	7.0	17.8	41.0	33.8	48.7	46.5	38.9	54.3
Port Phillip (C)	16.4*	9.8	26.0	41.4	34.3	48.9	41.5	34.1	49.3
Stonnington (C)	8.0	5.3	11.8	40.9	33.1	49.3	50.0	41.8	58.1
Southern Metropolitan Region	**15.5**	**13.6**	**17.7**	**45.6**	**42.9**	**48.2**	**37.6**	**35.3**	**40.1**
Victoria	**16.1**	**15.2**	**17.0**	**44.2**	**43.0**	**45.4**	**38.2**	**37.1**	**39.3**

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 2-6 shows that of the 48 rural local government areas, adults who live in the local government areas of Central Goldfields and Greater Shepparton are more likely *not* to agree that most people can be trusted compared with all Victorian adults.

In contrast, adults who live in the local government areas of Queenscliffe, Surf Coast, Bass Coast, Hindmarsh, West Wimmera, Alpine, Indigo, Towong, Buloke and Mount Alexander are more likely to agree that most people can be trusted compared with all Victorian adults.

Table 2-6: Proportion of adults, by whether or not they agree that most people can be trusted, region and local government area in rural Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	**8.3***	4.2	15.4	**56.1**	47.9	64.0	**35.0**	28.9	41.7
Corangamite (S)	**9.4**	5.9	14.6	**48.2**	39.1	57.4	**40.9**	32.2	50.2
Glenelg (S)	**8.6***	6.0	12.2	**56.4**	49.3	63.2	**34.9**	28.4	41.9
Greater Geelong (C)	**12.5**	8.2	18.6	**48.4**	40.3	56.5	**38.0**	30.7	45.8
Moyne (S)	**7.0**	4.3	11.2	**47.7**	39.2	56.4	**44.3**	36.1	52.8
Queenscliffe (B)	**19.2***	8.1	39.1	**22.3**	13.9	33.9	**58.1**	44.2	70.9
Southern Grampians (S)	**9.8**	6.4	14.8	**51.8**	44.2	59.2	**37.2**	30.4	44.6
Surf Coast (S)	**8.1**	5.0	12.9	**41.3**	32.4	50.7	**49.7**	41.2	58.3
Warrnambool (C)	**10.5**	6.9	15.7	**44.6**	36.4	53.1	**44.4**	36.1	53.1
Barwon-South Western Region	**11.3**	**8.4**	**15.0**	**48.1**	**43.0**	**53.3**	**39.7**	**35.0**	**44.5**
Bass Coast (S)	**14.9***	7.5	27.5	**29.0**	22.6	36.3	**55.7**	44.6	66.3
Baw Baw (S)	**11.6**	7.0	18.6	**41.4**	32.4	51.0	**46.6**	35.9	57.7
East Gippsland (S)	**25.4**	16.4	37.0	**37.7**	28.4	48.1	**36.3**	28.5	44.8
Latrobe (C)	**14.3**	10.2	19.7	**45.3**	36.4	54.5	**38.2**	29.8	47.4
South Gippsland (S)	**13.4**	8.4	20.8	**46.3**	38.2	54.7	**37.5**	30.8	44.8
Wellington (S)	**16.4**	10.1	25.6	**43.7**	35.2	52.7	**38.5**	30.3	47.4
Gippsland Region	**15.4**	**12.5**	**19.0**	**41.6**	**37.2**	**46.1**	**41.6**	**37.3**	**46.1**
Ararat (RC)	**19.4**	12.4	29.0	**37.7**	29.6	46.7	**40.7**	32.9	49.1
Ballarat (C)	**11.9**	8.0	17.2	**47.4**	39.9	55.1	**37.4**	30.9	44.5
Golden Plains (S)	**14.5**	9.5	21.5	**48.8**	41.6	56.0	**35.6**	29.6	42.2
Hepburn (S)	**12.1***	6.6	21.2	**41.0**	32.3	50.4	**45.6**	36.1	55.4
Hindmarsh (S)	**5.6***	3.3	9.5	**41.6**	32.7	51.0	**51.9**	42.5	61.2
Horsham (RC)	**11.2**	7.1	17.4	**41.9**	30.7	54.2	**45.9**	35.0	57.3
Moorabool (S)	**15.9**	10.6	23.1	**48.1**	40.8	55.6	**34.2**	28.2	40.7
Northern Grampians (S)	**10.0***	5.8	16.6	**46.5**	37.7	55.5	**41.5**	33.3	50.3
Pyrenees (S)	**22.9**	15.9	31.9	**34.7**	26.3	44.2	**40.3**	33.2	48.0
West Wimmera (S)	**8.2**	5.6	11.8	**32.7**	26.1	40.1	**58.5**	51.1	65.5
Yarriambiack (S)	**15.5***	8.9	25.5	**46.1**	36.9	55.6	**36.5**	31.2	42.2
Grampians Region	**12.9**	**10.5**	**15.7**	**45.6**	**41.4**	**49.9**	**39.0**	**35.2**	**42.9**
Alpine (S)	**10.1**	6.3	15.8	**38.1**	27.5	50.1	**50.8**	40.5	61.1
Benalla (RC)	**14.1**	9.0	21.4	**41.8**	32.6	51.5	**43.5**	34.4	53.0
Greater Shepparton (C)	**24.2**	17.5	32.5	**43.0**	34.8	51.7	**31.7**	26.1	37.9
Indigo (S)	**14.9***	7.8	26.5	**33.7**	24.6	44.1	**50.7**	42.5	58.8
Mansfield (S)	**22.3***	11.4	38.9	**31.8**	20.6	45.6	**45.4**	38.6	52.4
Mitchell (S)	**17.3**	12.2	24.1	**50.7**	42.4	59.1	**30.2**	24.1	36.9
Moira (S)	**18.5**	12.1	27.2	**49.4**	41.1	57.7	**31.1**	25.7	37.0
Murrindindi (S)	**18.9**	12.1	28.3	**36.7**	28.3	46.1	**43.2**	35.6	51.1
Strathbogie (S)	**7.7**	5.2	11.1	**44.0**	35.3	52.9	**47.3**	38.6	56.2
Towong (S)	**15.3***	8.4	26.0	**33.0**	25.1	42.1	**51.3**	41.5	61.1
Wangaratta (RC)	**14.2***	6.3	28.9	**46.2**	34.8	58.0	**39.1**	33.9	44.7
Wodonga (RC)	**15.8**	9.8	24.3	**47.4**	39.6	55.4	**35.7**	29.4	42.6
Hume Region	**18.1**	**15.1**	**21.5**	**44.1**	**40.6**	**47.6**	**36.8**	**34.3**	**39.3**
Buloke (S)	**7.6***	3.8	14.6	**37.0**	28.1	46.9	**55.1**	45.2	64.6
Campaspe (S)	**21.6**	14.1	31.6	**38.7**	30.1	48.1	**38.2**	31.0	46.0
Central Goldfields (S)	**27.1**	18.8	37.5	**34.6**	27.6	42.3	**38.0**	29.4	47.5
Gannawarra (S)	**17.1***	8.3	31.9	**37.0**	29.1	45.8	**45.5**	33.3	58.2
Greater Bendigo (C)	**19.3**	12.9	28.0	**41.7**	33.8	50.1	**38.4**	33.3	43.7
Loddon (S)	**17.6***	8.6	32.6	**34.7**	25.2	45.7	**46.6**	37.8	55.6
Macedon Ranges (S)	**12.9**	9.2	18.0	**37.1**	25.8	50.1	**48.8**	36.8	60.9
Mildura (RC)	**16.0**	11.5	21.9	**48.6**	40.3	57.0	**34.0**	26.0	43.0
Mount Alexander (S)	**18.8***	10.4	31.7	**29.6**	23.1	36.9	**50.8**	39.5	62.0
Swan Hill (RC)	**14.0***	7.5	24.5	**41.7**	31.9	52.3	**42.3**	32.7	52.4
Loddon Mallee Region	**17.8**	**14.2**	**22.1**	**41.0**	**36.7**	**45.3**	**40.3**	**36.8**	**43.9**
Victoria	**16.1**	**15.2**	**17.0**	**44.2**	**43.0**	**45.4**	**38.2**	**37.1**	**39.3**

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Figure 2-1 and Figure 2-2 show the proportions of adults who definitely agree that most people can be trusted, by local government area.

Figure 2-1: Proportion of Victorian adults who definitely agree that most people can be trusted, by metropolitan local government area

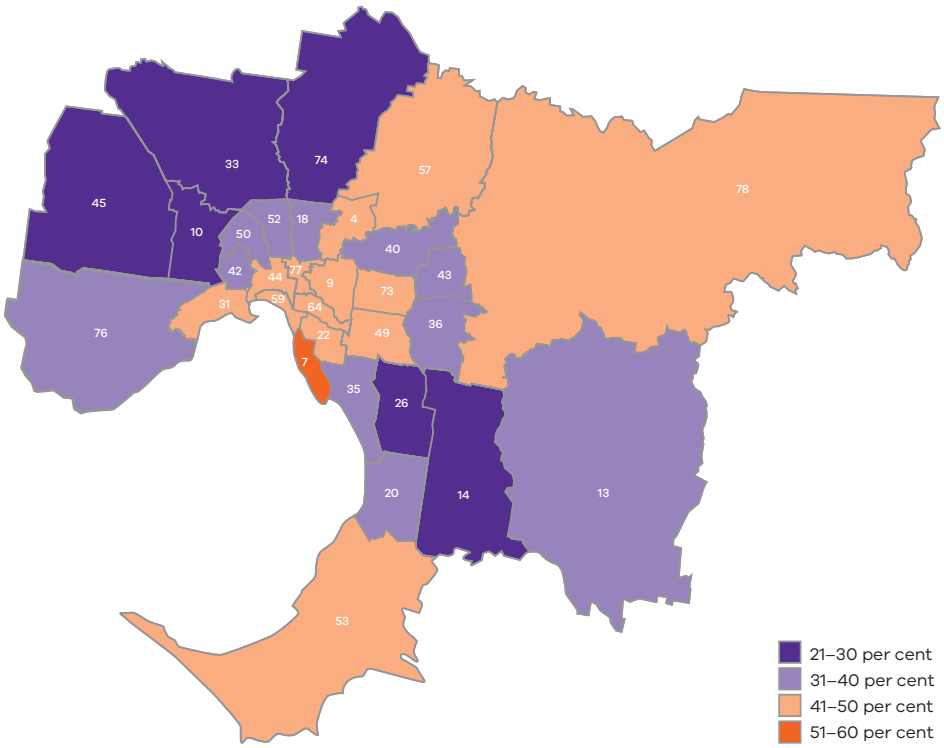
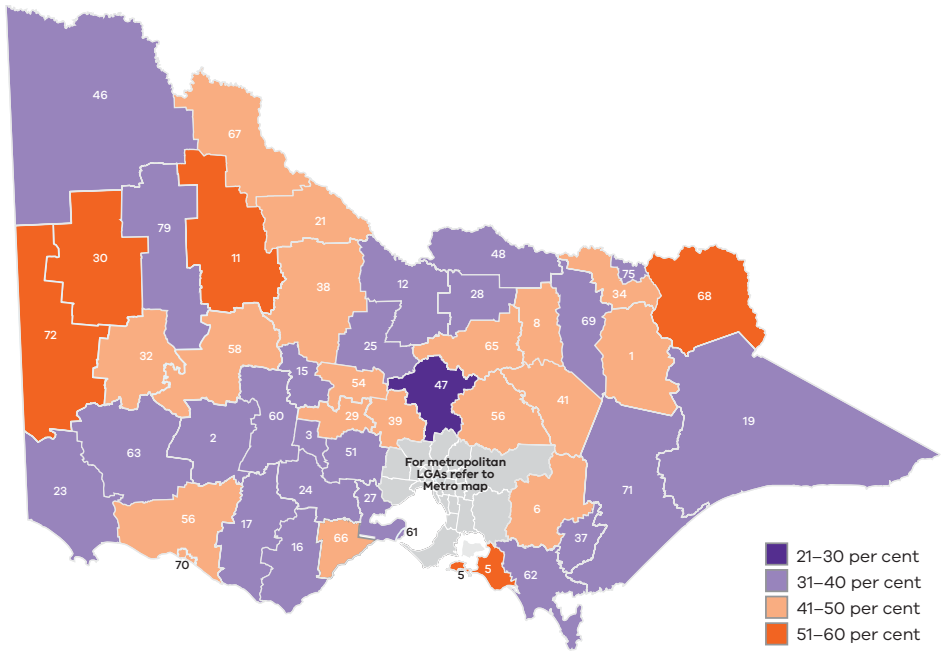


Figure 2-2: Proportion of Victorian adults who definitely agree that most people can be trusted, by rural local government area



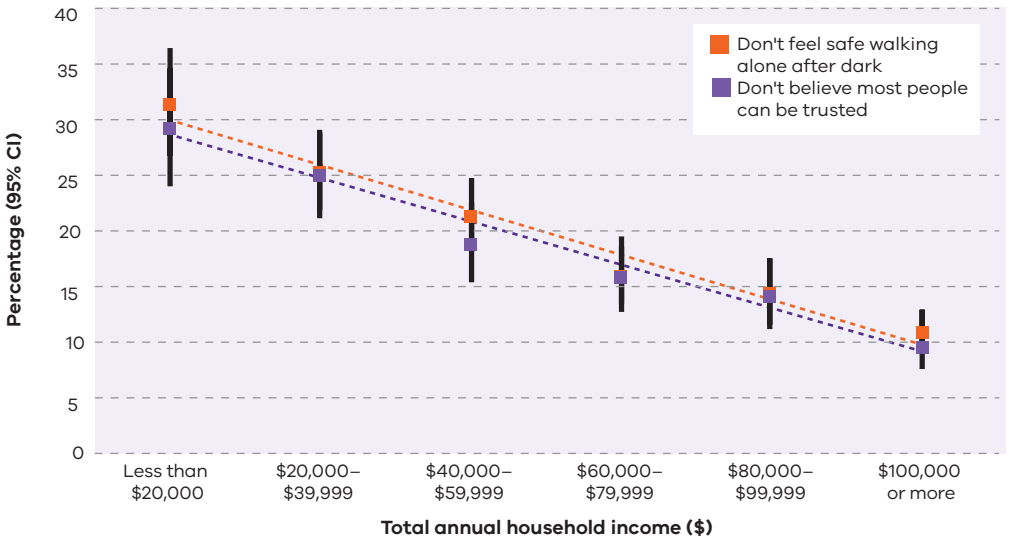
Does social trust vary by socioeconomic status?

Health and the determinants of health are not equally shared across the population. Socioeconomic status is a particularly important determinant of inequalities in health, observed for almost every known disease and condition where poorer outcomes are associated with lower socioeconomic status. Therefore, we conducted analyses to investigate whether social trust is associated with socioeconomic status.

We measured socioeconomic status using total annual household income. Total annual household income includes all sources of pre-tax income.

Figure 2-3 shows that as total annual household income increases, the proportion of Victorian adults who reported that they do not feel safe walking alone down their street after dark and/or do not believe that most people can be trusted decreases. Therefore, social trust is associated with socioeconomic status; the lower the socioeconomic status the lower the level of social trust.

Figure 2-3: Proportion of Victorian adults, by social trust and total annual household income



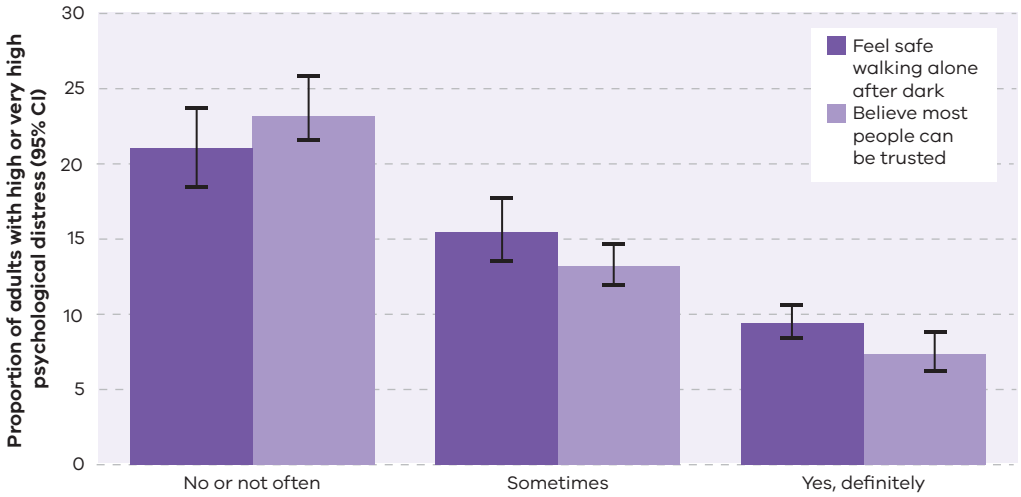
Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is social trust associated with health outcomes?

We investigated whether social trust is associated with mental and/or physical health. In this report, we use psychological distress as an indicator of mental ill-health. Psychological distress is a risk factor for affective disorders such as depression and anxiety and was measured in the 2014 Victorian Population Health Survey using the Kessler 10 Psychological Distress Scale.

Figure 2-4 shows that adults who do not feel safe walking alone down their street after dark and/or do not believe most people can be trusted are more likely to have high or very high psychological distress compared with their counterparts who did feel safe walking alone down their street after dark and/or do believe most people can be trusted. Therefore, social trust is associated with mental health; as social trust declines mental health declines. This is consistent for both indicators of social trust.

Figure 2-4: The relationship between social trust and mental health

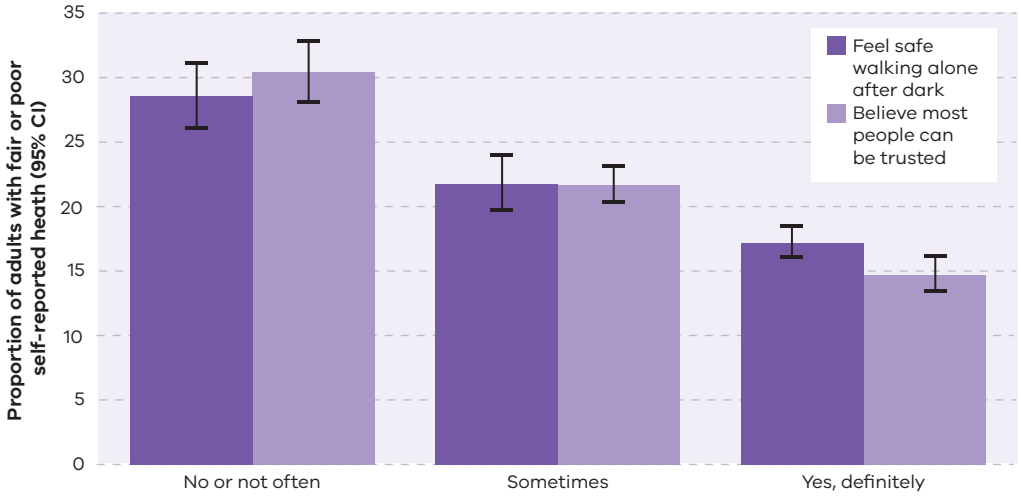


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

In this report we used fair or poor self-reported health status as an indicator of physical ill-health. Self-reported health status is a widely used reliable indicator of an individual's overall health status. Self-reported health status has been extensively validated in multiple studies across the world where it has been shown to be an excellent predictor of both morbidity (Manor, Matthews et al. 2001) and mortality (Burstrom and Fredlund 2001).

Figure 2-5 shows that adults who do *not* feel safe walking alone down their street after dark and/or do *not* believe most people can be trusted are more likely to rate their overall health status as only fair or poor compared with their counterparts who do feel safe walking alone down their street after dark and/or do believe most people can be trusted. Therefore, social trust is also associated with physical health; as social trust declines physical health declines. This is consistent for both indicators of social trust.

Figure 2-5: The relationship between social trust and physical health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of findings

- Almost one in three women (29 per cent) and one in 12 men (8 per cent) in Victoria feel unsafe walking down their street alone after dark.
- Approximately 39 per cent of Victorian adults believe that most people can be trusted; higher in men than women and higher in those 45 years of age or older.
- Almost one-quarter of women 25–34 years of age do not believe that most people can be trusted.
- Adults who live in the metropolitan local government areas of Brimbank, Hume, Melton, Whittlesea, Wyndham, Cardinia and Greater Dandenong are more likely not to feel safe walking alone down their street after dark than all Victorian adults.
- Adults who live in the metropolitan local government areas of Brimbank, Hume, Melton, Moreland, Whittlesea and Greater Dandenong, and rural local government areas of Central Goldfields and Greater Shepparton, are more likely not to agree that most people can be trusted than all Victorian adults.
- Social trust declines with declining total annual household income.
- As social trust declines so does mental health.
- As social trust declines so does physical health

Civic trust

We measured civic trust by asking survey respondents the following two questions: 'Do you feel valued by society?' and 'Do you feel there are opportunities to have a real say on issues that are important to you?'

By age and sex

Table 2-7 shows that just over half of Victorian adults (52 per cent) 'definitely' feel valued by society, a further 32 per cent 'sometimes' feel valued, 11 per cent do not feel valued and 5 per cent do not know or refused to say.

Men and women 75 years of age or older are more likely not to feel valued by society compared with all Victorian adults. In contrast, women 35–54 years of age are more likely to feel valued by society compared with all Victorian adults.

Table 2-7: Proportion of Victorian adults, by whether or not they feel valued by society, age and sex

Age group (years)	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	**12.0**	7.9	17.8	**34.8**	29.1	41.1	**50.1**	43.5	56.7
25–34	**11.3**	8.0	15.8	**33.3**	27.7	39.4	**51.4**	45.3	57.4
35–44	**9.3**	7.5	11.5	**31.5**	28.2	34.9	**56.0**	52.3	59.5
45–54	**9.2**	7.7	11.1	**31.3**	28.5	34.2	**54.3**	51.2	57.3
55–64	**11.9**	10.4	13.6	**28.5**	26.3	30.8	**53.0**	50.5	55.5
65–74	**12.3**	10.8	14.0	**25.2**	23.1	27.3	**54.6**	52.2	56.9
75–84	**16.5**	14.4	19.0	**24.0**	21.4	26.8	**48.8**	45.7	51.9
85+	**19.9**	15.2	25.6	**23.1**	18.1	29.0	**44.0**	37.9	50.4
18+	**11.3**	**10.2**	**12.5**	**30.6**	**29.0**	**32.3**	**52.9**	**51.1**	**54.6**
Females									
18–24	**11.4**	8.1	15.7	**46.9**	40.4	53.5	**40.8**	34.5	47.4
25–34	**11.5**	8.4	15.5	**41.0**	36.1	46.2	**45.4**	40.6	50.4
35–44	**8.8**	7.4	10.5	**32.5**	30.1	35.0	**55.4**	52.8	58.0
45–54	**9.1**	7.8	10.5	**31.6**	29.4	33.8	**54.7**	52.3	57.0
55–64	**11.6**	10.3	13.1	**29.3**	27.4	31.3	**53.4**	51.3	55.6
65–74	**11.4**	10.1	12.7	**26.4**	24.6	28.3	**53.8**	51.7	55.9
75–84	**13.7**	12.0	15.6	**22.2**	20.1	24.4	**51.3**	48.7	54.0
85+	**17.9**	14.5	21.9	**23.4**	19.6	27.8	**42.6**	37.9	47.4
18+	**10.8**	**9.9**	**11.8**	**33.7**	**32.3**	**35.2**	**50.7**	**49.2**	**52.1**
Persons									
18–24	**11.7**	8.9	15.2	**40.7**	36.3	45.3	**45.6**	41.0	50.3
25–34	**11.4**	9.0	14.3	**37.2**	33.4	41.1	**48.4**	44.5	52.3
35–44	**9.1**	7.9	10.4	**32.0**	29.9	34.1	**55.7**	53.5	57.9
45–54	**9.2**	8.1	10.3	**31.4**	29.7	33.3	**54.5**	52.6	56.4
55–64	**11.8**	10.7	12.9	**28.9**	27.5	30.4	**53.2**	51.6	54.8
65–74	**11.8**	10.8	12.8	**25.8**	24.5	27.2	**54.2**	52.6	55.7
75–84	**15.0**	13.6	16.5	**23.0**	21.3	24.8	**50.1**	48.1	52.2
85+	**18.7**	15.9	22.0	**23.3**	20.1	26.8	**43.2**	39.4	47.0
18+	**11.1**	**10.3**	**11.8**	**32.2**	**31.1**	**33.3**	**51.8**	**50.6**	**52.9**

Data are crude estimates (not age-standardised).
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 2-8 shows that 24 per cent of Victorian adults do not feel there are opportunities to have a real say on matters that are important to them, 38 per cent feel this is the case 'sometimes', 36 per cent 'definitely' feel there are opportunities, and 2 per cent do not know or refused to say. Adults 45–84 years of age are more likely to feel there are opportunities to have a real say on matters that are important to them compared with all Victorian adults.

Table 2-8: Proportion of Victorian adults, by whether or not they feel there are opportunities to have a real say on important issues, age and sex

Age group (years)	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	**26.7**	21.0	33.2	**37.4**	31.2	44.0	**34.7**	28.9	41.1
25–34	**26.2**	21.0	32.2	**43.3**	37.4	49.3	**27.5**	22.4	33.2
35–44	**25.9**	22.8	29.2	**38.5**	35.0	42.1	**34.2**	30.8	37.7
45–54	**25.9**	23.3	28.7	**34.4**	31.6	37.3	**37.7**	34.8	40.7
55–64	**26.5**	24.4	28.8	**33.1**	30.8	35.5	**37.9**	35.5	40.4
65–74	**27.0**	24.9	29.2	**28.9**	26.7	31.1	**40.4**	38.1	42.8
75–84	**29.0**	26.3	31.9	**25.5**	23.0	28.3	**39.2**	36.2	42.3
85+	**30.8**	25.4	36.9	**33.9**	28.0	40.5	**29.6**	24.2	35.5
18+	**26.5**	**24.9**	**28.2**	**36.0**	**34.3**	**37.7**	**35.0**	**33.3**	**36.6**
Females									
18–24	**27.4**	22.1	33.5	**45.1**	38.6	51.8	**26.4**	21.1	32.5
25–34	**25.2**	20.9	30.0	**43.0**	38.1	48.0	**29.7**	25.4	34.4
35–44	**19.3**	17.3	21.5	**44.1**	41.5	46.8	**35.3**	32.8	37.8
45–54	**19.0**	17.1	20.9	**39.0**	36.7	41.3	**39.4**	37.1	41.7
55–64	**22.0**	20.2	23.8	**35.6**	33.6	37.7	**40.0**	38.0	42.1
65–74	**21.4**	19.6	23.2	**30.9**	29.0	32.9	**43.1**	41.0	45.2
75–84	**22.5**	20.3	24.8	**26.2**	24.0	28.6	**43.1**	40.5	45.7
85+	**24.6**	20.7	29.0	**25.8**	21.8	30.2	**40.5**	35.9	45.3
18+	**22.3**	**21.0**	**23.6**	**38.9**	**37.5**	**40.4**	**36.0**	**34.7**	**37.4**
Persons									
18–24	**27.1**	23.1	31.4	**41.1**	36.6	45.8	**30.7**	26.7	35.0
25–34	**25.7**	22.3	29.5	**43.1**	39.3	47.0	**28.6**	25.2	32.2
35–44	**22.6**	20.7	24.5	**41.3**	39.2	43.6	**34.7**	32.6	36.9
45–54	**22.4**	20.8	24.1	**36.7**	34.9	38.6	**38.6**	36.7	40.4
55–64	**24.2**	22.8	25.6	**34.4**	32.9	36.0	**39.0**	37.4	40.6
65–74	**24.0**	22.6	25.4	**30.0**	28.5	31.4	**41.9**	40.3	43.4
75–84	**25.5**	23.8	27.4	**25.9**	24.2	27.7	**41.3**	39.3	43.3
85+	**27.2**	23.9	30.8	**29.2**	25.7	33.0	**35.9**	32.3	39.6
18+	**24.3**	**23.3**	**25.4**	**37.5**	**36.4**	**38.6**	**35.5**	**34.5**	**36.6**

Data are crude estimates (not age-standardised).
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported her...e.

By geographic location

Table 2-9 shows that adults who live in the metropolitan local government area of Stonnington are more likely to 'definitely' feel valued by society and those who live in the metropolitan local government area of Hobsons Bay are more likely to 'sometimes' feel valued by society compared with all Victorian adults.

Table 2-9: Proportion of adults, by whether or not they feel valued by society, region and local government area in metropolitan Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**8.8***	5.3	14.3	**30.9**	24.9	37.7	**56.0**	49.1	62.7
Knox (C)	**9.0**	6.0	13.2	**36.0**	28.4	44.5	**50.4**	42.2	58.5
Manningham (C)	**7.3**	4.7	11.1	**33.4**	26.3	41.3	**55.4**	47.4	63.1
Maroondah (C)	**8.9**	6.1	12.8	**30.5**	23.1	39.2	**51.9**	42.7	61.0
Monash (C)	**11.5**	7.7	17.1	**25.9**	20.5	32.3	**57.6**	51.0	63.9
Whitehorse (C)	**9.1***	5.3	15.1	**30.6**	24.6	37.4	**56.5**	49.3	63.6
Yarra Ranges (S)	**15.2***	9.0	24.6	**31.7**	23.9	40.7	**48.8**	39.9	57.9
Eastern Metropolitan Region	**10.1**	**8.4**	**12.2**	**30.9**	**28.2**	**33.7**	**54.2**	**51.2**	**57.1**
Banyule (C)	**14.1**	9.5	20.3	**27.2**	20.7	34.8	**54.4**	47.4	61.2
Brimbank (C)	**11.1**	8.4	14.5	**32.0**	26.4	38.2	**50.0**	43.7	56.2
Darebin (C)	**6.7**	4.8	9.2	**36.0**	28.6	44.1	**52.2**	44.5	59.8
Hobsons Bay (C)	**10.9**	6.9	16.6	**40.4**	33.8	47.4	**44.9**	38.5	51.4
Hume (C)	**13.6**	9.7	18.7	**28.4**	23.4	34.0	**53.3**	46.9	59.5
Maribyrnong (C)	**9.2***	5.4	15.2	**32.3**	25.7	39.6	**51.3**	44.1	58.4
Melbourne (C)	**8.6***	4.9	14.6	**31.6**	25.3	38.6	**56.9**	49.7	63.9
Melton (S)	**14.3**	10.7	18.9	**34.7**	28.2	41.8	**43.9**	37.3	50.7
Moonee Valley (C)	**9.2***	5.4	15.2	**34.9**	28.5	41.9	**52.2**	45.2	59.1
Moreland (C)	**15.5**	10.3	22.6	**26.9**	20.8	34.1	**51.3**	44.0	58.5
Nillumbik (S)	**6.1**	3.8	9.7	**30.5**	23.8	38.0	**58.3**	50.8	65.3
Whittlesea (C)	**9.4**	6.5	13.5	**33.4**	27.9	39.3	**49.2**	43.4	55.1
Wyndham (C)	**13.0**	9.5	17.6	**35.7**	29.9	41.8	**44.8**	38.8	51.0
Yarra (C)	**12.5***	7.4	20.5	**26.8**	19.4	35.7	**53.9**	43.4	64.0
North & West Metropolitan Region	**11.3**	**10.1**	**12.6**	**31.8**	**29.9**	**33.7**	**51.3**	**49.3**	**53.3**
Bayside (C)	**7.1***	4.0	12.4	**30.5**	22.4	40.0	**57.2**	48.0	66.0
Cardinia (S)	**14.2**	10.1	19.6	**36.9**	30.5	43.7	**41.8**	35.4	48.4
Casey (C)	**16.2**	11.9	21.8	**35.3**	29.4	41.7	**44.7**	38.2	51.3
Frankston (C)	**11.3**	7.9	15.8	**35.9**	29.8	42.4	**46.7**	40.1	53.4
Glen Eira (C)	**6.8**	4.3	10.6	**34.9**	27.8	42.9	**55.4**	47.7	62.9
Greater Dandenong (C)	**12.1**	8.3	17.2	**37.2**	30.5	44.5	**45.3**	38.3	52.4
Kingston (C)	**11.6**	7.3	18.1	**32.3**	24.8	40.9	**50.3**	42.0	58.5
Mornington Peninsula (S)	**8.4**	5.3	13.2	**32.0**	23.7	41.7	**55.1**	45.8	64.1
Port Phillip (C)	**9.2***	5.5	14.8	**36.2**	27.1	46.4	**49.4**	40.4	58.5
Stonnington (C)	**6.8**	4.2	10.7	**26.1**	19.6	33.9	**63.7**	55.9	70.9
Southern Metropolitan Region	**11.0**	**9.5**	**12.6**	**33.9**	**31.3**	**36.5**	**50.3**	**47.7**	**52.9**
Victoria	**11.1**	**10.4**	**11.9**	**32.5**	**31.3**	**33.7**	**51.4**	**50.2**	**52.6**

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 2-10 shows that adults who live in the rural local government areas of Surf Coast, Ararat, Hindmarsh, West Wimmera, Alpine and Buloke are more likely to feel valued by society compared with all Victorian adults.

Table 2-10: Proportion of adults, by whether or not they feel valued by society, region and local government area in rural Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	6.3	3.9	10.2	35.5	25.9	46.5	55.4	44.8	65.5
Corangamite (S)	9.6*	5.4	16.4	28.7	20.9	37.9	56.8	47.7	65.5
Glenelg (S)	13.7	9.3	19.6	30.2	23.3	38.2	51.4	43.5	59.2
Greater Geelong (C)	12.3*	7.2	20.4	37.4	29.7	45.8	44.9	37.5	52.5
Moyne (S)	9.1*	4.7	16.9	26.7	19.5	35.4	60.0	51.3	68.2
Queenscliffe (B)	5.6*	2.2	13.7	31.9	20.6	45.9	60.1	45.7	73.0
Southern Grampians (S)	9.2	5.6	14.8	33.2	23.8	44.2	55.3	45.2	65.0
Surf Coast (S)	7.2*	4.2	11.9	26.8	20.3	34.6	63.1	55.4	70.2
Warrnambool (C)	8.1	5.8	11.3	31.0	23.6	39.6	59.1	50.7	66.9
Barwon-South Western Region	**11.1**	**7.4**	**16.4**	**34.4**	**29.4**	**39.7**	**50.0**	**45.1**	**54.9**
Bass Coast (S)	6.6	4.5	9.6	27.5	18.1	39.5	62.8	51.4	73.0
Baw Baw (S)	14.6	8.9	23.0	30.9	24.4	38.2	49.2	39.7	58.8
East Gippsland (S)	6.9	4.7	10.0	32.7	23.2	43.9	57.5	46.7	67.6
Latrobe (C)	13.9*	7.8	23.5	36.2	27.3	46.0	43.4	35.7	51.5
South Gippsland (S)	10.0	6.5	15.1	33.5	25.9	42.1	51.5	43.1	59.8
Wellington (S)	10.5	7.2	15.1	37.9	29.4	47.1	47.8	39.2	56.6
Gippsland Region	**11.3**	**8.7**	**14.7**	**33.7**	**29.5**	**38.3**	**50.2**	**45.8**	**54.6**
Ararat (RC)	14.0	8.6	21.9	19.0	14.3	24.8	64.0	55.6	71.6
Ballarat (C)	9.6*	5.7	15.7	40.1	32.9	47.7	47.7	40.7	54.9
Golden Plains (S)	8.5	5.3	13.4	31.6	24.5	39.8	54.4	46.6	62.0
Hepburn (S)	13.3	8.0	21.3	29.4	21.5	38.8	54.3	43.7	64.5
Hindmarsh (S)	7.3	4.6	11.5	22.7	16.8	30.0	68.3	60.8	74.9
Horsham (RC)	8.0*	3.2	18.5	28.4	19.7	39.1	59.6	47.2	70.9
Moorabool (S)	12.4	8.3	18.2	36.8	29.7	44.5	46.1	38.9	53.3
Northern Grampians (S)	14.6	8.8	23.1	33.5	25.4	42.8	48.8	40.3	57.4
Pyrenees (S)	12.1*	7.3	19.5	23.0	16.5	31.1	57.7	49.1	65.8
West Wimmera (S)	7.1	5.1	9.8	22.4	17.6	28.2	68.0	62.1	73.4
Yarriambiack (S)	9.6	5.8	15.4	37.4	29.4	46.1	49.6	41.3	57.9
Grampians Region	**10.3**	**7.8**	**13.4**	**35.4**	**31.3**	**39.8**	**50.8**	**46.8**	**54.9**
Alpine (S)	8.7*	5.2	14.2	23.7	15.9	33.9	63.9	55.3	71.7
Benalla (RC)	12.3	7.5	19.4	35.6	27.0	45.2	46.9	37.6	56.4
Greater Shepparton (C)	16.5	10.2	25.7	30.9	23.4	39.5	48.1	40.4	55.9
Indigo (S)	16.9*	9.6	28.0	22.1	14.7	31.9	57.6	47.1	67.5
Mansfield (S)	11.4*	6.4	19.6	34.0	23.3	46.6	52.6	40.1	64.8
Mitchell (S)	14.7	9.6	21.8	36.3	28.4	45.1	45.4	36.4	54.6
Moira (S)	14.5	9.2	22.3	35.4	26.6	45.3	47.3	37.0	57.9
Murrindindi (S)	15.4	9.4	24.3	27.9	20.2	37.2	48.1	40.3	56.1
Strathbogie (S)	7.1	5.2	9.6	36.2	24.2	50.1	52.8	39.7	65.4
Towong (S)	11.5*	6.9	18.6	26.3	19.0	35.3	59.3	49.8	68.1
Wangaratta (RC)	11.9*	6.4	21.1	32.6	23.7	42.9	53.5	45.2	61.6
Wodonga (RC)	12.1	8.0	18.1	32.1	25.0	40.3	50.5	43.0	58.0
Hume Region	**14.0**	**11.3**	**17.2**	**32.2**	**28.7**	**35.8**	**49.8**	**46.4**	**53.3**
Buloke (S)	8.6*	4.7	15.2	24.7	18.0	33.0	62.4	54.1	70.1
Campaspe (S)	15.0	9.1	23.9	28.9	21.7	37.3	52.3	43.0	61.3
Central Goldfields (S)	15.7	9.8	24.1	31.5	23.1	41.3	49.7	40.1	59.4
Gannawarra (S)	8.3*	4.6	14.6	22.6	14.6	33.3	59.3	44.7	72.5
Greater Bendigo (C)	16.5	10.5	25.1	28.2	22.8	34.4	48.8	40.6	57.0
Loddon (S)	11.9*	6.1	21.8	33.6	23.7	45.2	49.6	39.7	59.6
Macedon Ranges (S)	9.2	6.0	13.8	40.9	32.7	49.6	46.4	38.0	54.9
Mildura (RC)	13.7	9.5	19.4	28.6	20.9	37.7	54.8	45.7	63.7
Mount Alexander (S)	11.2*	6.5	18.7	37.4	27.0	49.1	47.2	37.7	56.9
Swan Hill (RC)	9.3	6.1	13.9	44.4	34.9	54.3	43.2	34.1	52.8
Loddon Mallee Region	**13.9**	**10.7**	**17.9**	**30.8**	**27.0**	**34.9**	**50.5**	**46.2**	**54.8**
Victoria	**11.1**	**10.4**	**11.9**	**32.5**	**31.3**	**33.7**	**51.4**	**50.2**	**52.6**

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 2-11 shows that adults who live in the metropolitan local government areas of Boroondara and Stonnington are more likely to feel there are opportunities to have a real say on important matters and those who live in the local government areas of Hobsons Bay and Glen Eira are more likely to 'sometimes' feel there are opportunities compared with all Victorian adults.

In contrast, adults who live in the metropolitan local government area of Casey are more likely *not* to feel there are opportunities to have a real say on important matters compared with all Victorian adults.

Table 2-11: Proportion of adults, by whether or not they feel there are opportunities to have a real say on important matters, region and local government area in metropolitan Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**16.8**	11.9	23.1	**35.6**	29.0	42.9	**45.9**	38.7	53.3
Knox (C)	**24.2**	18.5	31.0	**41.8**	34.6	49.2	**32.0**	26.4	38.2
Manningham (C)	**21.7**	16.3	28.2	**46.3**	38.7	54.0	**30.2**	24.1	37.2
Maroondah (C)	**21.6**	15.0	30.1	**42.6**	33.8	51.8	**34.2**	26.9	42.3
Monash (C)	**20.9**	15.9	27.1	**40.3**	34.0	46.9	**34.1**	28.8	39.9
Whitehorse (C)	**24.1**	18.8	30.4	**31.1**	25.3	37.6	**40.2**	34.2	46.5
Yarra Ranges (S)	**26.0**	18.7	34.8	**39.7**	31.3	48.7	**33.6**	25.6	42.7
Eastern Metropolitan Region	**22.1**	**19.8**	**24.7**	**39.0**	**36.1**	**42.0**	**36.2**	**33.4**	**39.0**
Banyule (C)	**26.9**	20.2	34.9	**34.5**	27.5	42.2	**36.7**	30.4	43.6
Brimbank (C)	**25.9**	21.2	31.2	**35.6**	30.0	41.7	**32.6**	27.0	38.8
Darebin (C)	**22.5**	16.1	30.5	**37.6**	30.0	45.8	**35.7**	28.7	43.5
Hobsons Bay (C)	**19.4**	14.6	25.4	**47.8**	39.9	55.8	**29.6**	23.0	37.2
Hume (C)	**24.9**	19.6	31.1	**33.5**	27.7	39.7	**39.5**	33.5	45.8
Maribyrnong (C)	**20.4**	15.2	26.7	**39.7**	32.7	47.1	**34.7**	28.5	41.5
Melbourne (C)	**27.5**	21.5	34.6	**38.6**	32.3	45.4	**31.0**	25.2	37.3
Melton (S)	**27.2**	21.0	34.4	**39.1**	32.1	46.6	**29.8**	24.3	36.1
Moonee Valley (C)	**25.2**	19.5	31.9	**38.3**	31.7	45.5	**34.5**	28.6	41.0
Moreland (C)	**26.8**	20.5	34.1	**32.5**	25.9	39.9	**35.3**	28.9	42.2
Nillumbik (S)	**24.7**	19.2	31.2	**39.3**	32.9	46.2	**34.6**	28.6	41.0
Whittlesea (C)	**21.5**	17.0	27.0	**40.6**	34.9	46.6	**34.1**	28.9	39.8
Wyndham (C)	**28.0**	22.8	34.0	**33.3**	27.9	39.1	**34.5**	28.8	40.6
Yarra (C)	**25.3**	17.5	35.0	**41.0**	32.1	50.5	**30.5**	25.6	35.9
North & West Metropolitan Region	**25.0**	**23.2**	**26.8**	**37.3**	**35.3**	**39.2**	**34.1**	**32.3**	**36.0**
Bayside (C)	**28.4**	20.3	38.1	**33.6**	26.3	41.9	**33.6**	25.7	42.6
Cardinia (S)	**28.9**	22.9	35.6	**35.8**	29.8	42.3	**32.9**	27.2	39.3
Casey (C)	**33.6**	27.5	40.2	**33.9**	27.9	40.5	**30.6**	25.3	36.5
Frankston (C)	**30.1**	24.3	36.6	**38.1**	31.8	44.8	**28.5**	23.3	34.4
Glen Eira (C)	**22.6**	17.9	28.1	**45.7**	39.2	52.4	**29.2**	23.3	35.9
Greater Dandenong (C)	**23.1**	17.8	29.4	**34.9**	28.4	42.0	**37.5**	30.8	44.7
Kingston (C)	**20.5**	16.1	25.8	**40.5**	32.6	48.9	**34.3**	27.0	42.4
Mornington Peninsula (S)	**22.8**	16.4	30.7	**39.2**	30.5	48.6	**36.2**	28.6	44.6
Port Phillip (C)	**32.5**	23.1	43.5	**34.0**	25.9	43.2	**32.4**	25.3	40.4
Stonnington (C)	**20.0**	14.5	26.9	**32.9**	25.8	40.8	**45.7**	37.6	54.1
Southern Metropolitan Region	**26.5**	**24.2**	**29.1**	**37.1**	**34.5**	**39.7**	**33.7**	**31.4**	**36.0**
Victoria	**24.5**	**23.4**	**25.5**	**37.7**	**36.5**	**38.9**	**35.2**	**34.1**	**36.3**

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 2-12 shows that adults who live in the rural local government areas of Corangamite, Glenelg, Surf Coast, Hindmarsh, Pyrenees, West Wimmera, Mansfield, Moira, Buloke and Swan Hill are more likely to feel there are opportunities to have a real say on matters that are important to them and those who live in the local government area of Macedon Ranges are more likely to feel they 'sometimes' have opportunities, compared with all Victorian adults.

In contrast, adults who live in the rural local government area of Greater Shepparton are more likely *not* to feel there are opportunities to have a real say on matters that are important to them, compared with all Victorian adults.

Table 2-12: Proportion of adults, by whether or not they feel there are opportunities to have a real say on important matters, region and local government area in rural Victoria

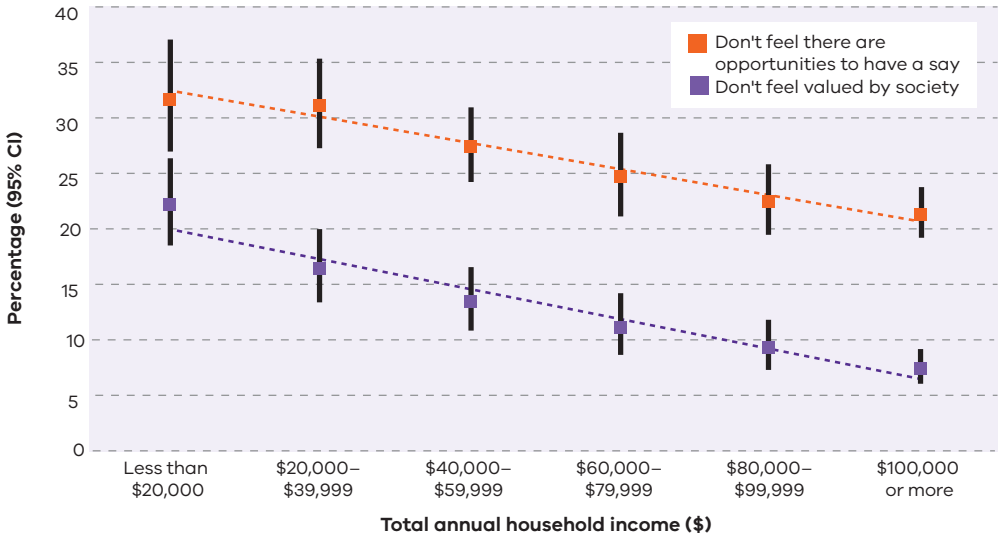
	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	**23.8**	16.4	33.3	**35.5**	25.7	46.8	**39.3**	31.1	48.1
Corangamite (S)	**17.0**	11.3	24.7	**33.7**	25.7	42.8	**46.8**	37.8	56.0
Glenelg (S)	**20.4**	14.6	27.8	**32.2**	26.0	39.0	**45.6**	38.0	53.5
Greater Geelong (C)	**23.6**	18.1	30.2	**40.2**	32.9	48.0	**35.0**	27.3	43.5
Moyne (S)	**18.8**	12.5	27.3	**38.4**	30.2	47.3	**42.3**	34.8	50.1
Queenscliffe (B)	**20.6***	10.1	37.4	**38.0**	27.2	50.1	**41.2**	30.8	52.5
Southern Grampians (S)	**26.6**	18.5	36.6	**37.2**	28.4	46.9	**35.0**	28.4	42.3
Surf Coast (S)	**22.6**	16.0	31.0	**30.0**	23.2	37.7	**46.7**	38.8	54.9
Warrnambool (C)	**19.1**	13.4	26.5	**37.9**	30.0	46.4	**42.3**	34.7	50.2
Barwon-South Western Region	**21.7**	**18.2**	**25.7**	**38.8**	**34.0**	**43.9**	**38.3**	**33.2**	**43.6**
Bass Coast (S)	**23.8**	14.7	36.0	**32.5**	25.9	39.8	**42.9**	32.3	54.2
Baw Baw (S)	**22.5**	15.2	31.9	**43.0**	33.7	52.9	**32.7**	27.0	38.9
East Gippsland (S)	**28.7**	20.1	39.2	**36.3**	27.4	46.4	**33.2**	25.0	42.6
Latrobe (C)	**28.0**	20.0	37.6	**37.8**	28.5	48.2	**28.6**	21.8	36.5
South Gippsland (S)	**31.1**	23.7	39.5	**38.8**	31.0	47.3	**29.1**	22.6	36.5
Wellington (S)	**27.0**	19.4	36.3	**40.2**	32.0	48.9	**31.0**	24.4	38.4
Gippsland Region	**26.7**	**22.9**	**30.9**	**38.4**	**34.0**	**43.1**	**32.0**	**28.6**	**35.7**
Ararat (RC)	**19.6**	13.7	27.2	**38.1**	29.4	47.6	**41.2**	33.1	49.8
Ballarat (C)	**27.3**	20.7	35.2	**33.0**	26.4	40.3	**38.7**	31.8	46.2
Golden Plains (S)	**26.0**	18.9	34.7	**34.1**	27.4	41.5	**37.6**	30.5	45.3
Hepburn (S)	**17.9**	12.8	24.6	**39.1**	30.5	48.3	**42.1**	34.2	50.4
Hindmarsh (S)	**18.6**	11.7	28.2	**31.9**	24.7	40.0	**49.1**	40.0	58.2
Horsham (RC)	**14.9***	8.6	24.6	**42.9**	33.7	52.7	**41.0**	30.2	52.9
Moorabool (S)	**27.0**	20.7	34.3	**36.5**	29.6	44.1	**34.4**	28.5	40.7
Northern Grampians (S)	**19.3**	12.9	27.8	**38.7**	30.0	48.2	**41.2**	33.1	49.8
Pyrenees (S)	**16.6**	11.7	23.0	**34.8**	25.4	45.5	**47.8**	37.9	57.9
West Wimmera (S)	**19.7**	14.3	26.4	**29.7**	22.4	38.2	**48.9**	39.8	58.0
Yarriambiack (S)	**30.6**	22.8	39.6	**33.2**	26.4	40.9	**35.1**	28.7	42.2
Grampians Region	**24.8**	**20.9**	**29.1**	**35.1**	**31.2**	**39.2**	**38.9**	**35.0**	**43.1**
Alpine (S)	**15.6**	10.3	22.8	**37.7**	26.1	50.8	**45.5**	34.9	56.5
Benalla (RC)	**27.9**	20.0	37.5	**36.9**	28.5	46.2	**33.2**	25.6	41.7
Greater Shepparton (C)	**34.2**	26.5	42.8	**31.6**	25.5	38.5	**32.9**	26.6	39.9
Indigo (S)	**15.8**	9.6	25.1	**40.9**	31.2	51.3	**42.7**	33.6	52.3
Mansfield (S)	**21.0**	14.6	29.3	**26.4**	18.1	36.8	**52.0**	42.6	61.2
Mitchell (S)	**22.7**	16.9	29.7	**36.3**	28.5	44.9	**38.0**	29.6	47.3
Moira (S)	**23.9**	17.5	31.8	**28.5**	21.6	36.6	**46.2**	36.7	55.9
Murrindindi (S)	**29.6**	21.2	39.6	**35.9**	27.4	45.3	**32.9**	26.5	40.0
Strathbogie (S)	**20.7**	13.4	30.7	**37.2**	25.8	50.2	**40.5**	28.8	53.4
Towong (S)	**21.2**	14.7	29.6	**40.9**	32.7	49.6	**37.7**	31.3	44.7
Wangaratta (RC)	**23.4**	14.8	34.9	**35.7**	28.6	43.5	**40.2**	29.1	52.3
Wodonga (RC)	**23.8**	17.8	31.2	**40.1**	32.9	47.7	**34.6**	28.5	41.3
Hume Region	**25.8**	**22.5**	**29.4**	**35.1**	**31.8**	**38.5**	**37.6**	**34.5**	**40.8**
Buloke (S)	**12.4***	7.3	20.2	**36.4**	27.7	46.1	**49.6**	40.0	59.1
Campaspe (S)	**21.3**	14.7	29.7	**44.6**	35.5	54.0	**30.6**	22.8	39.8
Central Goldfields (S)	**31.3**	22.6	41.5	**31.9**	25.2	39.5	**35.1**	27.0	44.2
Gannawarra (S)	**16.3**	11.5	22.7	**37.0**	26.3	49.1	**38.9**	32.9	45.3
Greater Bendigo (C)	**24.1**	17.3	32.6	**34.8**	28.0	42.2	**39.5**	31.7	47.8
Loddon (S)	**26.6**	18.4	36.9	**35.0**	24.9	46.7	**36.6**	26.7	47.7
Macedon Ranges (S)	**16.3**	12.2	21.4	**47.3**	40.4	54.2	**34.6**	28.4	41.4
Mildura (RC)	**23.3**	18.1	29.5	**42.3**	34.6	50.5	**32.9**	25.6	41.1
Mount Alexander (S)	**24.4***	14.0	39.0	**46.9**	34.0	60.3	**27.6**	22.5	33.3
Swan Hill (RC)	**14.5**	10.4	20.0	**37.6**	28.8	47.3	**46.7**	36.7	57.0
Loddon Mallee Region	**21.9**	**18.3**	**25.9**	**39.4**	**35.2**	**43.7**	**36.8**	**32.8**	**40.9**
Victoria	**24.5**	**23.4**	**25.5**	**37.7**	**36.5**	**38.9**	**35.2**	**34.1**	**36.3**

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Does civic trust vary by socioeconomic status?

Figure 2-6 shows that as total annual household income increases, the proportion of Victorian adults who do not feel valued by society and/or do not feel there are opportunities to have a real say on important matters decreases. Therefore civic trust is also associated with socioeconomic status; the lower the socioeconomic status the lower the level of civic trust.

Figure 2-6: Proportion of Victorian adults, by civic trust and total annual household income

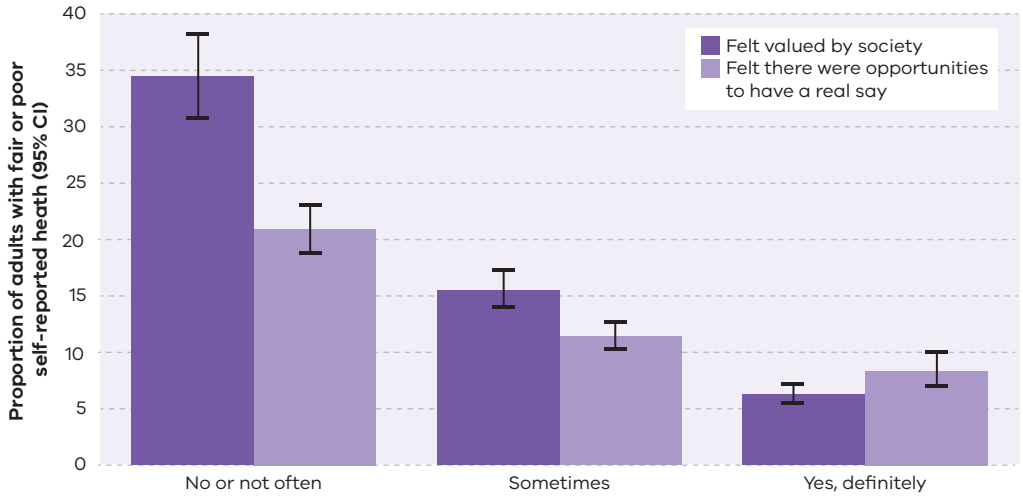


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is civic trust associated with health outcomes?

Figure 2-7 shows that adults who do not feel valued by society and/or do not feel there are opportunities to have a real say on matters that are important to them are significantly more likely to have high or very high psychological distress compared with their counterparts who do feel valued by society and/or do feel there are opportunities to have a real say on important matters. Therefore, civic trust is associated with mental health; as civic trust declines mental health declines. This is consistent for both indicators of civic trust.

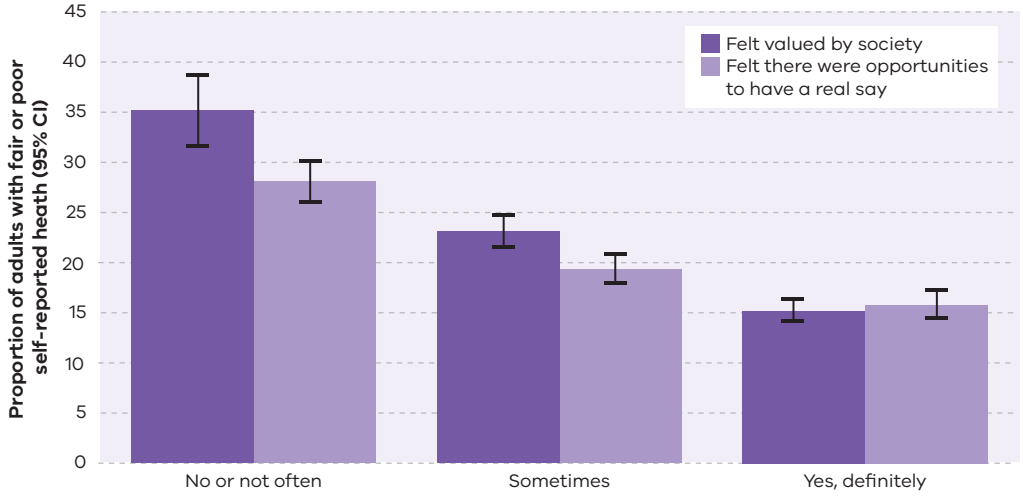
Figure 2-7: The relationship between civic trust and mental health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 2-8 shows that adults who do not feel valued by society and/or do not feel there are opportunities to have a real say on matters that are important to them are more likely to rate their overall health status as only fair or poor compared with their counterparts who do feel valued by society and/or do feel there are opportunities to have a real say on important matters. Therefore, civic trust is also associated with physical health; as civic trust declines physical health declines. This is consistent for both indicators of civic trust.

Figure 2-8: The relationship between civic trust and physical health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of findings

- Just over half of Victorian adults feel valued by society; higher among women aged 35–54 years.
- Approximately 11 per cent of Victorian adults do not feel valued by society; higher among men and women 75 years of age or older.
- Just over one-third of Victorian adults feel there are opportunities to have a real say about matters that are important to them; higher among people aged 45–84 years.
- Approximately 24 per cent of Victorian adults do not feel there are opportunities to have a real say about matters that are important to them; higher among men than women.
- Adults who live in the metropolitan local government area of Stonnington and rural local government areas of Surf Coast, Ararat, Hindmarsh, West Wimmera, Alpine and Buloke are more likely to feel valued by society.
- Adults who live in the metropolitan local government areas of Boroondara and Stonnington, and rural local government areas of Corangamite, Glenelg, Surf Coast, Hindmarsh, Pyrenees, West Wimmera, Mansfield, Moira, Buloke and Swan Hill are more likely to feel there are opportunities to have a real say on important matters.
- Civic trust declines with declining total annual household income.
- As civic trust declines, so does mental health.
- As civic trust declines, so does physical health.

Interpretation of the findings

How does Victoria compare nationally and internationally?

Our findings show that 39 per cent of Victorian adults agree that most people can be trusted – an indicator of overall social trust in Victoria. In 2014, the Australian Bureau of Statistics (ABS) asked a similar question in the General Social Survey and reported that 57 per cent of Victorians agreed that most people could be trusted (Australian Bureau of Statistics 2014). The ABS found that Victoria had the third highest level of social trust after the Australian Capital Territory (61 per cent) and Tasmania (58 per cent). The state with the lowest level of trust was South Australia (51 per cent). While our findings show that only 16 per cent of people do not agree that most people can be trusted, the 2014 General Social Survey reported that 25 per cent of Victorians disagreed or strongly disagreed that most people could be trusted.

A major difference between the two questions asked in each survey are the response options. The response options in the Victorian Population Health Survey consist of: 'Yes, definitely', 'Sometimes', 'Not often' and 'No'. In contrast, the response options in the General Social Survey are: 'Strongly agree or agree', 'Neither agree nor disagree' and 'Disagree or strongly disagree'. There is evidence that questions that use agree/disagree scales tend to be biased towards the 'agree' side (Harrison 2007). This may partly explain why the ABS-reported estimate of social trust in Victoria is higher than our estimate.

It is likely that other methodological differences also account for the difference in findings between the two surveys. For example, the Victorian Population Health Survey is conducted by telephone in adults 18 years of age or older, whereas the General Social Survey is conducted by face-to-face interview at the respondent's home and includes people 15 years of age or older.

Australia participates in the World Values Survey, which is conducted by a global network of social scientists studying changing values and their impact on social and political life across the world, based in Stockholm, Sweden. Between 2010 and 2014, survey respondents from 60 countries were asked 'Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?' Of the 60 countries that participated, Australia (51 per cent) ranked fifth highest for social trust after New Zealand (55 per cent), Sweden (60 per cent), China (60 per cent) and the Netherlands (66 per cent). The United States ranked 14th, with only 35 per cent of people agreeing that most people could be trusted. The Philippines and Trinidad and Tobago ranked equal last at 3 per cent. However, of the 60 countries that participated, only 17 were classified by the World Bank as high-income countries.

Why is civic and social trust associated with socioeconomic status?

Our findings that social and civic trust declines with declining socioeconomic status are consistent with the observation that people of low socioeconomic status tend to live in poorer neighbourhoods that often lack the services and resources of richer neighbourhoods, and have higher rates of crime. Such conditions are conducive to creating an atmosphere of fear and mistrust. We measure socioeconomic status using total annual household income – an individual-level characteristic.

We also use an area-based measure of socioeconomic status – the Index of Relative Socio-Economic Disadvantage (IRSD) (Australian Bureau of Statistics 2011). The ABS assigned an IRSD score to each local government area and we rank and split the scores into population quintiles. Local government areas that fall into the fifth quintile are the least socioeconomically disadvantaged, while those that fall into the first quintile are the most. Local government areas that are most socioeconomically disadvantaged have many households with low income and many people with no qualifications or low-skill occupations.

Overall, the local government areas that tend to have high levels of social and civic trust are highly socioeconomically advantaged, falling into the fifth quintile (data not shown). In contrast, the local government areas that tend to have low levels of social and civic trust are either in the first or second most socioeconomically disadvantaged quintiles, or one of the local government areas of middle socioeconomic status (quintile 3) located in the Melbourne growth corridor where the populations are growing and changing rapidly.

There are exceptions, however. Three local government areas in Victoria stand out in having very high levels of social and civic trust, based on statistically significant positive responses to all four indicators. These are the rural local government areas of Surf Coast, West Wimmera and Buloke. While Surf Coast is a local government area of high socioeconomic status (quintile 5), West Wimmera is of low socioeconomic status (quintile 2) and Buloke of very low socioeconomic status (quintile 1). Within the local government areas of West Wimmera and Buloke, however, the relationship between individual-level socioeconomic status (household income) and social and civic trust is still present; the level of social and civic trust declines with declining household income.

Our findings are consistent with the literature where neighbourhood differences in social trust are also observed in the US (Subramanian, Lochner et al. 2003). Using multilevel modelling to distinguish between the compositional (individual-level) and contextual (area-level) attributes of different neighbourhoods, Subramanian and co-authors show that after accounting for individual differences in demography (age, sex, race and marital status) and socioeconomic status (income and education) there

remains significant differences in social trust levels between different neighbourhoods in the American city of Chicago. This means that the variation in social trust between communities cannot be fully explained by differences in the individuals who make up those communities.

So what does explain the variation across communities in the level of social and civic trust?

It is generally accepted that higher *absolute* income is associated with better health and social outcomes and higher levels of social trust. While economic growth has raised living standards across the world, increasing health and wellbeing, the evidence shows that as countries grow richer the relationship between economic growth and health and wellbeing slows and then disappears (Wilkinson and Pickett 2009). Thus in high-income countries such as Australia, increasing the economic pie no longer brings significant improvements in health and wellbeing. In fact, high-income countries are experiencing long-term increases in the rates of anxiety and depression, obesity-related chronic diseases and a range of social problems such as violence and drug and alcohol addiction. For example, the lifetime prevalence of depression and anxiety in Victoria increased from 15 per cent in 2003 to 24 per cent in 2014 (DHHS 2014).

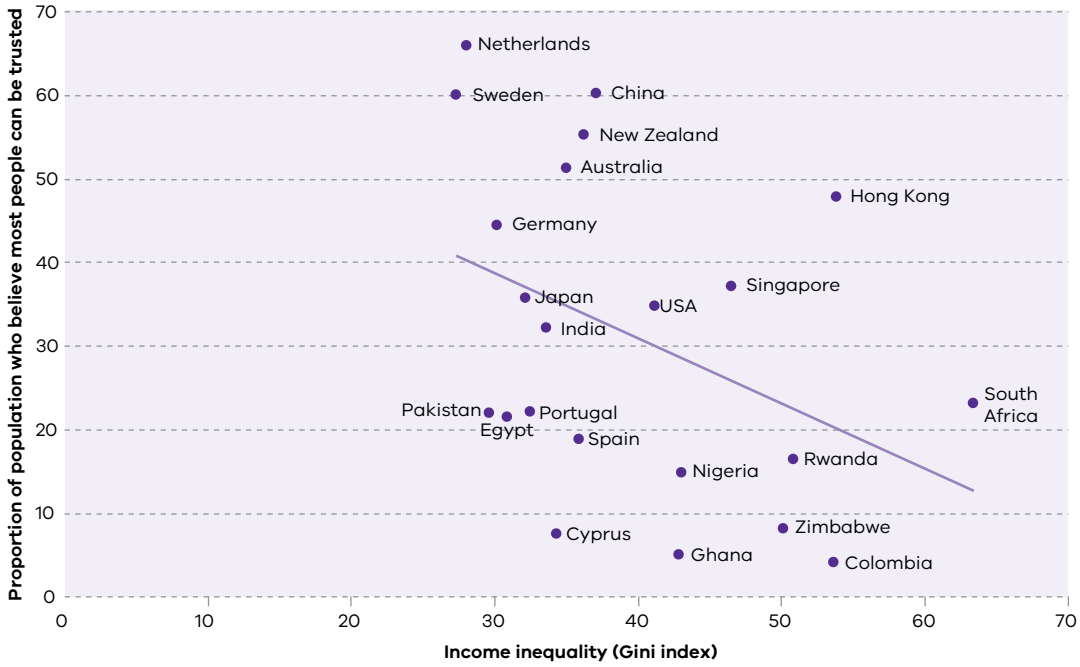
There are also substantial differences across the high-income countries in health and wellbeing outcomes. The explanation for this lies in the *relative* distribution of income within populations. Income inequality, which is the unequal distribution of household or individual income across a population, explains much of the variation between high-income countries (Wilkinson and Pickett 2009). High-income countries that also have high income inequality have poorer health and wellbeing than high-income countries with low income inequality (Wilkinson and Pickett 2009). Moreover, poorer health and wellbeing is associated with a plethora of social problems such as higher crime rates and poorer educational performance.

As income inequality increases, social and civic trust decreases. For example, countries with low income inequality such as the Netherlands have high levels of social trust; approximately 66 per cent of Dutch people believe that most people can be trusted. In contrast, countries with high income inequality, such as the United States, have low levels of social trust; only 35 per cent of Americans believe that most people can be trusted (World Values Survey 2010-2014). No matter how income inequality is measured, the negative association between income inequality and lower levels of social and civic trust, poorer health and poorer social outcomes is a consistent and robust finding (Wilkinson and Pickett 2009).

Income inequality causes declines in civic and social trust. The proportion of Americans who believe that most people can be trusted declined from 58 per cent in 1960 to 35 per cent in 2014 as successive governments of the United States dismantled the social safety net and abandoned redistributive policies, resulting in a rapid rise in income inequality (Rothstein and Uslaner 2005).

The sloping trend line in Figure 2-9 shows that as income inequality increases, the proportion of the citizens who agree that most people can be trusted declines, indicating that as income inequality increases the social trust that is necessary for social cohesion declines.

Figure 2-9: Social trust, by income inequality and country, between 2010 and 2014



The Gini index is based on the Gini coefficient which is a statistical dispersion measurement calculated to measure income distribtion across a population. The higher the score the greater the inequality.

The individual Gini indexes were sourced from the World bank website: http://data.worldbank.org/indicator/SI.POV.GINI/.

The social trust data was sourced from the World Values Survey website: http://www.worldvaluessurvey.org/WVSOnline.jsp

How does income inequality cause poorer health and wellbeing?

Humans are social creatures and where we stand in relation to each other has significant impacts on how we perceive ourselves and others. Societies where the gap between the rich and poor is large tend to be divided and hostility between those at the top and those at the bottom endemic. In 1999, Kawachi and colleagues identified three pathways through which income inequality impacts negatively on health and wellbeing (Subramanian, Kawachi et al. 2001):

1. Income inequality erodes social and civic trust, which leads to conflict and destroys social cohesion while increasing social exclusion.
2. Income inequality reduces access to life opportunities and resources needed to maximise health and wellbeing.
3. Income inequality acts directly via the psychosocial pathways to cause psychological distress, hopelessness and a loss of agency and respect, impacting directly and indirectly on health and wellbeing via unhealthy behaviours.

How does social and civic trust impact on health and wellbeing?

Our finding that low levels of trust are associated with mental and physical ill-health are consistent with the literature. In an American study of 40 communities, higher levels of social trust were associated with a lower probability of reporting poor health, even after controlling for individual-level factors that could account for poor health status such as age, smoking, obesity and socioeconomic status (Subramanian, Kim et al. 2002). Lower levels of trust have also been shown to be associated with higher overall death rates as well as death due to heart disease, cancer and violent death including homicide;

mortality decreased by 9 per cent with a one standard deviation increase in social trust (Subramanian, Kim et al. 2002).

Three mechanisms have been identified by which trust impacts on health (Subramanian, Kim et al. 2002):

1. When trust levels are high, there is a quicker and more efficient diffusion and uptake of important health-promoting innovations because people are connected with each other.
2. Trust is necessary for collective action such as lobbying for quality healthcare. Moreover, trust in our civic institutions, such as our healthcare system, and the people who run them, are essential, otherwise individuals are reluctant to seek and delay seeking medical attention when needed. Delays in seeking medical attention often results in poorer health outcomes.
3. Trust enables people to be more effective in exercising informal social control over each other's children, such as discouraging unhealthy behaviours like smoking.

What are the conclusions?

The evidence shows that income inequality causes poorer health and wellbeing and that this is partially mediated through lowering civic and social trust levels.

The World Bank concluded that the reduction of income inequality was an important policy option for governments seeking to increase social trust (Knack and Zak 2002). However, there is very little in the literature about specific policies that seek to increase social and civic trust, other than research where the following observations were made (Algan and Cahuc 2013):

- Trust in institutions requires the public perception that institutions are free of corruption and there is strong rule of law and good-quality governance.
- Distrust creates public demand for regulation, even when people believe their government is corrupt and ineffective, because they prefer state control to the unchallenged and uninhibited activities of entrepreneurs. However, when a society has high levels of trust lower regulation is preferred.
- Based on the premise that social capital is acquired through the practice of cooperation and that social skills are acquired in childhood, the evidence shows a clear relationship between educational teaching style and social trust. Horizontal teaching is where children work in groups to complete projects and ask the teacher questions. Vertical teaching is where the teacher lectures while the students take notes and the teacher asks questions. Countries that incorporate horizontal teaching into their educational curricula have higher levels of trust than countries that rely solely on vertical teaching.

For further reading we suggest:

Wilkinson R, Pickett K 2009, *The spirit level. Why greater equality makes societies stronger*, Bloomsbury Press, New York.

3. Social and support networks

Key messages

- **Low perceived social support is strongly associated with poor mental and physical health.**
- **The literature shows that perceived social support is more strongly linked to mental and physical health than received social support, and that there is a direct causal link between low or absent perceived social support and ill-health.**
- **Perceived social support declines with declining socioeconomic status.**
- **Social support provided by friends appears to be more protective of health than social support provided by family and/or neighbours.**
- **Vulnerable populations who have lower levels of social support include older Victorians (65 years of age or older) and women in the late child-rearing years (35–44 years).**
- **Policies that seek to increase perceived social support in vulnerable populations are likely to improve the health of the population.**

Introduction

Social networks are 'the web of social relationships that surround an individual' (Berkman and Glass 2000). Social networks and social support are two distinct constructs; social networks refers to the *structure* of social ties while social support refers to the *function* of social ties (Ikeda and Kawachi 2010).

In 2014 survey respondents were asked three questions about social support: (1) 'Can you get help from family members when you need it?' (2) 'Can you get help from friends when you need it?' and (3) 'Can you get help from neighbours when you need it?' This chapter reports on the findings.

Social support

By age and sex

Table 3-1 shows that 82 per cent of Victorian adults are able to get help from family if needed, 11 per cent are 'sometimes' able to get help, and 7 per cent are unable or rarely able to get help. There is no difference between men and women.

Young adults 18–24 years of age are more likely to be able to get help from family compared with all adults, while those 35–54 years of age are less likely.

Women and adults 35–44 years of age are more likely to be unable to get help from family than men or all other age groups, respectively. Almost 12 per cent of women 35–44 years of age reported that they are unable or rarely able to get help from family when needed.

Table 3-1: Proportion of Victorian adults, by ability to get help from family, age and sex

Age group (years)	No or not often			Sometimes			Yes, definitely		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
Males									
18–24	2.3*	1.2	4.3	9.6	6.2	14.6	88.0	83.0	91.7
25–34	3.4*	1.9	5.8	10.2	7.2	14.3	86.2	81.8	89.6
35–44	7.2	5.6	9.2	15.5	13.0	18.3	77.2	74.0	80.1
45–54	7.8	6.4	9.6	14.4	12.5	16.7	77.4	74.8	79.8
55–64	6.0	5.0	7.1	10.5	9.1	12.0	82.9	81.0	84.6
65–74	7.2	6.1	8.4	7.9	6.8	9.3	83.7	81.9	85.3
75–84	6.9	5.5	8.6	8.7	7.2	10.6	83.5	81.2	85.6
85+	7.7	5.3	11.1	9.0	6.1	13.1	81.7	76.8	85.7
18+	**5.7**	**5.1**	**6.4**	**11.5**	**10.5**	**12.7**	**82.3**	**81.1**	**83.6**
Females									
18–24	2.2*	1.1	4.5	12.0	8.4	16.9	85.8	80.7	89.7
25–34	7.7	5.4	10.8	10.8	8.3	13.9	81.4	77.4	84.8
35–44	11.8	10.2	13.7	14.5	12.7	16.4	73.5	71.1	75.8
45–54	8.2	7.0	9.5	12.0	10.6	13.6	79.5	77.6	81.3
55–64	6.6	5.7	7.6	10.7	9.4	12.1	82.4	80.7	83.9
65–74	7.6	6.5	8.8	9.0	7.9	10.2	82.2	80.5	83.7
75–84	7.1	5.9	8.5	8.1	6.7	9.7	83.7	81.6	85.6
85+	7.5	4.9	11.1	6.2	4.2	9.1	85.6	81.5	89.0
18+	**7.6**	**7.0**	**8.4**	**11.3**	**10.5**	**12.2**	**80.6**	**79.5**	**81.7**
Persons									
18–24	2.3	1.4	3.6	10.8	8.2	14.1	86.9	83.5	89.7
25–34	5.5	4.1	7.4	10.5	8.5	12.9	83.8	80.9	86.3
35–44	9.5	8.3	10.8	15.0	13.4	16.6	75.3	73.4	77.2
45–54	8.0	7.0	9.1	13.2	12.0	14.6	78.5	76.9	80.0
55–64	6.3	5.6	7.0	10.6	9.6	11.6	82.6	81.4	83.8
65–74	7.4	6.6	8.2	8.5	7.7	9.4	82.9	81.7	84.0
75–84	7.0	6.1	8.1	8.4	7.3	9.6	83.6	82.1	85.1
85+	7.6	5.7	10.0	7.4	5.6	9.7	83.9	80.9	86.6
18+	**6.7**	**6.2**	**7.2**	**11.4**	**10.7**	**12.1**	**81.5**	**80.6**	**82.3**

Data are crude estimates (not age-standardised).
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 3-2 shows that 80 per cent of Victorian adults are able to get help from friends when needed, 15 per cent are 'sometimes' able to get help, and 5 per cent are unable or rarely able to get help. The ability to get help from friends is higher among women than men and in those 18–24 years of age compared with all age groups. In contrast, men 35–44 years of age and adults 75 years of age or older are less likely to be able to get help from friends compared with their female or younger counterparts, respectively.

The inability to get help from friends increases with age and is higher among adults 65 years of age or older, rising to more than 13 per cent for those 85 years of age or older.

Table 3-2: Proportion of Victorian adults, by ability to get help from friends, age and sex

Age group (years)	No or not often			Sometimes			Yes, definitely		
	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL
Males									
18–24	**	0.7	7.7	**14.8**	10.6	20.3	**82.4**	76.3	87.2
25–34	**3.0***	1.7	5.1	**16.8**	12.6	22.0	**80.0**	74.7	84.4
35–44	**5.3**	3.9	7.1	**21.2**	18.4	24.3	**73.0**	69.7	76.1
45–54	**4.3**	3.3	5.6	**18.4**	16.0	21.0	**76.7**	73.9	79.3
55–64	**6.4**	5.3	7.8	**13.7**	12.1	15.5	**78.9**	76.8	80.8
65–74	**6.0**	4.9	7.3	**10.9**	9.5	12.5	**81.6**	79.7	83.4
75–84	**9.0**	7.3	11.0	**13.3**	11.3	15.5	**74.9**	72.1	77.5
85+	**13.2**	9.4	18.1	**13.3**	9.6	18.2	**70.0**	63.9	75.5
18+	**4.8**	**4.2**	**5.5**	**16.3**	**15.0**	**17.7**	**78.1**	**76.6**	**79.5**
Females									
18–24	**3.1***	1.6	5.8	**9.2**	6.2	13.5	**87.7**	83.1	91.2
25–34	**4.0**	2.7	6.1	**15.7**	12.6	19.4	**79.7**	75.7	83.2
35–44	**4.8**	3.7	6.0	**15.1**	13.3	17.0	**79.5**	77.3	81.6
45–54	**4.0**	3.1	5.1	**14.0**	12.4	15.8	**81.8**	79.9	83.6
55–64	**5.4**	4.4	6.4	**11.5**	10.2	13.0	**82.7**	81.0	84.2
65–74	**7.2**	6.2	8.4	**10.0**	8.8	11.3	**81.6**	79.9	83.1
75–84	**12.1**	10.3	14.0	**9.3**	7.9	10.9	**75.4**	73.0	77.7
85+	**13.0**	10.0	16.7	**9.2**	6.8	12.2	**72.5**	67.9	76.6
18+	**5.3**	**4.8**	**5.8**	**12.7**	**11.8**	**13.7**	**81.3**	**80.2**	**82.3**
Persons									
18–24	**2.7***	1.4	5.2	**12.1**	9.3	15.5	**85.0**	81.3	88.1
25–34	**3.5**	2.5	4.9	**16.3**	13.6	19.4	**79.8**	76.6	82.7
35–44	**5.0**	4.1	6.1	**18.1**	16.4	19.9	**76.3**	74.4	78.2
45–54	**4.1**	3.4	4.9	**16.2**	14.7	17.7	**79.3**	77.6	80.9
55–64	**5.9**	5.1	6.7	**12.6**	11.6	13.7	**80.8**	79.5	82.1
65–74	**6.6**	5.9	7.5	**10.4**	9.5	11.4	**81.6**	80.3	82.8
75–84	**10.6**	9.4	12.0	**11.1**	9.9	12.4	**75.2**	73.4	76.9
85+	**13.1**	10.6	16.0	**10.9**	8.8	13.6	**71.5**	67.8	74.8
18+	**5.1**	**4.6**	**5.5**	**14.5**	**13.7**	**15.3**	**79.7**	**78.8**	**80.6**

Data are crude estimates (not age-standardised).
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE greater than or equal to 50 per cent and is not reported as it is unreliable.

Table 3-3 shows that 52 per cent of adults are able to get help from neighbours when needed, 23 per cent are 'sometimes' able to get help, and 23 per cent are unable or rarely able to get help.

The ability to get help from neighbours increases with age in both men and women. Adults 45 years of age or older are more likely to be able to get help from neighbours, while those who are 18–34 years of age are less likely compared with all age groups.

Table 3-3: Proportion of Victorian adults, by ability to get help from neighbours, age and sex

Age group (years)	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	**31.1**	25.3	37.7	**25.7**	20.6	31.6	**41.6**	35.2	48.3
25–34	**30.3**	25.0	36.2	**27.9**	22.8	33.6	**39.5**	33.6	45.6
35–44	**22.4**	19.6	25.5	**28.3**	25.1	31.7	**46.3**	42.8	50.0
45–54	**19.6**	17.2	22.1	**24.4**	21.9	27.1	**54.3**	51.2	57.3
55–64	**17.1**	15.2	19.0	**21.9**	19.9	24.1	**58.4**	55.9	60.9
65–74	**15.1**	13.5	17.0	**13.6**	12.1	15.3	**67.6**	65.3	69.8
75–84	**17.0**	14.8	19.6	**13.2**	11.3	15.4	**66.3**	63.3	69.2
85+	**17.1**	13.0	22.1	**17.6**	13.2	23.2	**59.0**	52.6	65.0
18+	**22.7**	**21.2**	**24.4**	**23.8**	**22.3**	**25.3**	**51.0**	**49.2**	**52.8**
Females									
18–24	**30.4**	25.0	36.5	**28.1**	22.3	34.8	**40.9**	34.6	47.5
25–34	**30.1**	25.8	34.8	**27.5**	23.1	32.4	**38.3**	33.6	43.2
35–44	**23.4**	21.2	25.7	**24.1**	21.9	26.4	**50.5**	47.8	53.1
45–54	**20.7**	18.8	22.7	**21.4**	19.5	23.4	**56.3**	53.9	58.7
55–64	**20.3**	18.5	22.1	**16.8**	15.3	18.5	**60.5**	58.4	62.6
65–74	**19.1**	17.4	21.0	**13.4**	12.1	14.9	**63.9**	61.8	65.9
75–84	**20.9**	18.7	23.2	**9.5**	8.1	11.1	**65.0**	62.4	67.5
85+	**20.7**	16.8	25.2	**9.9**	7.5	13.0	**65.1**	60.2	69.7
18+	**23.9**	**22.7**	**25.2**	**21.3**	**20.0**	**22.7**	**52.2**	**50.7**	**53.7**
Persons									
18–24	**30.8**	26.7	35.2	**26.9**	22.9	31.3	**41.3**	36.7	46.0
25–34	**30.2**	26.7	33.9	**27.7**	24.3	31.4	**38.9**	35.1	42.8
35–44	**22.9**	21.1	24.8	**26.2**	24.2	28.2	**48.4**	46.2	50.7
45–54	**20.1**	18.6	21.7	**22.9**	21.3	24.6	**55.3**	53.4	57.2
55–64	**18.7**	17.4	20.0	**19.3**	18.1	20.7	**59.5**	57.8	61.1
65–74	**17.3**	16.1	18.6	**13.5**	12.5	14.6	**65.6**	64.0	67.1
75–84	**19.1**	17.5	20.8	**11.2**	10.0	12.5	**65.6**	63.7	67.5
85+	**19.2**	16.3	22.4	**13.2**	10.7	16.1	**62.5**	58.6	66.2
18+	**23.3**	**22.3**	**24.4**	**22.5**	**21.5**	**23.5**	**51.6**	**50.4**	**52.7**

Data are crude estimates (not age-standardised).
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution. .

By geographic location

Table 3-4 shows that adults who live in the metropolitan local government areas of Whitehorse, Yarra Ranges and Bayside are more likely to be able to get help from family when needed compared with all Victorian adults.

Table 3-4: Proportion of adults, by ability to get help from family, region and local government area in metropolitan Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**6.2***	3.7	10.2	**13.6**	9.2	19.7	**80.1**	73.8	85.2
Knox (C)	**5.3**	3.5	7.9	**10.5**	7.2	15.2	**83.7**	78.8	87.7
Manningham (C)	**5.0***	3.0	8.4	**7.9**	4.9	12.6	**86.7**	81.5	90.6
Maroondah (C)	**5.6***	3.4	9.3	**8.9**	6.1	12.8	**85.2**	80.4	89.0
Monash (C)	**4.6**	2.8	7.4	**13.1**	8.8	19.1	**81.8**	75.8	86.6
Whitehorse (C)	**4.3***	2.4	7.8	**8.7**	5.9	12.6	**87.0**	82.5	90.5
Yarra Ranges (S)	**4.6**	2.8	7.3	**8.6**	6.3	11.7	**86.7**	83.0	89.7
Eastern Metropolitan Region	**5.1**	**4.2**	**6.2**	**10.6**	**9.0**	**12.4**	**84.1**	**82.0**	**85.9**
Banyule (C)	**5.7***	3.3	9.6	**10.2**	6.5	15.7	**83.8**	77.7	88.4
Brimbank (C)	**6.9**	4.7	10.0	**15.0**	10.4	21.0	**77.8**	71.7	82.9
Darebin (C)	**6.0**	4.0	8.8	**10.2**	7.5	13.8	**83.4**	79.3	86.8
Hobsons Bay (C)	**4.8***	2.7	8.2	**12.4**	8.4	18.0	**82.6**	76.6	87.4
Hume (C)	**6.6**	4.3	9.9	**12.5**	9.2	16.8	**80.9**	76.1	84.9
Maribyrnong (C)	**7.1**	5.1	9.7	**10.4**	6.7	15.8	**82.1**	76.5	86.6
Melbourne (C)	**5.8**	3.8	8.8	**14.4**	9.9	20.3	**79.6**	73.5	84.6
Melton (S)	**7.1**	4.8	10.5	**15.3**	9.7	23.2	**77.6**	69.9	83.7
Moonee Valley (C)	**6.7***	4.0	11.2	**10.2**	6.9	15.1	**82.5**	76.8	87.1
Moreland (C)	**9.8**	6.6	14.3	**13.6**	9.0	20.1	**76.0**	69.1	81.7
Nillumbik (S)	**5.9***	3.5	9.9	**7.9**	5.0	12.2	**85.6**	80.4	89.6
Whittlesea (C)	**6.1**	4.0	9.1	**11.7**	8.2	16.6	**81.8**	76.6	86.1
Wyndham (C)	**6.2**	3.9	9.6	**8.7**	6.2	12.3	**84.3**	79.9	87.9
Yarra (C)	**7.3**	5.1	10.4	**7.5**	4.9	11.4	**83.9**	79.4	87.6
North & West Metropolitan Region	**6.5**	**5.8**	**7.4**	**11.6**	**10.4**	**13.0**	**81.4**	**79.8**	**82.8**
Bayside (C)	**6.0***	3.3	11.0	**4.7**	3.2	6.7	**89.0**	84.2	92.4
Cardinia (S)	**7.6**	5.0	11.5	**11.1**	7.6	15.9	**81.2**	75.7	85.6
Casey (C)	**6.3**	4.3	9.1	**11.7**	8.5	16.0	**81.5**	76.7	85.4
Frankston (C)	**6.1**	4.0	9.1	**14.1**	10.4	18.9	**79.2**	74.0	83.6
Glen Eira (C)	**7.7**	5.1	11.5	**12.6**	8.4	18.5	**78.6**	72.1	83.9
Greater Dandenong (C)	**8.9**	6.3	12.3	**15.6**	10.7	22.1	**75.3**	68.7	80.8
Kingston (C)	**7.2***	4.2	12.3	**11.7***	6.7	19.7	**80.5**	72.5	86.5
Mornington Peninsula (S)	**5.4***	3.1	9.4	**6.8**	4.2	10.9	**86.5**	81.1	90.6
Port Phillip (C)	**12.1***	6.2	22.4	**9.1***	5.5	14.9	**78.7**	68.9	86.0
Stonnington (C)	**5.0**	3.1	7.9	**9.1**	5.8	14.0	**85.6**	80.4	89.6
Southern Metropolitan Region	**7.0**	**5.9**	**8.3**	**11.2**	**9.7**	**12.9**	**81.1**	**79.1**	**83.0**
Victoria	**6.6**	**6.1**	**7.1**	**11.4**	**10.7**	**12.1**	**81.6**	**80.8**	**82.4**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 3-5 shows that adults who live in the rural local government area of Queenscliffe are more likely to be able to get help from family when needed compared with all Victorian adults.

In contrast, those who live in the rural local government areas of Ararat, Central Goldfields, and Yarriambiack are less likely to be able to get help from family compared with all Victorian adults.

Table 3-5: Proportion of adults, by ability to get help from family, region and local government area in rural Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	**4.1**	2.6	6.3	**13.0***	7.2	22.3	**82.6**	73.7	88.9
Corangamite (S)	**8.2**	5.0	13.1	**15.7**	10.0	24.0	**75.7**	67.4	82.4
Glenelg (S)	**8.4**	5.2	13.2	**14.7**	10.2	20.8	**75.6**	68.7	81.3
Greater Geelong (C)	**6.9**	4.3	10.7	**9.5**	5.8	15.1	**83.4**	77.4	88.1
Moyne (S)	**6.3**	3.9	10.0	**12.7**	8.5	18.5	**80.9**	74.6	85.8
Queenscliffe (B)	**3.2***	1.9	5.3	**3.4***	2.0	5.8	**93.1**	90.3	95.2
Southern Grampians (S)	**5.3**	3.5	8.0	**8.8***	5.3	14.2	**85.4**	79.8	89.7
Surf Coast (S)	**5.5**	3.6	8.2	**11.7**	7.2	18.6	**82.7**	75.8	87.9
Warrnambool (C)	**4.2**	2.8	6.3	**9.2**	6.4	13.1	**86.4**	82.2	89.7
Barwon-South Western Region	**6.3**	**4.7**	**8.5**	**10.4**	**7.8**	**13.8**	**82.9**	**79.2**	**86.0**
Bass Coast (S)	**4.2**	2.8	6.3	**21.4***	12.5	34.0	**74.2**	62.0	83.5
Baw Baw (S)	**4.1***	2.5	6.7	**11.3**	7.5	16.9	**84.3**	78.8	88.6
East Gippsland (S)	**11.3***	5.3	22.4	**10.1***	5.7	17.2	**78.4**	67.2	86.6
Latrobe (C)	**6.1**	4.2	9.0	**11.5**	7.0	18.4	**82.2**	75.4	87.4
South Gippsland (S)	**9.2***	5.2	15.9	**12.4**	7.7	19.5	**78.4**	70.4	84.6
Wellington (S)	**13.0***	6.7	23.7	**9.8**	6.4	14.7	**76.9**	67.3	84.4
Gippsland Region	**7.7**	**5.9**	**10.1**	**12.3**	**9.8**	**15.4**	**79.8**	**76.2**	**82.9**
Ararat (RC)	**11.4***	6.6	19.0	**15.7**	10.5	22.8	**72.4**	65.1	78.8
Ballarat (C)	**6.9**	4.5	10.6	**10.2**	6.5	15.7	**82.5**	76.8	87.0
Golden Plains (S)	**6.5**	4.6	9.1	**13.2***	7.6	21.8	**80.3**	72.2	86.5
Hepburn (S)	**9.3***	5.6	15.0	**11.3**	7.8	16.2	**79.4**	72.9	84.7
Hindmarsh (S)	**8.4**	5.3	13.2	**12.2**	7.6	19.0	**78.8**	72.0	84.4
Horsham (RC)	**4.6**	3.0	7.0	**14.6**	9.0	22.7	**80.7**	72.9	86.7
Moorabool (S)	**5.1**	3.4	7.5	**8.0**	5.0	12.6	**86.8**	82.0	90.5
Northern Grampians (S)	**10.6***	6.3	17.3	**9.8**	6.7	14.2	**79.3**	73.3	84.3
Pyrenees (S)	**8.7***	4.6	15.7	**11.8**	7.7	17.7	**79.0**	70.9	85.2
West Wimmera (S)	**9.0**	6.6	12.3	**10.5**	6.7	16.0	**80.2**	74.4	85.0
Yarriambiack (S)	**11.8**	7.7	17.7	**9.9**	6.7	14.5	**77.7**	70.9	83.3
Grampians Region	**7.2**	**5.9**	**8.8**	**11.2**	**9.0**	**13.9**	**81.3**	**78.5**	**83.9**
Alpine (S)	**7.1**	4.9	10.3	**15.5**	10.0	23.3	**76.4**	68.4	82.8
Benalla (RC)	**10.2**	6.6	15.4	**9.2**	6.2	13.7	**80.5**	74.4	85.4
Greater Shepparton (C)	**8.7**	5.6	13.1	**13.7**	9.3	19.8	**77.3**	70.5	82.9
Indigo (S)	**8.7***	4.2	17.2	**9.6***	5.7	15.7	**81.2**	72.2	87.8
Mansfield (S)	**6.3**	4.1	9.5	**15.7***	8.5	27.1	**77.9**	67.4	85.8
Mitchell (S)	**7.3**	4.8	10.9	**12.6**	8.1	19.0	**79.8**	73.1	85.3
Moira (S)	**6.0***	3.3	10.9	**15.5**	10.4	22.5	**78.4**	71.0	84.3
Murrindindi (S)	**8.7**	6.1	12.3	**14.7**	9.2	22.7	**76.3**	68.7	82.6
Strathbogie (S)	**6.8**	4.7	9.8	**7.8**	5.0	11.8	**85.2**	80.8	88.8
Towong (S)	**10.0**	6.3	15.5	**10.4***	6.2	17.0	**79.5**	71.9	85.5
Wangaratta (RC)	**5.9**	3.8	9.1	**17.0***	10.0	27.4	**76.9**	66.9	84.6
Wodonga (RC)	**6.2**	4.1	9.3	**11.3**	7.7	16.3	**82.3**	77.1	86.6
Hume Region	**7.6**	**6.5**	**9.0**	**13.2**	**11.2**	**15.4**	**79.0**	**76.5**	**81.3**
Buloke (S)	**5.4***	2.5	11.2	**11.8**	7.4	18.3	**82.6**	75.5	88.0
Campaspe (S)	**10.1**	6.8	14.8	**9.2***	5.1	16.0	**80.7**	73.4	86.4
Central Goldfields (S)	**7.0***	3.8	12.6	**21.6**	14.6	30.8	**70.8**	61.2	78.9
Gannawarra (S)	**6.6***	3.3	12.7	**12.4***	5.0	27.7	**80.8**	66.5	89.9
Greater Bendigo (C)	**6.5***	3.9	10.9	**13.4**	9.7	18.4	**79.5**	73.7	84.3
Loddon (S)	**10.1***	5.8	17.1	**18.5***	10.7	30.1	**71.2**	59.2	80.8
Macedon Ranges (S)	**6.4**	4.2	9.5	**11.6**	8.3	16.0	**81.9**	77.1	85.9
Mildura (RC)	**9.2**	5.9	13.9	**12.4**	8.4	18.0	**77.9**	71.3	83.3
Mount Alexander (S)	**4.5**	3.0	6.8	**9.0**	6.3	12.9	**86.4**	82.4	89.6
Swan Hill (RC)	**6.1**	4.1	9.0	**10.4**	7.0	15.3	**81.3**	74.6	86.6
Loddon Mallee Region	**7.4**	**6.0**	**9.2**	**12.0**	**10.1**	**14.2**	**80.1**	**77.4**	**82.6**
Victoria	**6.6**	**6.1**	**7.1**	**11.4**	**10.7**	**12.1**	**81.6**	**80.8**	**82.4**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 3-6 shows that adults who live in the metropolitan local government area of Stonnington are more likely to be able to get help from friends than all Victorian adults.

Table 3-6: Proportion of adults, by ability to get help from friends, region and local government area in metropolitan Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**3.2***	1.5	6.7	**12.8**	8.8	18.2	**83.3**	77.5	87.8
Knox (C)	**4.8***	2.9	7.9	**11.6**	8.3	16.0	**82.8**	77.9	86.9
Manningham (C)	**3.4***	1.9	6.0	**16.9**	11.3	24.6	**78.4**	71.0	84.4
Maroondah (C)	**3.9**	2.5	5.8	**15.4**	10.7	21.8	**79.9**	73.5	85.0
Monash (C)	**3.8***	2.2	6.4	**16.8**	12.0	22.9	**78.2**	72.0	83.3
Whitehorse (C)	**3.5**	2.2	5.5	**10.8**	7.7	15.0	**85.3**	81.0	88.7
Yarra Ranges (S)	**4.5**	2.8	7.3	**12.9***	7.5	21.4	**82.4**	74.2	88.5
Eastern Metropolitan Region	**3.9**	**3.2**	**4.8**	**13.9**	**11.9**	**16.0**	**81.5**	**79.3**	**83.6**
Banyule (C)	**5.5***	2.6	11.3	**13.2**	9.1	18.9	**80.9**	74.1	86.2
Brimbank (C)	**6.1**	4.3	8.5	**20.1**	15.3	26.0	**72.7**	66.8	77.9
Darebin (C)	**5.8**	4.1	8.2	**21.0**	14.5	29.4	**71.7**	63.4	78.8
Hobsons Bay (C)	**3.0**	1.9	4.7	**11.3**	7.6	16.5	**84.4**	78.9	88.7
Hume (C)	**7.3**	5.2	10.3	**16.3**	12.2	21.4	**75.3**	69.9	79.9
Maribyrnong (C)	**7.9**	5.3	11.5	**12.9**	9.2	17.7	**77.0**	71.3	81.9
Melbourne (C)	**6.8***	3.5	12.7	**14.4**	10.4	19.6	**78.4**	71.9	83.7
Melton (S)	**4.9**	3.1	7.7	**15.6**	11.4	20.9	**79.0**	73.4	83.7
Moonee Valley (C)	**5.2***	3.1	8.6	**16.4**	11.4	23.0	**77.5**	70.8	83.0
Moreland (C)	**8.9**	6.2	12.6	**15.3**	10.5	21.7	**73.9**	67.0	79.9
Nillumbik (S)	**2.1***	1.1	3.9	**11.7**	8.2	16.4	**85.3**	80.4	89.1
Whittlesea (C)	**7.0**	4.7	10.4	**13.6**	9.9	18.4	**78.3**	73.1	82.8
Wyndham (C)	**4.1**	2.7	6.2	**16.1**	11.8	21.7	**79.1**	73.5	83.8
Yarra (C)	**7.9***	4.7	12.9	**14.6**	10.6	19.7	**76.7**	70.2	82.1
North & West Metropolitan Region	**6.3**	**5.5**	**7.3**	**15.4**	**13.9**	**17.0**	**77.3**	**75.5**	**78.9**
Bayside (C)	**3.5***	1.3	9.0	**9.3***	5.1	16.3	**87.0**	79.5	92.1
Cardinia (S)	**4.7**	2.9	7.5	**13.1**	9.1	18.6	**81.6**	75.9	86.2
Casey (C)	**5.5**	3.7	8.1	**14.4**	10.5	19.5	**79.3**	74.1	83.8
Frankston (C)	**6.1**	4.0	9.1	**14.4**	10.5	19.6	**78.8**	73.5	83.4
Glen Eira (C)	**6.3**	4.2	9.5	**14.2**	9.7	20.4	**78.2**	71.6	83.6
Greater Dandenong (C)	**5.7**	3.8	8.3	**17.2**	12.1	24.0	**75.7**	69.0	81.5
Kingston (C)	**6.0***	3.1	11.4	**17.5**	12.4	24.2	**75.5**	68.0	81.7
Mornington Peninsula (S)	**3.5***	2.0	6.1	**11.4**	7.5	16.9	**83.4**	77.5	88.0
Port Phillip (C)	**3.9**	2.6	5.9	**16.5**	10.5	25.1	**79.3**	71.0	85.8
Stonnington (C)	**2.3***	1.1	4.6	**8.3**	5.5	12.3	**88.8**	84.5	92.0
Southern Metropolitan Region	**4.9**	**4.1**	**5.8**	**14.1**	**12.4**	**16.0**	**80.1**	**78.1**	**82.0**
Victoria	**5.0**	**4.6**	**5.5**	**14.5**	**13.7**	**15.4**	**79.7**	**78.8**	**80.6**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

There are no notable differences in the proportions of adults who are or are not able to get help from friends when needed, by rural local government area (Table 3-7).

Table 3-7: Proportion of adults, by ability to get help from friends, region and local government area in rural Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	**5.3***	1.9	13.5	**22.8**	13.8	35.2	**71.4**	59.8	80.8
Corangamite (S)	**3.3***	1.6	6.7	**11.8**	7.3	18.5	**84.5**	77.8	89.5
Glenelg (S)	**5.3***	3.0	9.1	**14.8**	9.1	23.1	**79.6**	71.6	85.8
Greater Geelong (C)	**2.2***	1.3	3.8	**16.9**	11.1	24.7	**80.7**	72.9	86.6
Moyne (S)	**2.0***	0.8	4.9	**17.6**	10.9	27.3	**79.9**	70.3	87.0
Queenscliffe (B)	**1.6***	0.8	2.9	**12.1***	5.7	24.0	**86.2**	74.8	92.9
Southern Grampians (S)	**1.8***	0.9	3.5	**9.3**	5.8	14.4	**88.5**	83.3	92.2
Surf Coast (S)	**4.2**	2.6	6.8	**9.8***	5.8	16.0	**85.7**	79.5	90.3
Warrnambool (C)	**5.4***	2.6	10.6	**10.5**	7.5	14.6	**83.4**	77.7	87.9
Barwon-South Western Region	**3.0**	**2.2**	**4.0**	**15.2**	**11.4**	**20.0**	**81.5**	**76.7**	**85.4**
Bass Coast (S)	**3.2**	2.1	4.9	**14.5**	9.4	21.6	**81.9**	74.9	87.2
Baw Baw (S)	**8.3***	3.6	17.9	**8.7**	6.1	12.3	**82.3**	74.0	88.4
East Gippsland (S)	**5.1***	2.6	10.0	**12.6***	7.4	20.5	**81.7**	73.3	87.9
Latrobe (C)	**5.7**	3.7	8.7	**11.8**	7.2	18.6	**81.7**	74.8	87.0
South Gippsland (S)	**3.2***	1.9	5.6	**22.3**	15.7	30.6	**74.4**	66.1	81.2
Wellington (S)	**3.3***	2.0	5.4	**9.2***	5.1	16.0	**86.3**	79.8	91.0
Gippsland Region	**5.2**	**3.8**	**7.1**	**12.1**	**9.9**	**14.8**	**82.0**	**78.9**	**84.7**
Ararat (RC)	**4.8***	2.3	9.8	**11.5**	8.0	16.4	**83.0**	76.8	87.7
Ballarat (C)	**3.4***	1.8	6.1	**15.0**	11.1	20.0	**81.5**	76.4	85.6
Golden Plains (S)	**5.5***	3.2	9.2	**11.7**	8.0	16.7	**82.7**	77.4	87.0
Hepburn (S)	**2.0***	1.1	3.7	**15.1**	10.4	21.6	**82.4**	76.1	87.4
Hindmarsh (S)	**3.7***	2.1	6.4	**14.7**	9.2	22.6	**81.5**	73.8	87.3
Horsham (RC)	**9.4***	4.7	18.0	**13.4***	7.2	23.7	**77.1**	65.7	85.5
Moorabool (S)	**5.1***	3.1	8.3	**13.7**	8.8	20.6	**81.0**	74.0	86.5
Northern Grampians (S)	**9.7***	4.7	18.9	**13.2***	7.4	22.6	**76.6**	66.3	84.5
Pyrenees (S)	**4.5**	2.9	6.8	**21.7**	14.2	31.5	**73.4**	63.8	81.2
West Wimmera (S)	**4.7***	2.9	7.7	**13.2**	8.9	19.1	**81.7**	75.5	86.5
Yarriambiack (S)	**4.2***	2.5	7.0	**20.1**	12.3	30.9	**75.1**	64.5	83.3
Grampians Region	**4.7**	**3.6**	**6.1**	**13.9**	**11.7**	**16.5**	**81.1**	**78.5**	**83.5**
Alpine (S)	**3.9***	2.0	7.6	**12.9***	7.7	20.7	**82.4**	74.4	88.3
Benalla (RC)	**7.0***	2.6	17.6	**18.6**	12.6	26.5	**74.2**	64.3	82.1
Greater Shepparton (C)	**4.5***	2.7	7.3	**12.9**	8.7	18.7	**81.9**	75.9	86.7
Indigo (S)	**	1.3	15.5	**10.4***	6.1	17.2	**84.2**	74.5	90.6
Mansfield (S)	**7.7***	3.2	17.3	**11.7***	6.2	20.8	**80.5**	69.6	88.1
Mitchell (S)	**8.3***	4.4	14.9	**13.6**	9.1	19.9	**77.1**	69.2	83.5
Moira (S)	**4.0***	2.3	6.8	**14.3**	9.1	21.6	**81.5**	74.2	87.1
Murrindindi (S)	**8.9***	5.1	15.2	**13.9**	8.4	22.1	**76.9**	68.2	83.8
Strathbogie (S)	**3.9**	2.6	5.9	**7.6***	4.5	12.7	**88.1**	83.2	91.8
Towong (S)	**2.1***	1.1	4.0	**14.6**	9.1	22.6	**83.3**	75.4	89.0
Wangaratta (RC)	**7.2***	3.7	13.6	**14.4**	9.1	22.1	**78.0**	69.0	85.0
Wodonga (RC)	**5.2***	2.7	9.8	**17.9**	12.5	25.0	**76.5**	68.9	82.6
Hume Region	**5.6**	**4.4**	**7.0**	**14.1**	**12.2**	**16.4**	**79.7**	**77.2**	**82.1**
Buloke (S)	**	1.7	12.1	**11.5***	6.9	18.4	**83.6**	75.5	89.4
Campaspe (S)	**6.9***	3.6	13.0	**13.3**	8.7	20.0	**79.5**	71.8	85.5
Central Goldfields (S)	**8.6***	4.9	14.5	**17.5***	10.3	28.3	**73.6**	63.2	81.9
Gannawarra (S)	**1.6***	0.8	3.0	**16.6***	7.6	32.5	**81.3**	66.0	90.7
Greater Bendigo (C)	**5.0***	2.2	10.7	**19.5**	13.1	28.0	**74.9**	66.3	81.8
Loddon (S)	**5.4***	2.1	13.2	**18.4***	11.0	29.2	**75.5**	65.2	83.5
Macedon Ranges (S)	**3.1***	1.7	5.4	**21.5***	11.6	36.3	**75.2**	61.0	85.5
Mildura (RC)	**6.9***	4.2	11.2	**9.3**	6.3	13.4	**83.4**	78.0	87.7
Mount Alexander (S)	**1.7***	0.9	2.9	**18.4***	8.9	34.0	**79.2**	64.1	89.1
Swan Hill (RC)	**	1.4	15.6	**9.1**	6.5	12.5	**85.5**	77.6	91.0
Loddon Mallee Region	**5.2**	**3.6**	**7.4**	**15.8**	**12.4**	**20.0**	**78.5**	**74.3**	**82.2**
Victoria	**5.0**	**4.6**	**5.5**	**14.5**	**13.7**	**15.4**	**79.7**	**78.8**	**80.6**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE greater than or equal to 50 per cent and is not reported as it is unreliable.

Table 3-8 shows that almost one-third (31 per cent) of adults who live in the metropolitan local government area of Melbourne are rarely or unable to get help from their neighbours, significantly higher than all Victorian adults (24 per cent).

Table 3-8: Proportion of adults, by ability to get help from neighbours, region and local government area in metropolitan Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**24.8**	18.8	32.0	**24.6**	18.8	31.5	**47.7**	40.4	55.0
Knox (C)	**20.3**	14.8	27.3	**23.4**	16.7	31.9	**53.3**	45.1	61.4
Manningham (C)	**22.8**	17.1	29.8	**24.5**	18.2	32.2	**47.2**	39.5	55.1
Maroondah (C)	**24.9**	17.3	34.5	**18.7**	13.5	25.2	**54.7**	45.4	63.6
Monash (C)	**26.1**	20.4	32.6	**20.9**	16.1	26.7	**49.1**	43.1	55.2
Whitehorse (C)	**22.1**	16.2	29.5	**19.7**	15.0	25.5	**57.2**	49.8	64.3
Yarra Ranges (S)	**23.2**	15.9	32.4	**27.4**	19.6	36.8	**48.7**	40.4	57.0
Eastern Metropolitan Region	**23.3**	**20.7**	**26.1**	**23.0**	**20.5**	**25.7**	**51.1**	**48.1**	**54.1**
Banyule (C)	**19.2**	14.2	25.4	**23.6**	17.8	30.5	**56.7**	49.3	63.8
Brimbank (C)	**26.3**	21.2	32.2	**25.3**	19.9	31.6	**44.9**	39.0	51.0
Darebin (C)	**22.5**	16.6	29.8	**26.3**	19.5	34.3	**49.0**	42.3	55.9
Hobsons Bay (C)	**23.1**	16.5	31.3	**24.0**	18.5	30.4	**50.1**	41.4	58.8
Hume (C)	**25.2**	20.3	30.7	**19.9**	15.1	25.8	**52.5**	46.1	58.8
Maribyrnong (C)	**28.1**	22.0	35.2	**25.4**	19.3	32.6	**43.3**	36.3	50.6
Melbourne (C)	**31.4**	24.9	38.8	**22.7**	17.0	29.7	**43.2**	36.5	50.1
Melton (S)	**27.7**	21.4	35.1	**17.1**	13.2	21.9	**53.1**	45.7	60.3
Moonee Valley (C)	**21.5**	16.2	28.0	**25.7**	19.8	32.6	**51.3**	44.7	57.8
Moreland (C)	**25.5**	19.3	32.9	**22.9**	17.0	30.1	**48.3**	41.6	55.1
Nillumbik (S)	**23.6**	17.7	30.6	**23.1**	17.1	30.3	**50.7**	43.9	57.5
Whittlesea (C)	**26.8**	21.7	32.7	**24.0**	19.1	29.6	**47.0**	41.2	52.9
Wyndham (C)	**28.1**	22.7	34.1	**19.1**	14.6	24.5	**47.9**	42.1	53.7
Yarra (C)	**28.7**	20.6	38.4	**20.7**	14.8	28.2	**47.0**	37.2	57.1
North & West Metropolitan Region	**26.0**	**24.2**	**27.9**	**23.0**	**21.3**	**24.8**	**48.3**	**46.3**	**50.2**
Bayside (C)	**16.8**	10.5	25.8	**23.5**	16.9	31.7	**56.9**	47.6	65.7
Cardinia (S)	**21.7**	16.6	28.0	**22.8**	17.2	29.4	**52.3**	45.7	58.9
Casey (C)	**24.3**	19.1	30.3	**24.1**	18.9	30.3	**48.6**	42.1	55.2
Frankston (C)	**28.8**	23.1	35.1	**22.4**	17.1	28.7	**45.9**	39.4	52.5
Glen Eira (C)	**23.9**	18.3	30.6	**23.8**	17.9	31.0	**48.6**	40.7	56.6
Greater Dandenong (C)	**29.8**	23.3	37.3	**20.0**	14.9	26.3	**47.9**	41.0	54.9
Kingston (C)	**21.1**	15.0	28.8	**24.3**	17.5	32.8	**52.3**	43.8	60.6
Mornington Peninsula (S)	**25.6**	17.9	35.2	**21.7**	15.0	30.5	**50.8**	42.2	59.4
Port Phillip (C)	**22.3**	14.6	32.5	**23.9**	16.3	33.7	**51.5**	42.0	60.9
Stonnington (C)	**22.3**	16.5	29.4	**23.0**	16.4	31.3	**51.9**	44.0	59.8
Southern Metropolitan Region	**23.9**	**21.7**	**26.4**	**23.4**	**21.0**	**25.9**	**50.1**	**47.5**	**52.7**
Victoria	**23.6**	**22.5**	**24.7**	**22.7**	**21.6**	**23.7**	**51.2**	**50.0**	**52.4**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 3-9 shows that adults who live in the rural local government areas of Hindmarsh, West Wimmera, Indigo, Murrindindi, Strathbogie, Buloke, Gannawarra, Mount Alexander and Swan Hill are more likely to be able to get help from neighbours when needed than all Victorian adults. Overall, adults who live in Loddon Mallee region are significantly more likely to be able to get help from neighbours than all Victorian adults.

Table 3-9: Proportion of adults, by ability to get help from neighbours, region and local government area in rural Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	**23.1**	14.2	35.2	**13.1**	8.3	20.0	**62.7**	51.8	72.4
Corangamite (S)	**19.9**	13.5	28.4	**19.1**	11.7	29.6	**59.7**	50.8	68.0
Glenelg (S)	**16.8**	11.8	23.4	**20.5**	14.4	28.2	**61.7**	53.9	69.0
Greater Geelong (C)	**19.2**	13.8	26.1	**21.5**	15.3	29.2	**56.4**	48.1	64.4
Moyne (S)	**16.3**	10.1	25.3	**15.1**	10.5	21.3	**66.3**	57.2	74.4
Queenscliffe (B)	**10.3***	5.7	17.8	**32.9**	20.3	48.6	**56.1**	42.4	68.9
Southern Grampians (S)	**19.1**	11.9	29.3	**23.6**	15.1	35.0	**56.2**	47.3	64.8
Surf Coast (S)	**15.3**	10.2	22.4	**22.8**	15.6	31.9	**60.9**	51.6	69.5
Warrnambool (C)	**21.6**	15.1	29.9	**19.4**	13.7	26.8	**55.5**	47.0	63.7
Barwon-South Western Region	**19.0**	**15.2**	**23.4**	**20.3**	**16.3**	**25.0**	**58.2**	**52.8**	**63.4**
Bass Coast (S)	**29.6**	20.6	40.4	**17.2**	12.1	23.9	**49.9**	39.8	60.0
Baw Baw (S)	**20.7**	15.3	27.4	**19.6**	13.1	28.2	**58.0**	49.0	66.5
East Gippsland (S)	**18.2**	12.1	26.5	**23.7**	14.5	36.3	**57.3**	46.4	67.6
Latrobe (C)	**19.7**	13.6	27.7	**22.5**	15.3	31.8	**56.2**	47.0	65.0
South Gippsland (S)	**18.2**	12.1	26.5	**25.1**	18.3	33.3	**54.6**	47.1	62.0
Wellington (S)	**29.8**	21.2	40.0	**19.2**	13.0	27.4	**48.7**	41.0	56.4
Gippsland Region	**22.6**	**19.0**	**26.7**	**21.0**	**17.5**	**25.0**	**54.6**	**50.1**	**59.0**
Ararat (RC)	**18.3**	12.2	26.6	**20.8**	15.2	27.7	**52.8**	45.0	60.4
Ballarat (C)	**25.4**	19.5	32.3	**24.8**	18.3	32.6	**48.7**	41.2	56.2
Golden Plains (S)	**29.9**	23.0	37.8	**17.9**	13.0	24.1	**51.5**	44.5	58.3
Hepburn (S)	**17.4**	11.0	26.3	**22.2**	14.8	32.0	**59.7**	49.8	68.8
Hindmarsh (S)	**17.4**	10.6	27.4	**15.8**	11.2	21.8	**65.0**	55.7	73.3
Horsham (RC)	**16.8***	10.1	26.8	**23.0**	13.8	35.6	**56.7**	43.0	69.4
Moorabool (S)	**17.1**	11.8	24.1	**24.4**	18.4	31.7	**55.9**	48.2	63.2
Northern Grampians (S)	**25.6**	17.8	35.2	**19.8**	12.5	29.9	**53.5**	44.2	62.7
Pyrenees (S)	**23.9**	16.6	33.0	**13.9**	9.6	19.7	**57.5**	50.3	64.3
West Wimmera (S)	**8.0**	5.5	11.7	**18.2**	13.0	25.0	**72.3**	65.6	78.2
Yarriambiack (S)	**23.0**	14.4	34.7	**24.7**	16.6	35.2	**51.4**	44.5	58.3
Grampians Region	**22.4**	**19.0**	**26.1**	**23.0**	**19.2**	**27.3**	**52.8**	**48.5**	**57.0**
Alpine (S)	**20.1**	13.2	29.3	**19.8**	13.6	27.9	**59.4**	50.5	67.8
Benalla (RC)	**17.2**	10.9	26.1	**30.5**	22.2	40.3	**49.7**	40.4	59.1
Greater Shepparton (C)	**20.4**	14.9	27.4	**23.3**	16.6	31.8	**50.4**	43.7	57.1
Indigo (S)	**14.9***	8.2	25.6	**15.2**	10.7	21.1	**68.2**	58.1	76.8
Mansfield (S)	**14.9***	7.9	26.4	**28.1**	18.9	39.7	**54.6**	45.0	63.8
Mitchell (S)	**20.2**	14.4	27.6	**22.4**	15.5	31.2	**55.2**	47.4	62.8
Moira (S)	**18.7**	12.6	26.9	**24.4**	16.2	35.0	**53.6**	45.9	61.1
Murrindindi (S)	**17.6**	12.6	24.1	**17.7**	12.1	25.2	**63.5**	55.0	71.2
Strathbogie (S)	**12.3**	8.0	18.5	**19.1**	12.8	27.5	**67.8**	59.7	74.9
Towong (S)	**23.8**	15.3	35.0	**12.0**	8.1	17.5	**60.4**	50.5	69.6
Wangaratta (RC)	**23.9**	15.1	35.7	**15.2**	10.0	22.4	**60.3**	48.3	71.2
Wodonga (RC)	**19.6**	13.4	27.6	**28.6**	21.7	36.6	**50.4**	43.4	57.3
Hume Region	**19.5**	**16.8**	**22.5**	**22.7**	**19.8**	**25.9**	**54.9**	**51.5**	**58.2**
Buloke (S)	**6.5***	3.2	12.6	**18.3**	12.1	26.9	**73.8**	64.7	81.3
Campaspe (S)	**22.1**	14.9	31.4	**19.8**	14.2	26.8	**55.8**	46.3	65.0
Central Goldfields (S)	**26.7**	18.3	37.3	**14.4***	8.3	23.7	**54.5**	45.5	63.2
Gannawarra (S)	**12.8**	8.0	19.8	**17.5***	8.6	32.3	**69.1**	55.0	80.4
Greater Bendigo (C)	**26.7**	19.6	35.1	**17.2**	12.6	23.0	**54.6**	46.4	62.6
Loddon (S)	**15.2**	9.3	23.8	**27.6**	18.4	39.1	**55.4**	45.6	64.7
Macedon Ranges (S)	**14.4**	8.8	22.5	**26.2**	15.8	40.1	**56.2**	43.7	67.9
Mildura (RC)	**21.0**	13.9	30.5	**21.3**	14.2	30.7	**55.0**	45.4	64.3
Mount Alexander (S)	**12.8**	8.1	19.7	**14.0**	8.6	22.2	**71.7**	62.5	79.4
Swan Hill (RC)	**13.2***	7.8	21.4	**21.6**	13.9	32.0	**64.5**	53.9	73.9
Loddon Mallee Region	**20.8**	**17.2**	**24.9**	**19.4**	**16.2**	**23.1**	**57.8**	**53.4**	**62.0**
Victoria	**23.6**	**22.5**	**24.7**	**22.7**	**21.6**	**23.7**	**51.2**	**50.0**	**52.4**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Figure 3-1 and Figure 3-2 shows the proportion of adults who are definitely able to get help from neighbours when needed, by local government area.

Figure 3-1: Proportion of adults who are able to get help from neighbours when needed, by local government area in metropolitan Victoria

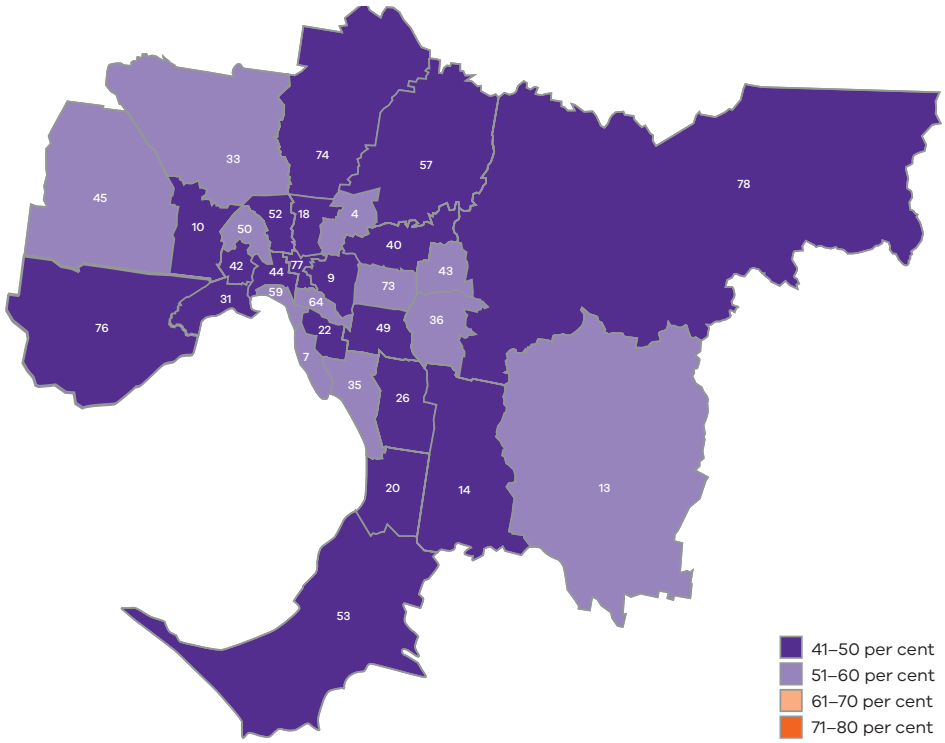
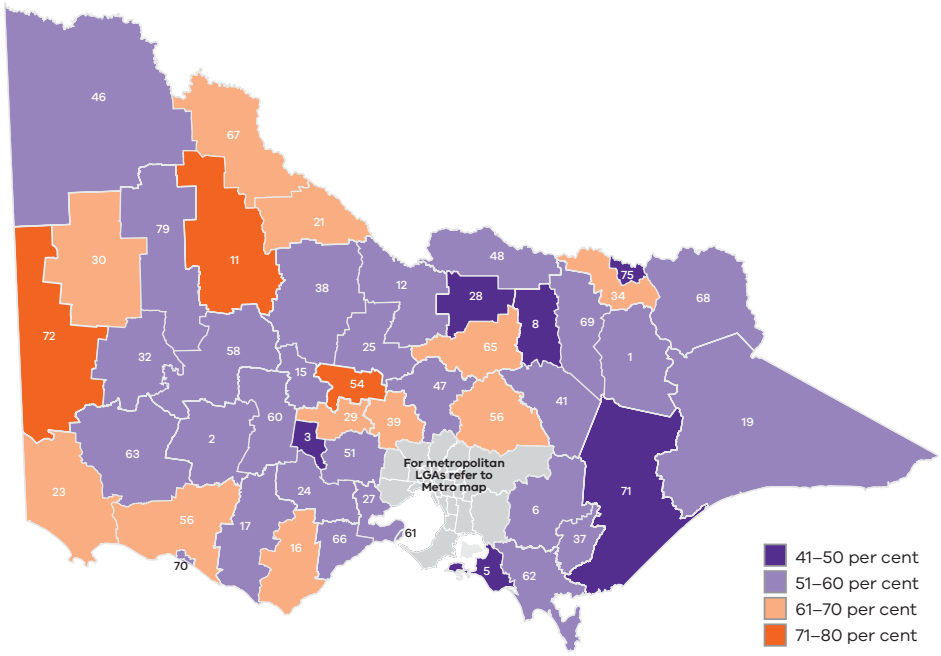


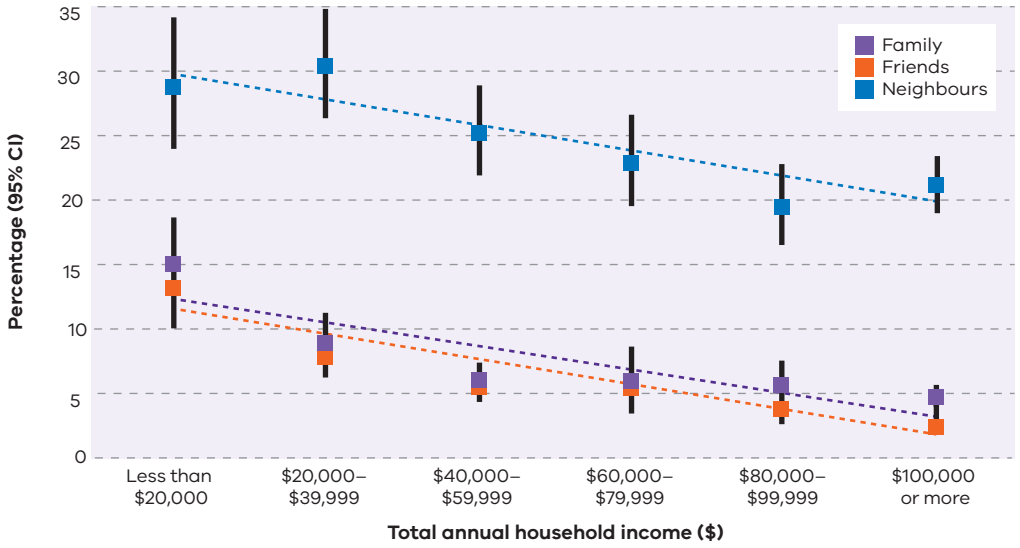
Figure 3-2: Proportion of adults who are able to get help from neighbours when needed, by local government area in rural Victoria



Does social support vary by socioeconomic status?

Figure 3-3 shows that the ability to get help from family, friends and/or neighbours, when needed, is associated with socioeconomic status; the higher the total annual household income the less likely adults are to be unable to get help from family, friends and/or neighbours.

Figure 3-3: Proportion of Victorian adults who are unable or rarely able to get help from family, friends and/or neighbours, by total annual household income

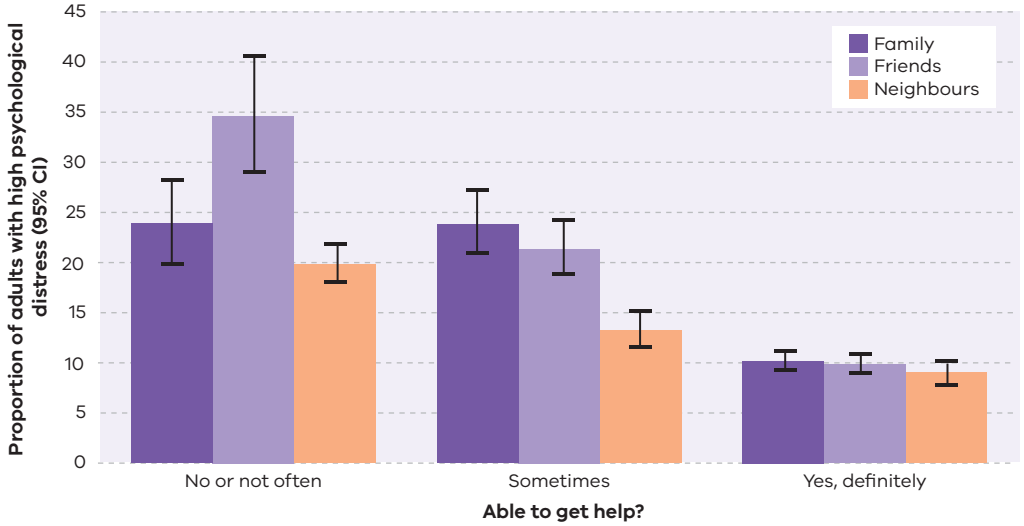


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is social support associated with health outcomes?

Figure 3-4 shows that social support, irrespective of the source, is associated with mental health. Victorian adults who are rarely or unable to get help from family, friends and/or neighbours are more likely to have high levels of psychological distress than those who are able to get help from any of these sources. Moreover, when the sources of social support are compared, the inability to get help from friends is more strongly associated with psychological distress than when the source is family or neighbours.

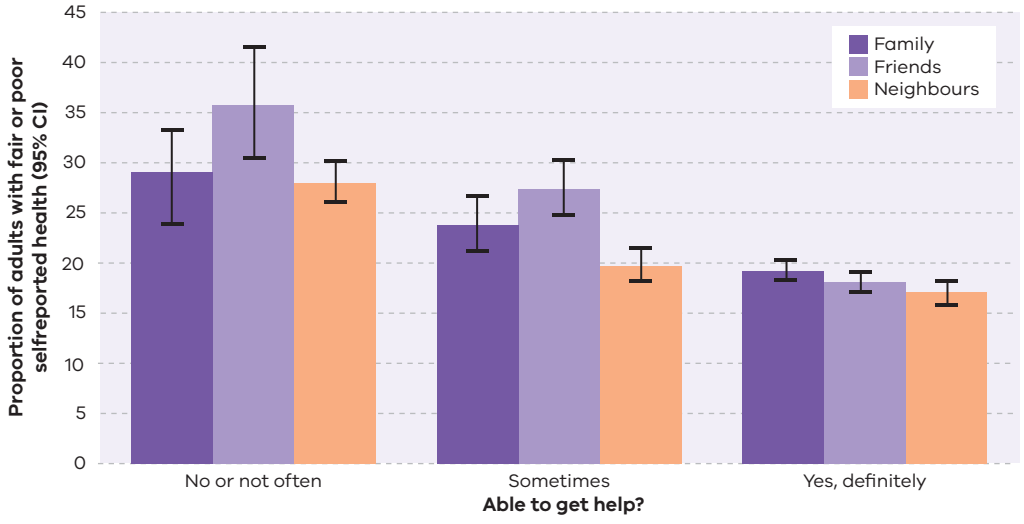
Figure 3-4: The relationship between ability to get help from family, friends and/or neighbours and mental health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 3-5 shows that social support, irrespective of the source, is associated with physical health. Victorian adults who are unable or rarely able to get help from family, friends and/or neighbours are more likely to report their overall health status as fair or poor than those who are able to get help from any of these sources. There are no statistically significant differences between the three sources of social support.

Figure 3-5: The relationship between ability to get help from family, friends and/or neighbours and physical health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of findings

- Over 80 per cent of Victorian adults are able to get help from family.
- Overall, women are less likely to be able to get help from family, and this is particularly notable for women 35–44 years of age.
- Almost 80 per cent of Victorian adults are able to get help from friends.
- Victorians 65 years of age or older are less likely to be able to get help from friends compared with all Victorian adults.
- Just over half of Victorian adults are able to get help from neighbours.
- Adults 45 years of age or older are more likely to be able to get help from neighbours compared with all Victorian adults.
- Adults who live in the metropolitan local government areas of Bayside, Whitehorse and Yarra Ranges, and the rural local government area of Queenscliffe are more likely to be able to get help from family, while those who live in the rural local government area of Yarriambiack are least likely.
- Adults who live in the metropolitan local government area of Stonnington are more likely to be able to get help from friends than all Victorian adults.
- Adults who live in the rural local government areas of Hindmarsh, West Wimmera, Indigo, Murrindindi, Strathbogie, Buloke, Gannawarra, Mount Alexander and Swan Hill are more likely to be able to get help from neighbours, while those who live in the metropolitan local government area of Melbourne are least likely.
- The ability to get help from family, friends and/or neighbours declines with declining household income.
- The inability to get help from family, friends and/or neighbours is associated with poor mental health; more so when the source of social support is friends.
- The inability to get help from family, friends and/or neighbours is associated with poor physical health.

Interpretation of the findings

The literature on social support distinguishes between two types: 'perceived' or 'received' social support (Haber, Cohen et al. 2007). Perceived social support refers to an individual's subjective judgment that social support will be provided when needed, while received social support (also called 'enacted' support) refers to the actual receipt of supportive behaviours. Perceived and received social support have generally not been found to correlate highly with each other except when the received support is needed by the recipient (Melrose, Brown et al. 2015). The relationship between social support and health varies according to the type of social support. A meta-analytic review (highest level of evidence) showed that only perceived social support is consistently linked to health (Haber, Cohen et al. 2007).

Social support can be emotional, informational and/or instrumental. Emotional social support includes expressions of love, empathy, trust and caring. Informational social support includes providing advice and information. Instrumental social support includes providing tangible aid and services such a cash loans and labour in kind.

The three questions we asked in the Victorian Population Health Survey are all measures of *perceived* social support and the results show that they are all strongly associated with mental health, consistent with the literature. Meta-analyses show a consistent

relationship between low perceived social support and major depression, post-traumatic stress disorder and psychological distress (Lakey and Orehek 2011).

Similarly, our findings show a strong association between low perceived social support and physical ill-health, consistent with the literature. Studies have consistently found an association between perceived support and mortality, where people with high social support live longer than people with low social support, even after controlling for demographic and physical health status (Reblin and Uchino 2008, Hill, Uchino et al. 2016). Low perceived social support has also been shown to be associated with poor self-reported health, consistent with the findings of this report.

Perceived social support has also been shown to be associated with lifestyle risk factors such as inadequate consumption of fruit and vegetables, inadequate physical activity and smoking, where low perceived social support is associated with a higher uptake of these lifestyle risk behaviours (Reblin and Uchino 2008). While we observed a significantly higher prevalence of smoking among Victorian adults who are unable to get help from family, friends and/or neighbours, we did not observe any differences in fruit and vegetable consumption (data not shown). Similarly, we did not observe any significant difference in physical activity levels for adults who are unable to get help from family but those who are unable to get help from friends and/or neighbours are significantly more likely to be sedentary. The link between perceived support and physical health may be partially mediated by lifestyle risk factors.

Our finding that social support declines with declining socioeconomic status is consistent with the literature. Given that both socioeconomic status and social support are associated with physical health, an analysis of 9.333 participants of the British Whitehall II cohort found that not only is social support an important risk factor for mortality in men, but it also partially explains socioeconomic differences in mortality (Stringhini, Berkman et al. 2012). Interestingly, they did not find a consistent association between social support and mortality in women, suggesting a gender difference.

In relation to mental health, the inverse association between depression and social support has been shown to be much stronger in people of low socioeconomic status than people of high socioeconomic status (Brummett, Barefoot et al. 2003). The authors of this work hypothesised that this may be due in part to the lack of resources of those of lower socioeconomic status, thus social support appears to play a bigger role among those of lower compared with higher socioeconomic status.

How does perceived social support impact on health?

Uchino (2009) proposed a conceptual framework, based on a life-span perspective, that described the antecedent factors that influence perceived support and its relationship to health (Uchino 2009). Beginning in the early family environment, factors such as parental support, parental affection and familial conflict interact to develop positive or negative psychosocial profiles, characterised personality traits, social skills, self-esteem, feelings of personal control and perceived social support. In turn, these characteristics interact to influence health outcomes via behavioural, psychosocial and physiological mechanisms described in chapter 7 of this report (Umberson and Montez 2010).

4. Community and civic engagement

Key messages

- **Community and civic engagement, whether through joining a local club, volunteering or attending a local community event, is associated with better mental and physical health.**
- **As socioeconomic status declines so does community and civic engagement.**
- **The literature supports a direct causal link between volunteerism and better mental and physical health.**
- **It is hypothesised that volunteering improves health by raising self-esteem, increasing the number of social relationships and improving self-care behaviours.**
- **Policies that seek to increase community and civic engagement are likely to improve the health of the population.**

Introduction

Whether individuals take up opportunities for social interaction through community and civic engagement may depend on the extent to which certain conditions are fulfilled. These include the state of the social environment, the extent and strength of social and support networks, and the relative levels of social and civic trust. The previous two sections of this report focused on the extent to which these enabling or disabling conditions are fulfilled, and this section examines the current level of community and civic engagement in Victoria.

Community and civic engagement is measured through such indicators as membership of organised groups, attendance at local community events, and being involved in the community through volunteering

Membership of an organised community group

In order to determine how active Victorian adults are in their local community, we asked survey respondents if they were a member of a sports group, a religious group, a school group, a professional or academic society or any other community or action group with the exception of a trade union.

By age and sex

Table 4-1 shows that one in four Victorian adults belong to a sports group. This is significantly higher for men (31 per cent) than women (20 per cent) and highest in those 18–24 years of age. Membership of a sports group declines with age.

Similarly, almost one in four Victorian adults belong to a professional group. This is not different between men and women but significantly higher among those 25–54 years of age.

Approximately 18 per cent of Victorian adults belong to a religious group. This is higher among women than men and in those 75 years of age or older.

Almost twice as many women (18 per cent) as men (10 per cent) belong to a school group. This is significantly higher among adults 35–54 years of age and males 18–24 years of age.

Women (22 per cent) are more likely to belong to an 'other' community or action group than men (18 per cent), and this is highest for those 55 years of age or older.

Table 4-1: Proportion of Victorian adults who belong to an organised community group, by age and sex

Age group (years)	Sports			Religious			School			Professional			Other		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
Males															
18–24	**38.6**	32.4	45.2	**15.1**	10.8	20.7	**16.3**	12.1	21.5	**14.9**	10.8	20.2	**7.9**	5.4	11.5
25–34	**28.4**	23.3	34.1	**12.4**	8.8	17.1	**6.1***	3.6	10.1	**28.9**	23.9	34.5	**11.0**	7.7	15.4
35–44	**32.1**	28.9	35.6	**16.4**	13.8	19.4	**14.9**	12.5	17.8	**32.2**	28.9	35.7	**15.0**	12.7	17.6
45–54	**34.8**	31.9	37.7	**16.5**	14.3	19.0	**12.0**	10.2	14.1	**28.5**	25.9	31.4	**17.0**	15.0	19.2
55–64	**27.3**	25.2	29.5	**15.5**	13.7	17.4	**5.4**	4.4	6.6	**24.1**	22.1	26.3	**21.8**	19.9	23.9
65–74	**29.4**	27.4	31.6	**17.7**	15.9	19.6	**4.0**	3.1	5.1	**16.3**	14.7	18.2	**30.2**	28.0	32.4
75–84	**28.9**	26.1	31.8	**24.3**	21.7	27.1	**2.8**	1.9	4.1	**12.9**	10.9	15.1	**33.8**	30.9	36.8
85+	**18.8**	14.6	23.9	**24.3**	19.5	29.9	**2.1***	1.0	4.5	**13.3**	9.5	18.3	**30.6**	25.2	36.5
18+	**31.4**	**29.8**	**33.0**	**16.0**	**14.8**	**17.3**	**9.5**	**8.5**	**10.6**	**24.5**	**23.0**	**26.0**	**17.5**	**16.3**	**18.6**
Females															
18–24	**23.3**	18.4	28.9	**22.7**	17.2	29.3	**20.2**	15.1	26.4	**27.2**	21.8	33.4	**19.4**	14.2	25.8
25–34	**18.1**	14.8	21.8	**18.1**	14.0	23.1	**19.2**	15.7	23.4	**27.5**	23.0	32.5	**16.5**	13.3	20.3
35–44	**25.0**	22.8	27.3	**19.4**	17.4	21.7	**34.2**	31.8	36.8	**30.3**	27.9	32.8	**17.9**	16.0	20.0
45–54	**22.6**	20.7	24.5	**19.6**	17.8	21.7	**21.1**	19.3	23.0	**25.2**	23.3	27.3	**18.0**	16.4	19.8
55–64	**16.8**	15.2	18.5	**19.0**	17.3	20.8	**7.1**	6.1	8.3	**20.9**	19.3	22.7	**22.0**	20.4	23.7
65–74	**16.6**	15.1	18.1	**21.5**	19.9	23.3	**4.4**	3.7	5.3	**10.7**	9.5	12.0	**34.3**	32.3	36.3
75–84	**15.5**	13.7	17.5	**31.1**	28.7	33.6	**2.5**	1.9	3.4	**7.8**	6.5	9.4	**35.0**	32.5	37.5
85+	**10.3**	8.0	13.3	**32.2**	28.0	36.6	**2.2***	1.3	3.9	**6.4**	4.4	9.0	**32.1**	27.9	36.7
18+	**20.0**	**19.0**	**21.2**	**20.8**	**19.5**	**22.1**	**17.5**	**16.4**	**18.7**	**23.0**	**21.8**	**24.4**	**21.7**	**20.6**	**22.9**
Persons															
18–24	**31.1**	27.0	35.5	**18.8**	15.2	23.0	**18.2**	14.8	22.1	**20.9**	17.4	24.9	**13.5**	10.5	17.2
25–34	**23.2**	20.1	26.6	**15.3**	12.4	18.6	**12.7**	10.3	15.4	**28.2**	24.8	31.9	**13.7**	11.3	16.6
35–44	**28.5**	26.6	30.6	**17.9**	16.2	19.8	**24.7**	22.9	26.6	**31.2**	29.2	33.4	**16.5**	15.0	18.1
45–54	**28.6**	26.9	30.3	**18.1**	16.6	19.7	**16.6**	15.3	18.0	**26.8**	25.2	28.6	**17.5**	16.2	18.9
55–64	**21.9**	20.6	23.3	**17.3**	16.0	18.6	**6.3**	5.6	7.1	**22.5**	21.2	23.9	**21.9**	20.7	23.2
65–74	**22.5**	21.2	23.8	**19.8**	18.5	21.0	**4.2**	3.6	4.9	**13.3**	12.2	14.4	**32.4**	30.9	33.9
75–84	**21.7**	20.1	23.4	**27.9**	26.2	29.8	**2.7**	2.1	3.4	**10.2**	9.0	11.5	**34.4**	32.5	36.4
85+	**13.9**	11.6	16.6	**28.8**	25.6	32.3	**2.2**	1.4	3.4	**9.3**	7.3	11.8	**31.5**	28.1	35.0
18+	**25.6**	**24.6**	**26.6**	**18.4**	**17.5**	**19.4**	**13.6**	**12.8**	**14.4**	**23.7**	**22.8**	**24.7**	**19.6**	**18.8**	**20.4**

Data are crude estimates (not age-standardised).
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

By geographic location

Table 4-2 shows that adults who live in the metropolitan local government areas of Nillumbik, Bayside and Stonnington are more likely than all Victorian adults to belong to a sports group.

Adults who live in the local government areas of Boroondara and Greater Dandenong are more likely than all Victorian adults to belong to a religious group.

More than one in five adults who live in the local government area of Stonnington belong to a school group; significantly higher than all Victorian adults.

Adults who live in the local government areas of Boroondara, Manningham, Monash, Melbourne, Yarra, Bayside, Glen Eira, Port Phillip and Stonnington are more likely to belong to a professional group than all Victorian adults.

There are no local government areas where adults are more likely to belong to an 'other' community or action group. However, adults who live in the local government areas of Brimbank, Melton, Wyndham and Greater Dandenong are less likely than all Victorian adults to belong to an 'other' community or action group.

Adults who live in the local government area of Brimbank are less likely than all Victorian adults to belong to any group, with the exception of a religious group.

Table 4-2: Proportion of adults who belong to a community group, by local government area in metropolitan Victoria

	Sports			Religious			School			Professional			Other		
		95% CI			95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**24.2**	18.9	30.5	**27.4**	20.9	35.0	**19.6**	14.5	26.0	**34.4**	28.9	40.4	**19.4**	14.9	24.8
Knox (C)	**19.5**	14.2	26.3	**16.9**	12.8	22.0	**9.2**	5.8	14.2	**20.0**	14.0	27.9	**19.7**	13.1	28.5
Manningham (C)	**26.3**	19.4	34.6	**18.9**	13.8	25.4	**14.3**	9.3	21.2	**32.7**	25.7	40.7	**13.5**	9.2	19.3
Maroondah (C)	**21.5**	16.4	27.6	**19.1**	14.7	24.5	**15.5***	9.2	25.1	**22.5**	16.9	29.3	**16.7**	12.1	22.6
Monash (C)	**21.9**	16.9	27.8	**22.9**	17.7	29.0	**13.0**	9.1	18.1	**34.9**	28.8	41.5	**17.7**	13.2	23.2
Whitehorse (C)	**32.9**	25.9	40.7	**22.7**	17.5	28.8	**15.8**	11.9	20.8	**28.7**	22.4	35.9	**17.2**	14.1	20.8
Yarra Ranges (S)	**26.9**	19.1	36.4	**17.5**	11.8	25.2	**16.5**	10.3	25.5	**21.4**	15.1	29.3	**19.2**	14.0	25.7
Eastern Metropolitan Region	**24.7**	**22.2**	**27.5**	**21.1**	**18.8**	**23.5**	**14.8**	**12.8**	**17.0**	**28.4**	**25.8**	**31.1**	**17.9**	**15.8**	**20.1**
Banyule (C)	**29.8**	22.9	37.7	**20.7**	14.5	28.5	**17.5**	12.2	24.6	**29.9**	23.2	37.5	**21.4**	15.7	28.6
Brimbank (C)	**16.1**	11.7	21.7	**21.1**	16.7	26.2	**6.5**	4.2	9.9	**15.8**	11.3	21.8	**13.5**	10.2	17.5
Darebin (C)	**20.3**	15.5	26.2	**16.9**	11.3	24.5	**17.3**	11.4	25.2	**23.5**	18.2	29.8	**23.2**	18.3	28.8
Hobsons Bay (C)	**26.1**	19.6	33.9	**19.5**	13.7	27.0	**9.3**	6.2	13.7	**25.1**	18.4	33.3	**17.6**	13.5	22.5
Hume (C)	**24.2**	19.0	30.3	**19.6**	15.0	25.2	**13.6**	9.7	18.7	**13.9**	9.9	19.2	**15.7**	11.7	20.8
Maribyrnong (C)	**24.9**	18.6	32.5	**16.6**	11.7	23.1	**12.3**	8.4	17.6	**22.6**	18.0	27.8	**15.8**	12.1	20.4
Melbourne (C)	**19.1**	14.0	25.5	**20.0**	14.8	26.4	**11.0**	7.2	16.5	**41.7**	35.0	48.6	**24.7**	19.4	31.0
Melton (S)	**17.2**	12.6	23.1	**25.0**	18.6	32.7	**9.7**	7.2	13.1	**11.4**	7.6	16.7	**10.9**	8.2	14.2
Moonee Valley (C)	**24.3**	18.9	30.7	**17.8**	13.6	22.8	**14.7**	10.9	19.5	**24.8**	19.5	30.9	**19.3**	14.6	25.1
Moreland (C)	**26.0**	19.8	33.2	**17.7**	12.7	24.2	**12.3**	8.0	18.3	**30.1**	23.7	37.3	**24.4**	19.0	30.8
Nillumbik (S)	**38.5**	31.5	46.1	**10.7**	7.3	15.5	**13.7**	10.2	18.1	**26.6**	20.4	34.0	**18.1**	13.7	23.5
Whittlesea (C)	**24.3**	19.4	29.8	**20.5**	15.9	25.9	**9.3**	6.3	13.4	**17.6**	13.3	22.9	**16.7**	13.2	21.0
Wyndham (C)	**20.2**	15.9	25.3	**15.3**	11.5	20.1	**12.2**	8.5	17.1	**16.7**	12.7	21.5	**13.8**	10.7	17.7
Yarra (C)	**25.4**	16.4	37.0	**9.0**	5.8	13.6	**11.5**	7.0	18.2	**36.9**	29.1	45.5	**18.4**	14.6	22.9
North & West Metropolitan Region	**22.9**	**21.2**	**24.7**	**18.9**	**17.3**	**20.6**	**12.3**	**11.0**	**13.7**	**23.0**	**21.4**	**24.8**	**18.6**	**17.2**	**20.1**
Bayside (C)	**38.9**	30.2	48.3	**13.0**	8.9	18.7	**16.9**	11.7	23.9	**40.4**	31.9	49.5	**18.2**	12.7	25.5
Cardinia (S)	**23.0**	18.0	28.8	**13.3**	9.7	17.8	**11.9**	8.2	17.0	**12.0**	8.8	16.2	**20.4**	15.6	26.1
Casey (C)	**20.7**	15.3	27.5	**22.7**	18.1	28.1	**11.8**	8.1	16.9	**12.7**	9.4	16.9	**16.4**	12.6	21.1
Frankston (C)	**30.8**	24.8	37.6	**12.7**	8.9	17.8	**14.6**	10.5	19.9	**22.2**	16.7	28.7	**15.8**	12.3	20.1
Glen Eira (C)	**20.5**	15.6	26.5	**18.4**	12.3	26.6	**19.9**	13.5	28.3	**31.7**	24.9	39.4	**16.0**	12.1	20.7
Greater Dandenong (C)	**21.0**	15.3	28.1	**29.1**	23.1	35.9	**12.4**	8.1	18.4	**12.5**	8.5	18.1	**13.6**	10.2	17.8
Kingston (C)	**27.4**	20.7	35.4	**11.0**	8.3	14.4	**10.7**	7.0	16.0	**22.1**	15.6	30.2	**17.2**	11.4	25.2
Mornington Peninsula (S)	**26.7**	19.9	34.9	**8.5**	5.8	12.2	**12.1**	7.9	18.0	**17.0**	11.8	24.0	**26.1**	18.7	35.1
Port Phillip (C)	**19.9**	14.3	26.9	**17.3**	10.5	27.1	**9.6**	6.4	14.0	**36.0**	26.5	46.7	**16.7**	12.3	22.3
Stonnington (C)	**34.8**	27.2	43.2	**16.4**	12.0	22.0	**20.6**	15.2	27.3	**49.8**	42.1	57.5	**16.6**	12.4	21.9
Southern Metropolitan Region	**25.5**	**23.3**	**27.8**	**17.6**	**15.6**	**19.7**	**13.6**	**11.9**	**15.5**	**24.0**	**21.8**	**26.4**	**17.3**	**15.5**	**19.1**
Victoria	**25.7**	**24.6**	**26.7**	**18.6**	**17.6**	**19.5**	**13.7**	**12.8**	**14.5**	**23.7**	**22.7**	**24.7**	**19.4**	**18.6**	**20.2**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 4-3 shows that adults who live in the rural regions of Barwon-South Western, Grampians and Hume are *more* likely than all Victorian adults to belong to a sports group, although there is no difference between rural and metropolitan Victoria overall. Those who live in the rural local government areas of Colac-Otway, Corangamite, Moyne, Queenscliffe, Southern Grampians, Surf Coast, Warrnambool, Ararat, Hindmarsh, Horsham, West Wimmera, Yarriambiack, Alpine, Greater Shepparton, Moira, Towong, Buloke, Gannawarra, Loddon and Swan Hill are *more* likely than all Victorian adults to belong to a sports group. Approximately 45 per cent of adults who live in the local government area of Horsham belong to a sports group – the highest in Victoria. In contrast, only 18 per cent of adults who live in the local government area of Latrobe belong to a sports group, which is significantly *lower* than all Victorian adults.

Almost one-third of adults who live in the local government areas of Hindmarsh and Yarriambiack belong to a religious group – *higher* than all Victorian adults.

Those who live in the rural local government areas of Warrnambool, West Wimmera, Yarriambiack, Greater Shepparton, Towong and Gannawarra are *more* likely than all Victorian adults to belong to a school group. In contrast, only 8 per cent of adults who live in the local government area of Mitchell belong to a school group, which is *lower* than all Victorian adults (14 per cent).

Overall, adults who live in rural Victoria (20 per cent) are *less* likely to belong to a professional group than those who live in metropolitan Victoria (25 per cent). However, adults who live in the rural local government area of Queenscliffe (39 per cent) are *more* likely than all Victorian adults to belong to a professional group.

Overall, adults who live in rural Victoria (23 per cent) are *more* likely to belong to an 'other' local community or action group than those who live in metropolitan Victoria (18 per cent), and includes the rural local government areas of Colac-Otway, Corangamite, Glenelg, Moyne, Queenscliffe, Southern Grampians, Hepburn, Hindmarsh, Northern Grampians, Pyrenees, West Wimmera, Yarriambiack, Alpine, Indigo, Mansfield, Strathbogie, Towong, Buloke, Loddon, Macedon Ranges, Mount Alexander, and Swan Hill.

Table 4-3: Proportion of adults who belong to a community group, by local government area in rural Victoria

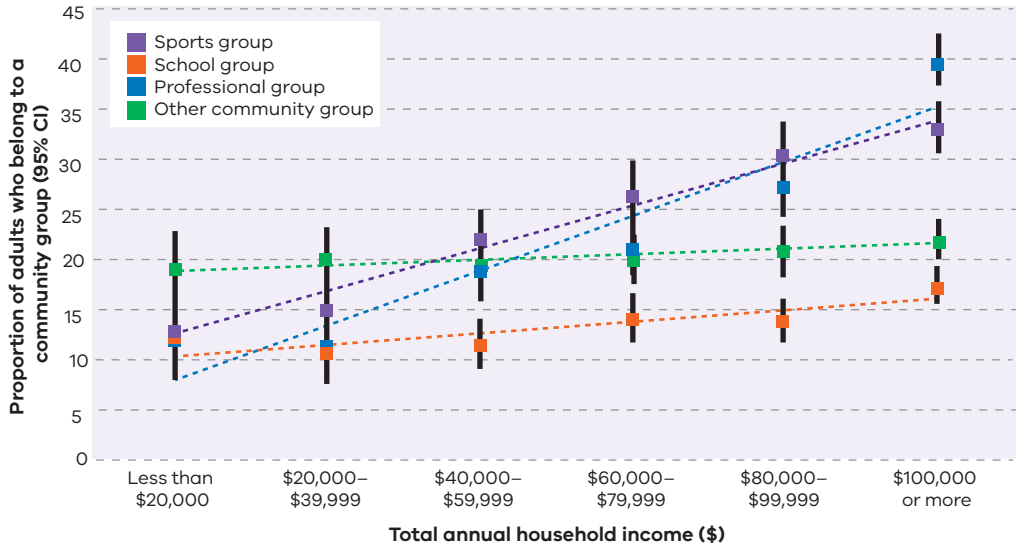
	Sports			Religious			School			Professional			Other		
		95% CI			95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	37.6	28.1	48.1	12.4	8.8	17.4	16.0*	9.5	25.9	16.7	11.5	23.7	29.3	21.5	38.4
Corangamite (S)	38.5	31.0	46.6	18.2	13.5	24.1	20.6	13.9	29.4	14.2	10.0	20.0	28.0	22.4	34.4
Glenelg (S)	29.8	23.7	36.7	19.1	13.8	26.0	15.0	10.0	21.8	12.1	7.8	18.1	32.6	25.5	40.5
Greater Geelong (C)	27.9	21.7	35.2	19.9	14.1	27.3	12.8*	7.7	20.6	19.3	13.5	26.8	17.9	13.7	23.0
Moyne (S)	45.1	36.8	53.7	14.9	11.7	18.8	17.8	13.3	23.5	21.0	15.6	27.7	29.4	25.0	34.3
Queenscliffe (B)	38.1	27.2	50.2	14.3*	7.4	25.6	15.1*	8.8	24.6	38.8	28.7	50.0	31.8	23.9	40.8
Southern Grampians (S)	35.5	27.1	44.8	27.3	19.3	37.0	16.2	11.6	22.1	15.6	11.0	21.7	26.2	21.2	31.9
Surf Coast (S)	41.2	33.1	49.7	13.4	9.6	18.4	15.6	10.2	23.0	30.6	21.9	40.9	23.1	18.2	28.8
Warrnambool (C)	36.2	28.3	44.9	20.8	16.1	26.3	24.6	17.5	33.3	19.3	14.3	25.5	22.8	17.1	29.6
Barwon-South Western Region	32.0	27.6	36.7	19.4	15.2	24.4	15.4	11.5	20.4	19.9	15.7	25.0	21.3	18.5	24.4
Bass Coast (S)	22.4	16.9	29.0	11.3	7.1	17.4	11.3	6.9	17.8	15.2	10.4	21.6	23.0	18.0	28.9
Baw Baw (S)	25.1	19.1	32.2	17.6	12.8	23.5	10.9	6.9	16.7	19.1*	10.6	32.0	18.3	14.4	23.1
East Gippsland (S)	31.3	22.6	41.5	15.2	10.2	22.1	13.7	9.1	20.2	20.4	12.5	31.6	22.3	17.6	27.9
Latrobe (C)	17.6	12.8	23.8	11.1	7.9	15.4	12.4	7.7	19.4	14.8	10.1	21.2	22.0	15.8	29.8
South Gippsland (S)	30.4	23.1	39.0	10.8	8.3	14.0	14.8	10.7	20.1	13.0	9.7	17.2	25.0	19.6	31.2
Wellington (S)	30.5	23.3	38.8	15.3	10.8	21.2	18.3	12.6	25.8	18.7	13.2	25.9	21.6	15.9	28.8
Gippsland Region	24.7	21.7	27.9	13.6	11.6	15.8	13.4	11.0	16.1	16.7	13.4	20.6	22.1	19.4	25.1
Ararat (RC)	35.1	27.1	44.1	18.8	11.8	28.5	11.5	8.0	16.3	20.4	13.4	29.6	25.1	19.5	31.7
Ballarat (C)	32.3	25.5	40.0	22.0	16.1	29.3	19.0	13.3	26.4	29.6	22.9	37.2	23.9	17.6	31.4
Golden Plains (S)	29.6	22.8	37.5	14.2	9.4	20.8	17.8	12.0	25.6	20.0	14.0	27.8	21.8	15.8	29.3
Hepburn (S)	24.7	17.2	34.2	8.0	6.2	10.2	14.1*	8.3	23.0	20.0*	10.8	34.1	24.8	20.3	29.9
Hindmarsh (S)	38.7	30.0	48.1	32.6	24.0	42.5	20.2	14.1	28.2	18.3	12.0	27.1	31.6	25.0	39.1
Horsham (RC)	45.4	36.2	54.9	24.6	17.8	33.1	21.3	12.7	33.6	19.4	12.6	28.5	24.7	17.2	34.0
Moorabool (S)	27.4	21.2	34.8	16.9	11.9	23.5	14.3	9.6	20.7	19.5	14.1	26.4	22.5	17.8	28.0
Northern Grampians (S)	35.6	26.6	45.7	13.2	9.9	17.4	12.9	8.5	19.1	18.4	12.1	27.0	33.8	25.6	43.1
Pyrenees (S)	28.8	20.9	38.3	7.8	5.0	11.9	11.8	7.2	18.9	21.3	12.9	33.1	34.0	25.7	43.3
West Wimmera (S)	41.7	33.2	50.7	17.4	13.4	22.3	20.6	15.0	27.5	29.5	21.6	39.0	45.2	36.6	54.1
Yarriambiack (S)	41.8	33.9	50.1	30.5	24.7	37.0	28.2	19.7	38.7	17.2	12.2	23.7	33.6	27.1	40.8
Grampians Region	32.5	28.5	36.7	19.9	16.4	23.8	17.6	14.2	21.5	23.9	20.1	28.0	25.8	22.0	29.9
Alpine (S)	42.3	35.3	49.7	10.1	7.2	14.1	12.6	8.1	19.0	27.8	17.6	41.1	28.3	20.3	37.9
Benalla (RC)	34.9	26.1	44.9	15.0	10.1	21.8	18.2	11.0	28.6	18.3	11.3	28.2	25.4	19.0	33.1
Greater Shepparton (C)	40.3	33.1	47.9	20.0	14.7	26.6	22.8	15.7	31.9	18.6	13.7	24.7	21.5	16.7	27.2
Indigo (S)	25.9	18.2	35.6	12.0	8.9	16.0	16.3	10.6	24.3	26.7	18.3	37.1	28.4	21.4	36.7
Mansfield (S)	22.0	16.6	28.5	11.6	7.2	18.3	13.8	8.9	20.8	21.2	13.0	32.6	36.5	25.7	48.8
Mitchell (S)	18.5	13.2	25.4	9.1	6.6	12.6	7.5	5.0	11.3	13.0	9.4	17.7	22.7	17.9	28.3
Moira (S)	38.5	30.2	47.4	17.4*	9.7	29.3	17.0*	9.0	29.7	20.3*	11.8	32.6	20.0	14.4	27.1
Murrindindi (S)	24.1	17.3	32.6	9.3	5.7	14.6	13.9	9.2	20.5	17.3	12.6	23.3	24.0	19.1	29.8
Strathbogie (S)	22.7	16.8	30.0	12.4	9.4	16.2	14.7	9.3	22.5	24.6*	14.5	38.5	31.8	21.9	43.7
Towong (S)	44.9	35.8	54.4	14.3	10.8	18.8	23.3	15.0	34.2	22.1	14.0	33.2	39.8	31.9	48.2
Wangaratta (RC)	32.8	22.2	45.5	17.3	12.2	23.9	18.6	12.2	27.4	25.3	15.6	38.2	20.4	15.5	26.4
Wodonga (RC)	24.6	18.6	31.7	13.6	9.2	19.5	16.0	11.0	22.9	13.9	9.6	19.7	23.1	18.3	28.8
Hume Region	31.0	27.8	34.4	15.1	12.8	17.6	16.8	13.8	20.2	18.8	16.3	21.6	23.8	21.7	26.0
Buloke (S)	41.7	33.0	51.0	22.7	16.5	30.3	20.8	14.3	29.3	16.9	11.6	23.9	36.1	27.9	45.2
Campaspe (S)	29.4	21.4	38.9	12.6	9.1	17.1	10.1	6.6	15.3	14.8	10.2	21.0	24.4	17.9	32.3
Central Goldfields (S)	30.8	22.7	40.4	15.0	9.2	23.4	9.5	6.0	14.8	10.1	7.2	14.1	27.9	20.0	37.4
Gannawarra (S)	43.9	30.9	57.8	18.7	14.7	23.6	29.6	19.1	42.7	13.4	9.3	18.9	22.4	17.5	28.3
Greater Bendigo (C)	24.7	19.0	31.4	15.3	9.6	23.7	10.3	7.2	14.6	24.9	17.9	33.5	17.8	14.5	21.7
Loddon (S)	37.7	27.9	48.6	18.6	12.8	26.2	15.1	9.5	23.2	22.8	14.1	34.7	42.1	30.7	54.4
Macedon Ranges (S)	23.6	17.0	31.8	12.9	8.6	18.8	19.4*	10.2	34.0	19.9	15.1	25.7	32.0	20.7	45.8
Mildura (RC)	31.9	23.8	41.2	14.2	10.6	18.8	16.3	10.0	25.4	22.8	15.2	32.8	18.6	15.1	22.6
Mount Alexander (S)	25.6	16.8	37.0	18.3*	10.5	30.0	18.7*	10.8	30.2	27.2	18.8	37.7	29.4	23.5	36.0
Swan Hill (RC)	39.3	29.6	49.8	19.9	13.8	27.9	14.2	9.3	21.2	23.7	15.3	34.8	30.4	21.3	41.3
Loddon Mallee Region	30.1	25.4	35.2	15.4	12.4	19.1	13.9	11.3	17.0	21.9	18.3	26.1	23.5	20.8	26.5
Victoria	25.7	24.6	26.7	18.6	17.6	19.5	13.7	12.8	14.5	23.7	22.7	24.7	19.4	18.6	20.2

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Does community group membership vary by socioeconomic status?

Figure 4-1 shows that membership of a sport, school, professional or other community or action group is associated with socioeconomic status. However, membership of a religious group is not. As total annual household income increases the proportion of Victorian adults belonging to a sport, school, professional or other community or action group also increases. In contrast, the proportion of Victorian adults who belong to a religious group does not vary by total annual household income.

Figure 4-1: Proportion of Victorian adults who belong to a community group, by total annual household income



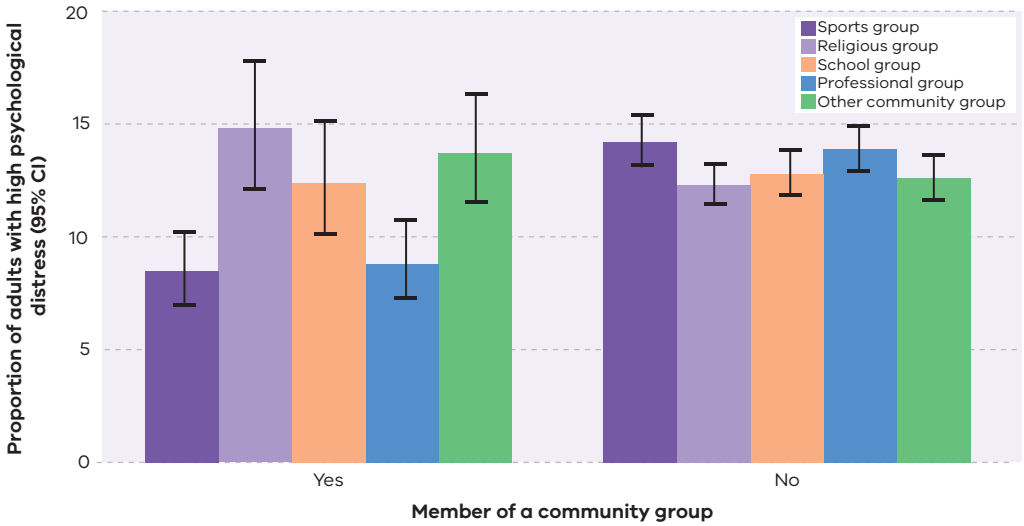
Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is community group membership associated with health outcomes?

Figure 4-2 shows that adults who belong to a sports or professional group are significantly *less* likely to be psychologically distressed than those who do not, suggesting that membership of a sports or professional group is associated with better mental health.

In contrast, there are no significant differences in the proportions of psychological distressed adults whether or not they are a member of a religious, school or other community or action group.

Figure 4-2: The relationship between community group membership and mental health

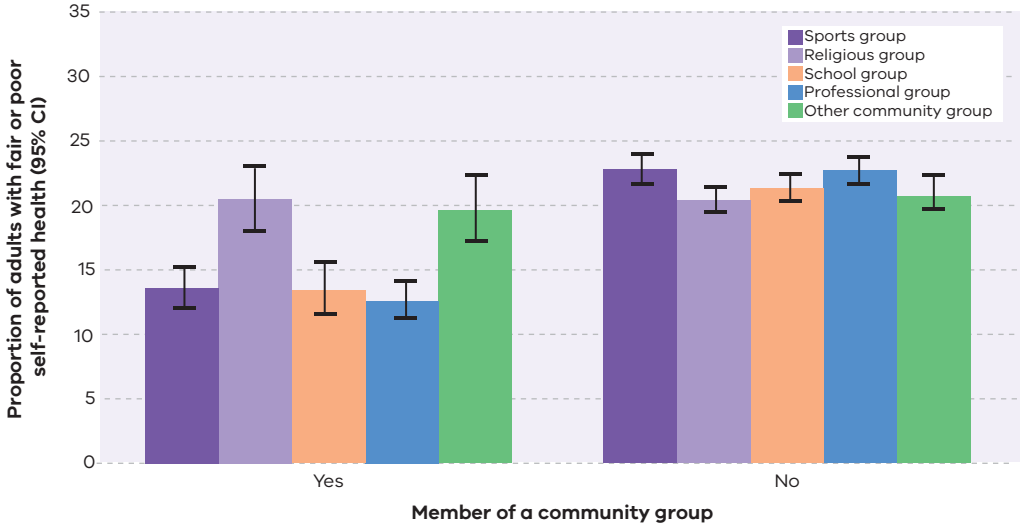


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 4-3 shows that adults who belong to a sports, school and/or professional group are significantly *less* likely to report being in only fair or poor health than those who do not, suggesting that membership of a sports, school and/or professional group is associated with better physical health.

There are no significant differences in the proportions of adults who report being in fair or poor health whether or not they are a member of a religious or other local community group.

Figure 4-3: The relationship between community group membership and physical health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of findings

- 31 per cent of men and 20 per cent of women in Victoria belong to a sports club.
- 21 per cent of women and 16 per cent of men belong to a religious organisation.
- 18 per cent of women and 10 per cent of men belong to a school group.
- 25 per cent of men and 23 per cent of women belong to a professional organisation.
- 22 per cent of women and 18 per cent of men belong to an 'other' local community group.
- Household income is associated with membership of a sports, school, professional and/or other local community action group; as household income increases so does group membership.
- There is no relationship between membership of a religious organisation and household income.
- Membership of a sports club or professional organisation is associated with lower psychological distress and better self-reported health status.
- Membership of a school group is associated with better self-reported health status.

Interpretation of the findings

Being a member of a local group such as a sports club is a measure of social engagement. However, membership of a local group requires having sufficient leisure time and sometimes a financial commitment, as in the case of a sports club, which may necessitate the purchase of uniform and sports equipment. Time and financial barriers to participation are more common in those with fewer resources who may be required to work longer hours in low-paid jobs, and at unsociable hours such as the weekends. This may explain, at least in part, why membership of a sport, school or other local community action group declines with declining socioeconomic status, measured through household income. Similar findings have been noted in the literature.

Our finding that club membership is associated with better self-reported health is consistent with a study that investigated the extent to which social and environmental factors impact on self-reported health (Jones, Heim et al. 2014). Club membership is found to be a significant predictor of good self-reported health. However, whether good health enables participation and/or participation improves health is unclear as the data is cross-sectional.

In the case of a sports club, one would logically assume that there is a bi-directional path of causality, whereby an individual needs to be in relatively good health to be able to participate in most sports, and the physical exercise gained by participation is protective of health. However, club membership also impacts positively on health by providing opportunities for social interaction and the development of social ties.

We observed that membership of a sports club is significantly higher in rural Victoria than metropolitan Victoria. This is consistent with Australian findings, and popular myth holds that sport is the social glue in rural areas, contributing to identity, a sense of community and a spirit of egalitarianism. However, this view ignores the exclusion and inequality that are often simultaneously generated (see Box 4.1 at the end of this section).

Attendance at a local community event

A further indicator of community participation is attendance at a local community event. Survey respondents are asked, 'Have you attended a local community event in the past six months (like a street festival, sports event at the local oval, school fete, craft exhibition)?'

By age and sex

Table 4-4 shows that approximately 59 per cent of Victorian adults attended a local community event in the six months preceding the survey. Victorian men and women 35–54 years of age are more likely to have attend a local community event compared with all men and women.

Table 4-4: Proportion of Victorian adults who attended a local community event, by age and sex

Age group (years)	Yes			No		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
Males						
18–24	**47.6**	41.0	54.2	**52.0**	45.4	58.5
25–34	**58.6**	52.4	64.5	**41.0**	35.1	47.1
35–44	**67.7**	64.1	71.1	**31.8**	28.4	35.3
45–54	**61.9**	58.9	64.9	**37.9**	34.9	40.9
55–64	**55.5**	53.0	58.0	**43.8**	41.3	46.4
65–74	**54.9**	52.5	57.3	**44.6**	42.3	47.0
75–84	**46.5**	43.5	49.7	**53.0**	49.9	56.1
85+	**39.8**	33.9	46.1	**60.0**	53.8	65.9
18+	**57.6**	**55.8**	**59.4**	**41.9**	**40.2**	**43.7**
Females						
18–24	**58.1**	51.5	64.4	**41.7**	35.4	48.3
25–34	**63.4**	58.4	68.1	**35.7**	31.0	40.7
35–44	**72.0**	69.6	74.4	**27.7**	25.4	30.2
45–54	**62.0**	59.6	64.3	**37.5**	35.2	39.9
55–64	**54.1**	51.9	56.2	**45.4**	43.3	47.6
65–74	**52.3**	50.1	54.4	**47.4**	45.2	49.5
75–84	**47.6**	45.0	50.3	**51.4**	48.7	54.0
85+	**48.1**	43.3	52.9	**51.2**	46.4	55.9
18+	**60.1**	**58.7**	**61.6**	**39.3**	**37.9**	**40.8**
Persons						
18–24	**52.7**	48.0	57.3	**47.0**	42.3	51.7
25–34	**61.0**	57.0	64.8	**38.3**	34.5	42.3
35–44	**69.9**	67.7	72.0	**29.7**	27.7	31.9
45–54	**62.0**	60.0	63.8	**37.7**	35.8	39.6
55–64	**54.8**	53.1	56.4	**44.6**	43.0	46.3
65–74	**53.5**	51.9	55.1	**46.1**	44.5	47.7
75–84	**47.1**	45.1	49.1	**52.1**	50.1	54.1
85+	**44.6**	40.8	48.4	**54.9**	51.1	58.7
18+	**58.9**	**57.8**	**60.0**	**40.6**	**39.5**	**41.8**

Data are crude estimates (not age-standardised).
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

By geographic location

Table 4-5 shows that adults who live in the North & West Metropolitan and Southern Metropolitan regions of Victoria are less likely than all Victorian adults to attend a local community event.

Victorian adults who live in the local government areas of Yarra Ranges and Nillumbik are more likely to attend a local community event compared with all Victorian adults. In contrast, those who live in the local government areas of Monash, Brimbank, Hume, Melton, Whittlesea, Casey and Greater Dandenong are less likely to attend a local community event.

Table 4-5: Proportion of adults who attended a local community event, by local government area in metropolitan Victoria

	Yes			No		
		95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL
Boroondara (C)	**57.7**	50.2	64.9	**41.3**	34.2	48.8
Knox (C)	**50.9**	43.4	58.3	**48.8**	41.4	56.3
Manningham (C)	**54.4**	46.5	62.1	**43.7**	36.1	51.6
Maroondah (C)	**59.6**	50.2	68.3	**40.3**	31.6	49.7
Monash (C)	**45.6**	39.2	52.2	**53.3**	46.7	59.7
Whitehorse (C)	**58.2**	50.8	65.3	**41.5**	34.4	49.0
Yarra Ranges (S)	**68.3**	60.9	75.0	**31.4**	24.8	38.9
Eastern Metropolitan Region	**55.8**	**52.8**	**58.7**	**43.5**	**40.6**	**46.5**
Banyule (C)	**64.0**	57.1	70.4	**35.8**	29.5	42.7
Brimbank (C)	**37.7**	31.9	43.9	**62.1**	55.9	67.9
Darebin (C)	**57.2**	49.5	64.7	**42.8**	35.3	50.5
Hobsons Bay (C)	**61.1**	52.9	68.7	**38.5**	30.9	46.7
Hume (C)	**42.5**	37.1	48.1	**57.4**	51.8	62.8
Maribyrnong (C)	**58.3**	51.3	65.0	**41.3**	34.7	48.3
Melbourne (C)	**60.0**	52.8	66.8	**39.5**	32.7	46.8
Melton (S)	**50.3**	43.0	57.6	**49.4**	42.1	56.7
Moonee Valley (C)	**54.6**	47.6	61.4	**45.2**	38.4	52.2
Moreland (C)	**51.6**	44.2	58.9	**46.7**	39.6	54.0
Nillumbik (S)	**70.2**	63.6	76.0	**29.5**	23.7	36.1
Whittlesea (C)	**49.2**	43.4	55.0	**50.6**	44.8	56.4
Wyndham (C)	**52.7**	46.5	58.8	**46.8**	40.8	53.0
Yarra (C)	**63.0**	54.8	70.5	**35.8**	28.4	43.9
North & West Metropolitan Region	**52.8**	**50.8**	**54.7**	**46.8**	**44.8**	**48.8**
Bayside (C)	**62.7**	53.3	71.2	**37.2**	28.7	46.6
Cardinia (S)	**61.6**	55.1	67.8	**38.0**	31.9	44.6
Casey (C)	**46.5**	40.0	53.1	**52.9**	46.2	59.4
Frankston (C)	**59.2**	52.9	65.1	**40.2**	34.3	46.3
Glen Eira (C)	**51.5**	43.8	59.2	**48.4**	40.8	56.2
Greater Dandenong (C)	**43.2**	36.3	50.4	**56.6**	49.5	63.5
Kingston (C)	**53.5**	45.1	61.7	**46.1**	37.9	54.5
Mornington Peninsula (S)	**66.8**	58.6	74.0	**32.5**	25.3	40.6
Port Phillip (C)	**50.8**	41.7	59.8	**48.9**	39.9	58.0
Stonnington (C)	**59.5**	51.6	66.9	**39.9**	32.5	47.8
Southern Metropolitan Region	**54.5**	**51.8**	**57.1**	**45.1**	**42.5**	**47.8**
Victoria	**58.7**	**57.5**	**59.9**	**40.8**	**39.7**	**42.0**

Data were age-standardised to the 2011 Victorian population
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 4-6 shows that adults who live in any of the five rural regions of Victoria are significantly more likely to attend a local community event compared with all Victorian adults. Moreover, adults who live in 39 of the 48 rural local government areas (81 per cent) are more likely to attend a local community event than all Victorian adults.

Table 4-6: Proportion of adults who attended a local community event, by local government area in rural Victoria

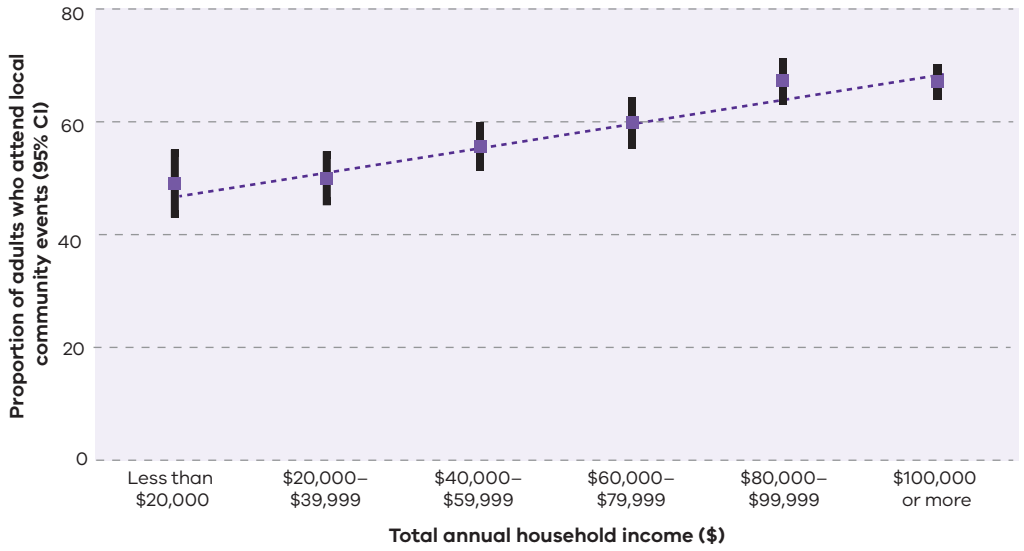
	Yes			No		
		95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL
Colac-Otway (S)	72.6	61.9	81.2	27.0	18.4	37.7
Corangamite (S)	75.9	67.1	82.9	23.6	16.6	32.4
Glenelg (S)	70.3	62.2	77.3	29.5	22.5	37.6
Greater Geelong (C)	71.2	63.8	77.6	28.5	22.1	35.9
Moyne (S)	85.1	79.4	89.4	14.7	10.4	20.4
Queenscliffe (B)	79.7	62.9	90.1	20.3*	9.9	37.1
Southern Grampians (S)	78.9	70.7	85.3	20.9	14.6	29.1
Surf Coast (S)	78.4	71.0	84.4	21.4	15.5	28.8
Warrnambool (C)	82.1	77.2	86.2	16.5	12.6	21.3
Barwon-South Western Region	74.4	**69.8**	**78.5**	25.2	**21.1**	**29.8**
Bass Coast (S)	**66.5**	55.5	76.0	**33.3**	23.8	44.3
Baw Baw (S)	**65.6**	55.3	74.5	**34.2**	25.2	44.5
East Gippsland (S)	79.5	74.7	83.6	20.5	16.4	25.3
Latrobe (C)	**60.4**	50.3	69.6	**37.5**	28.4	47.6
South Gippsland (S)	72.8	64.1	80.0	27.2	20.0	35.8
Wellington (S)	75.2	66.0	82.5	23.8	16.4	33.1
Gippsland Region	68.2	**63.7**	**72.3**	30.9	**26.8**	**35.4**
Ararat (RC)	74.4	65.8	81.5	24.4	17.5	33.0
Ballarat (C)	70.3	62.7	77.0	29.4	22.7	37.0
Golden Plains (S)	71.0	63.6	77.4	29.0	22.6	36.4
Hepburn (S)	74.4	66.2	81.1	25.5	18.7	33.6
Hindmarsh (S)	83.8	77.2	88.8	16.0	11.0	22.6
Horsham (RC)	75.4	62.5	84.9	24.2	14.7	37.1
Moorabool (S)	69.6	63.3	75.2	30.0	24.4	36.4
Northern Grampians (S)	78.9	71.1	85.0	20.7	14.6	28.5
Pyrenees (S)	73.7	64.5	81.1	25.9	18.5	35.0
West Wimmera (S)	84.2	77.8	88.9	15.5	10.7	21.8
Yarriambiack (S)	76.2	64.4	85.0	23.7	14.9	35.5
Grampians Region	71.9	**67.6**	**75.8**	27.8	**23.9**	**32.1**
Alpine (S)	87.5	83.6	90.6	12.4	9.4	16.3
Benalla (RC)	78.6	70.5	85.0	20.9	14.6	29.0
Greater Shepparton (C)	70.8	62.3	78.0	29.2	21.9	37.6
Indigo (S)	79.3	69.5	86.6	20.5	13.3	30.4
Mansfield (S)	82.3	73.5	88.7	17.4	11.1	26.2
Mitchell (S)	**58.1**	47.6	67.8	**41.7**	32.0	52.2
Moira (S)	77.4	69.8	83.5	22.2	16.1	29.8
Murrindindi (S)	**66.4**	58.4	73.6	**33.2**	26.0	41.3
Strathbogie (S)	**70.1**	59.6	78.9	**29.7**	20.9	40.2
Towong (S)	78.4	68.4	85.9	21.5	14.0	31.5
Wangaratta (RC)	76.2	65.8	84.2	23.7	15.7	34.1
Wodonga (RC)	70.6	63.2	77.0	29.3	22.9	36.7
Hume Region	71.6	**67.7**	**75.1**	28.2	**24.7**	**32.1**
Buloke (S)	79.7	69.0	87.4	20.3	12.6	30.9
Campaspe (S)	**66.0**	56.2	74.7	**33.8**	25.2	43.7
Central Goldfields (S)	**66.9**	56.5	75.9	**29.5**	21.1	39.7
Gannawarra (S)	83.6	76.8	88.8	15.9	10.8	22.8
Greater Bendigo (C)	69.8	61.5	77.0	30.2	23.0	38.5
Loddon (S)	78.2	67.0	86.4	21.5	13.4	32.7
Macedon Ranges (S)	**68.7**	55.6	79.3	**31.0**	20.4	44.1
Mildura (RC)	79.0	70.5	85.5	20.8	14.3	29.3
Mount Alexander (S)	85.4	81.3	88.7	14.5	11.2	18.6
Swan Hill (RC)	85.5	82.3	88.2	14.3	11.6	17.5
Loddon Mallee Region	73.3	**69.0**	**77.2**	26.4	**22.6**	**30.7**
Victoria	**58.7**	**57.5**	**59.9**	**40.8**	**39.7**	**42.0**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Does local community event attendance vary by socioeconomic status?

Figure 4-4 shows that the higher the total annual household income, the more likely an adult attends a local community event in Victoria. Therefore, local community event attendance is associated with socioeconomic status.

Figure 4-4: Proportion of Victorian adults who attend local community events, by total annual household income

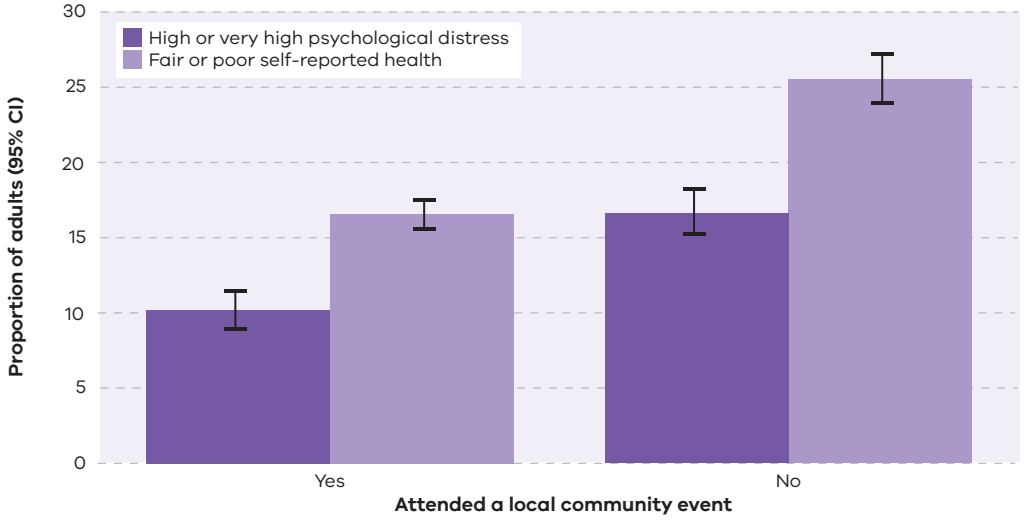


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is local community event attendance associated with health outcomes?

Figure 4-5 shows that adults who attend local community events in Victoria are less likely to be psychological distressed and to report being in fair or poor health compared with those who do not attend local community events. Therefore it appears that local community event attendance is associated with better mental and physical health.

Figure 4-5: The relationship between local community event attendance and health outcomes



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of findings

- Almost 59 per cent of Victorian adults attend local community events.
- Adults who live in the metropolitan local government areas of Yarra Ranges and Nillumbik are significantly more likely to attend a local community event, while those who live in Monash, Brimbank, Hume, Melton, Whittlesea, Casey and Greater Dandenong are less likely.
- Adults who live in rural Victoria are significantly more likely to attend local community events than those who live in metropolitan Victoria.
- Local community event attendance is associated with socioeconomic status; as household income declines so does attendance.
- Non-attendance of local community events is associated with poor mental and physical health.

Interpretation of the findings

Local community events offer opportunities for social contact and possibly increase social ties. However, attendance declines with declining socioeconomic status, measured by household income. Depending on the nature of the local community event, it is possible that there may be financial barriers and/or the type of event may be of less interest to people of lower socioeconomic status. Given that people of lower socioeconomic status are often employed in casual jobs and/or jobs that require working on weekends, and that local community events are more likely to be held on a weekend or public holiday, it may be that many people of lower socioeconomic status are simply unable to attend due to work commitments. However, in the absence of any specific data to support these hypotheses, the reason for the socioeconomic gradient in local community event attendance is currently unknown and may vary according to the event and when it is held.

People who attend local community events are healthier than those who do not, consistent with the literature. Of course, poor mental and/or physical health may preclude attendance at a local community event, but whether attending a local community event actually promotes better health cannot be determined from our data due to its cross-sectional nature. However, there is evidence in the literature that individuals who engage with the community believe that this has benefits for their physical and mental health as well as increased self-confidence and self-esteem, a sense of personal empowerment and better social relationships (Attree, French et al. 2011).

Membership of a sports club, school group, professional organisation and/or a local community group and attending local community events offers opportunities to build bridging social capital, particularly in areas of great diversity. Bridging social capital consists of weak social ties between people who see themselves as different from each other, such as people of low and high socioeconomic status or different ethnicities. It is these weak social ties that act as the social glue to hold communities together. Therefore building bridging social capital builds social cohesion.

However, failure to address potential barriers that disproportionately affect certain groups of the population (for example, financial barriers that impact those of low socioeconomic status) runs the risk of building strong bonding social capital, at the expense of bridging social capital, thus reinforcing social division. Bonding social capital

consists of strong social ties between people who see themselves as similar. Bonding social capital is inward looking and reinforces exclusive identities and homogenous groups, often resulting in hostility towards those not in the group. Thus bonding social capital can cause social problems such as racism, sectarianism, social exclusion and corruption (Tonts 2005).

Without the correct balance between bridging and bonding social capital, communities high in bonding but low in bridging social capital are divided communities with the plethora of social problems that follow. Box 4.1 illustrates the importance of getting the balance right between bonding and bridging social capital.

Box 4.1: Inclusion and exclusion in sports clubs

In a study of sports club membership in a rural community in Western Australia, the author found that sports club membership was as high as 60 per cent in women and 63 per cent in men, providing important opportunities for social interaction and generating social capital (Tonts 2005). However, the main type of social capital generated was the bonding kind, as participation was often divided along socioeconomic class, ethnic and gender lines.

At football matches, for example, farmers and small business men congregated while labourers and other lower socioeconomic occupations congregated separately. Moreover, there was a large Aboriginal population, but Aboriginal participation was low and only for specific sports, such as football, which they were believed to be more suited to. The residents believed that Aboriginal players were treated well as long as they were good players.

Once an Aboriginal player retired from sport, the social status that he had acquired through participation declined, suggesting that the bridging social capital built between the Aboriginal and non-Aboriginal residents failed to translate into substantial changes in their social status in the community.

However, it was argued that had Aboriginal people not participated there would not have been any bridging social capital in the first place. Similarly, women were often excluded from some sporting activities, and those who were not interested or not good at sport suffered an acute sense of social exclusion.

Volunteerism

A further indicator of community participation is volunteerism. We asked survey respondents, 'Do you help out a local group as a volunteer?'

By age and sex

Table 4-7 shows that women 35–54 of age and 65–74 years of age and men 65–84 years of age are significantly more likely to volunteer for a local group compared with all other age groups.

Table 4-7: Proportion of Victorian adults who volunteer, by age and sex

Age group (years)	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	76.3	70.5	81.3	9.9	6.7	14.4	13.8	10.0	18.6
25–34	74.2	68.7	78.9	11.6	8.3	16.0	13.4	10.1	17.6
35–44	60.0	56.4	63.5	15.8	13.3	18.7	24.0	21.2	27.1
45–54	59.4	56.5	62.3	14.7	12.6	17.0	25.8	23.3	28.4
55–64	65.4	63.1	67.7	9.8	8.4	11.3	24.7	22.7	26.8
65–74	58.0	55.7	60.3	9.3	8.0	10.8	32.4	30.3	34.6
75–84	60.6	57.5	63.6	8.2	6.6	10.1	30.5	27.7	33.4
85+	70.3	64.2	75.7	9.8	6.7	14.2	18.8	14.4	24.2
18+	**65.6**	**64.0**	**67.1**	**11.9**	**10.9**	**13.1**	**22.2**	**20.9**	**23.5**
Females									
18–24	63.2	56.6	69.4	17.2	12.6	23.0	19.6	14.9	25.5
25–34	68.0	63.2	72.3	12.8	9.8	16.6	18.9	15.5	22.8
35–44	57.9	55.3	60.5	13.0	11.3	14.8	29.0	26.7	31.4
45–54	58.4	56.1	60.7	11.9	10.5	13.4	29.2	27.1	31.4
55–64	66.0	64.0	68.0	9.1	8.0	10.5	24.6	22.9	26.4
65–74	62.1	60.1	64.1	7.9	6.9	9.1	29.7	27.9	31.6
75–84	66.6	64.1	69.0	7.0	5.8	8.5	25.9	23.8	28.2
85+	76.7	72.6	80.3	6.3	4.3	9.1	16.7	13.8	20.2
18+	**63.1**	**61.7**	**64.4**	**11.6**	**10.7**	**12.7**	**25.0**	**23.9**	**26.2**
Persons									
18–24	69.9	65.5	74.0	13.4	10.5	17.0	16.6	13.5	20.3
25–34	71.1	67.5	74.4	12.2	9.9	15.0	16.1	13.7	18.9
35–44	59.0	56.8	61.1	14.4	12.9	16.1	26.5	24.7	28.5
45–54	58.9	57.0	60.8	13.3	12.0	14.6	27.5	25.9	29.2
55–64	65.7	64.2	67.2	9.5	8.6	10.4	24.6	23.3	26.0
65–74	60.2	58.7	61.8	8.6	7.7	9.5	31.0	29.6	32.4
75–84	63.8	61.9	65.7	7.6	6.5	8.7	28.0	26.3	29.8
85+	73.9	70.5	77.1	7.8	5.9	10.1	17.6	15.0	20.6
18+	**64.3**	**63.2**	**65.3**	**11.8**	**11.1**	**12.6**	**23.6**	**22.8**	**24.5**

Data are crude estimates (not age-standardised.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

By geographic location

Table 4-8 shows that Victorian adults who live in the North & West Metropolitan Region are more likely *not* to volunteer for a local group, specifically those living in the local government areas of Brimbank, Hume, Melton, Wyndham, and Kingston.

Table 4-8: Proportion of adults who volunteer, by local government area in metropolitan Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**63.7**	57.4	69.6	**11.6**	8.0	16.5	**24.7**	19.7	30.5
Knox (C)	**69.5**	61.8	76.3	**7.9***	4.4	13.8	**22.3**	16.6	29.2
Manningham (C)	**65.7**	57.7	72.9	**10.8**	6.9	16.5	**23.5**	17.1	31.3
Maroondah (C)	**66.7**	59.7	73.1	**11.2**	6.9	17.7	**22.1**	17.7	27.1
Monash (C)	**68.2**	62.0	73.9	**12.0**	8.2	17.4	**19.7**	15.4	24.9
Whitehorse (C)	**64.2**	58.0	69.9	**8.2**	5.4	12.2	**27.6**	22.4	33.4
Yarra Ranges (S)	**57.3**	48.1	66.0	**11.7**	7.1	18.5	**30.7**	23.0	39.7
Eastern Metropolitan Region	**65.1**	**62.3**	**67.7**	**10.5**	**8.8**	**12.4**	**24.3**	**22.1**	**26.7**
Banyule (C)	**61.6**	54.4	68.3	**11.9**	7.6	18.1	**26.4**	20.1	33.8
Brimbank (C)	**73.8**	68.2	78.6	**15.2**	11.2	20.3	**10.9**	8.0	14.7
Darebin (C)	**69.7**	62.7	75.8	**11.5**	7.9	16.4	**18.7**	14.0	24.5
Hobsons Bay (C)	**70.4**	63.0	76.8	**8.7**	5.7	12.8	**20.9**	15.2	28.0
Hume (C)	**74.2**	68.8	78.9	**7.8**	5.1	11.8	**17.8**	14.0	22.5
Maribyrnong (C)	**67.3**	60.0	73.9	**13.7**	8.6	21.2	**18.8**	14.3	24.3
Melbourne (C)	**64.5**	57.5	70.9	**13.6**	9.4	19.3	**21.9**	16.8	27.9
Melton (S)	**73.6**	65.8	80.1	**13.5***	8.1	21.6	**12.7**	9.7	16.5
Moonee Valley (C)	**67.4**	60.5	73.6	**11.5**	7.9	16.6	**18.9**	14.2	24.7
Moreland (C)	**68.4**	61.3	74.8	**13.1**	8.6	19.6	**18.3**	13.7	24.0
Nillumbik (S)	**67.3**	61.1	72.8	**9.6**	6.7	13.5	**23.1**	18.1	29.0
Whittlesea (C)	**70.6**	65.2	75.5	**10.9**	8.0	14.7	**18.4**	14.3	23.3
Wyndham (C)	**73.5**	68.2	78.2	**10.0**	6.8	14.4	**16.1**	12.7	20.2
Yarra (C)	**65.2**	54.3	74.7	**15.5***	7.8	28.5	**18.9**	14.4	24.5
North & West Metropolitan Region	**69.7**	**67.9**	**71.5**	**11.9**	**10.6**	**13.3**	**18.2**	**16.8**	**19.6**
Bayside (C)	**62.9**	55.4	69.9	**12.7**	7.8	19.9	**24.1**	18.8	30.4
Cardinia (S)	**69.2**	63.0	74.8	**6.9**	4.6	10.2	**23.6**	18.5	29.6
Casey (C)	**69.8**	64.1	74.9	**10.4**	7.4	14.5	**19.2**	15.1	24.0
Frankston (C)	**68.5**	62.1	74.2	**13.5**	9.6	18.7	**17.8**	13.3	23.4
Glen Eira (C)	**62.9**	54.8	70.4	**13.4***	7.8	22.2	**22.0**	16.3	29.1
Greater Dandenong (C)	**68.5**	61.3	75.0	**11.8**	7.6	18.0	**19.5**	14.4	25.8
Kingston (C)	**72.3**	66.3	77.7	**9.5***	5.7	15.3	**18.1**	13.9	23.3
Mornington Peninsula (S)	**60.1**	52.3	67.4	**13.4***	7.9	21.8	**25.9**	19.6	33.3
Port Phillip (C)	**65.8**	56.1	74.3	**12.6***	6.4	23.3	**21.5**	16.7	27.3
Stonnington (C)	**71.1**	64.0	77.3	**8.4**	5.2	13.4	**18.1**	13.3	24.2
Southern Metropolitan Region	**67.1**	**64.7**	**69.5**	**11.3**	**9.6**	**13.3**	**20.9**	**19.1**	**22.8**
Victoria	**64.6**	**63.6**	**65.7**	**11.8**	**11.1**	**12.6**	**23.2**	**22.4**	**24.1**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 4-9 shows that adults who live in rural Victoria are more likely to volunteer for a local group than all Victorian adults. The proportion of adults who live in metropolitan Victoria and volunteer for a local group range from 11 per cent to 31 per cent. In contrast, the proportion of Victorian adults who live in rural Victoria and volunteer for a local group range from 22 per cent to 59 per cent.

Table 4-9: Proportion of adults who volunteer, by local government area in rural Victoria

	No or not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	41.3	32.8	50.5	14.9	9.3	23.0	43.8	35.3	52.6
Corangamite (S)	44.7	36.2	53.6	17.3	10.9	26.3	38.0	31.2	45.3
Glenelg (S)	50.1	42.3	58.0	14.4	9.7	21.0	35.3	28.4	43.0
Greater Geelong (C)	65.5	58.7	71.7	7.8	5.5	11.0	26.7	20.9	33.4
Moyne (S)	38.9	30.8	47.6	21.8	14.2	31.9	39.1	33.0	45.5
Queenscliffe (B)	38.1	25.2	52.9	10.4*	5.3	19.4	51.4	38.3	64.4
Southern Grampians (S)	46.5	37.4	55.9	19.2	13.1	27.3	34.1	27.1	42.0
Surf Coast (S)	49.7	40.4	59.0	12.4	7.8	19.3	37.7	29.8	46.4
Warrnambool (C)	47.5	39.5	55.6	16.1	10.4	24.2	36.4	29.1	44.2
Barwon-South Western Region	57.7	**53.1**	**62.2**	**11.0**	**9.1**	**13.2**	31.3	**27.3**	**35.6**
Bass Coast (S)	59.5	51.5	67.0	8.0	5.2	12.3	32.4	25.7	40.0
Baw Baw (S)	58.3	49.9	66.3	8.8*	5.2	14.5	32.6	26.3	39.6
East Gippsland (S)	59.4	50.6	67.7	10.3*	5.5	18.5	30.2	24.2	37.1
Latrobe (C)	63.7	55.6	71.1	14.1	8.7	22.1	22.1	17.1	28.0
South Gippsland (S)	49.9	41.5	58.4	14.2	10.1	19.7	34.6	27.0	43.0
Wellington (S)	51.4	42.4	60.3	15.5	10.5	22.4	33.1	25.7	41.5
Gippsland Region	58.1	**54.3**	**61.8**	**12.3**	**9.8**	**15.2**	29.4	**26.5**	**32.6**
Ararat (RC)	55.8	48.1	63.3	14.9	9.6	22.4	29.0	23.5	35.1
Ballarat (C)	56.9	49.1	64.3	14.5	9.4	21.8	28.3	21.9	35.7
Golden Plains (S)	60.7	52.7	68.1	13.5	8.1	21.5	25.6	19.2	33.4
Hepburn (S)	63.4	55.9	70.3	7.3	4.9	10.9	29.2	22.6	36.8
Hindmarsh (S)	34.2	26.5	42.8	18.1	11.9	26.5	47.7	38.8	56.7
Horsham (RC)	49.5	40.1	58.9	15.2*	8.9	24.8	35.0	28.8	41.8
Moorabool (S)	58.6	51.7	65.2	12.1	7.8	18.3	29.3	23.7	35.5
Northern Grampians (S)	40.3	32.2	49.0	20.7	13.3	30.7	38.5	29.7	48.1
Pyrenees (S)	45.8	36.4	55.5	14.4*	8.2	24.2	39.7	31.7	48.3
West Wimmera (S)	30.6	21.6	41.4	10.2*	6.0	16.8	59.1	49.4	68.2
Yarriambiack (S)	30.0	21.7	39.9	22.2	14.2	33.0	47.8	41.4	54.2
Grampians Region	53.5	**49.2**	**57.8**	**14.5**	**11.3**	**18.5**	31.8	**28.1**	**35.7**
Alpine (S)	45.2	33.2	57.8	24.5	14.7	38.0	30.3	24.7	36.5
Benalla (RC)	49.7	40.3	59.0	19.0	12.3	28.1	31.4	23.8	40.0
Greater Shepparton (C)	51.2	43.5	58.9	16.6	11.8	22.9	32.1	25.7	39.4
Indigo (S)	37.8	28.6	48.0	21.6	13.7	32.3	40.6	32.5	49.4
Mansfield (S)	47.5	34.4	60.9	10.6*	6.3	17.1	42.0	29.8	55.2
Mitchell (S)	57.4	48.5	65.8	12.5	8.0	19.1	29.9	22.8	38.1
Moira (S)	47.2	39.0	55.6	18.8	11.7	28.9	34.0	26.6	42.2
Murrindindi (S)	54.4	46.5	62.0	15.0	9.1	23.6	30.6	25.2	36.7
Strathbogie (S)	51.2	41.7	60.7	12.3	7.5	19.4	36.5	28.9	44.8
Towong (S)	35.4	26.7	45.2	16.0*	9.1	26.8	48.5	41.5	55.6
Wangaratta (RC)	56.0	46.6	65.0	17.0	10.3	26.8	27.0	22.0	32.5
Wodonga (RC)	54.7	47.2	61.9	17.6	11.8	25.4	27.6	22.5	33.2
Hume Region	51.6	**48.2**	**54.9**	16.6	**14.1**	**19.4**	31.8	**29.1**	**34.7**
Buloke (S)	35.8	26.7	46.1	14.9*	8.8	24.0	49.2	40.5	58.0
Campaspe (S)	54.0	44.6	63.2	18.0	10.9	28.1	27.7	22.5	33.6
Central Goldfields (S)	60.8	52.3	68.7	15.2	9.1	24.1	24.0	18.7	30.3
Gannawarra (S)	53.6	45.0	61.9	10.7*	6.1	18.2	35.6	29.4	42.3
Greater Bendigo (C)	60.6	52.2	68.4	11.6	7.2	18.0	27.8	20.9	36.0
Loddon (S)	34.7	27.7	42.4	24.5	17.0	34.1	40.6	32.1	49.8
Macedon Ranges (S)	65.4	59.0	71.3	9.3	6.3	13.6	25.0	19.9	31.0
Mildura (RC)	63.3	57.6	68.7	9.7	7.2	13.0	27.0	22.0	32.6
Mount Alexander (S)	47.0	36.9	57.4	16.9*	9.6	27.9	36.1	24.8	49.2
Swan Hill (RC)	40.4	30.9	50.6	19.6*	11.1	32.2	39.8	30.3	50.1
Loddon Mallee Region	57.5	**53.4**	**61.5**	**12.8**	**10.3**	**15.7**	29.6	**26.2**	**33.4**
Victoria	**64.6**	**63.6**	**65.7**	**11.8**	**11.1**	**12.6**	**23.2**	**22.4**	**24.1**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Figure 4-6 and Figure 4-7 show the proportion of Victorian adults who volunteer, by local government area.

Figure 4-6: Proportion of Victorian adults who volunteer, by metropolitan local government area

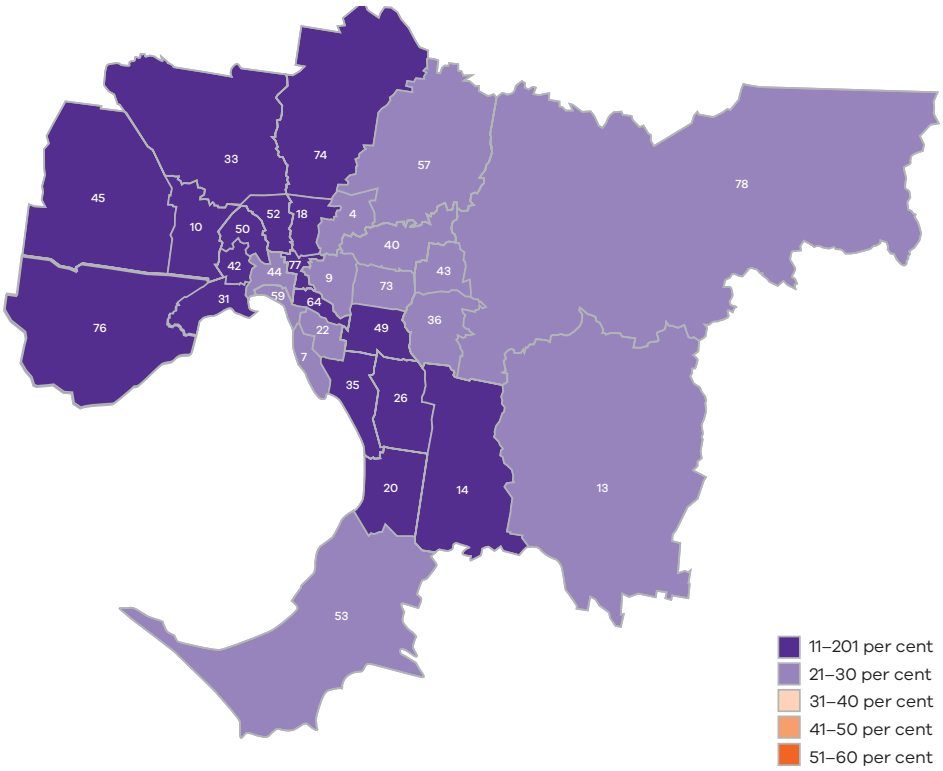
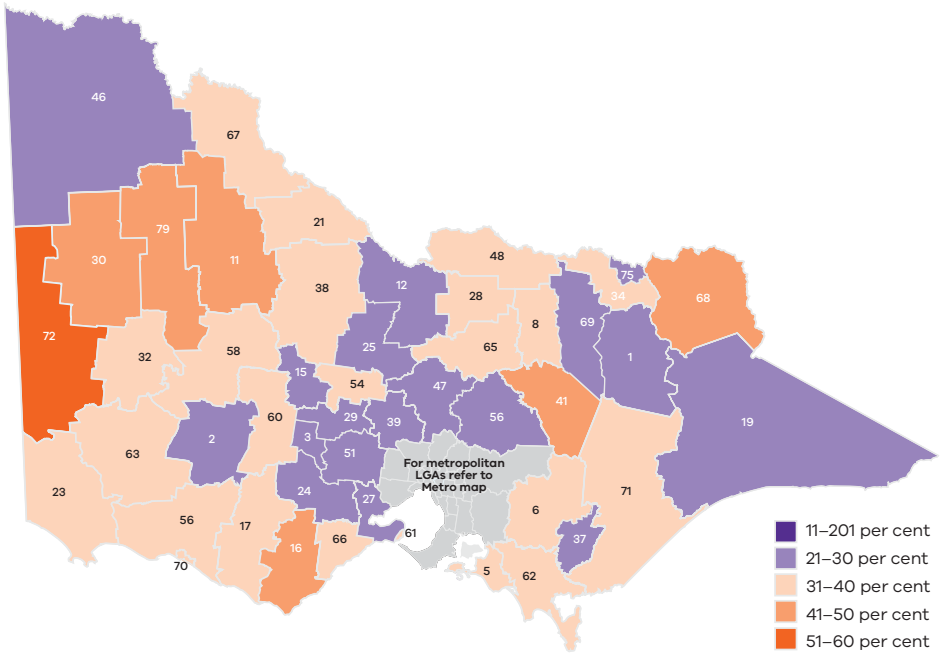


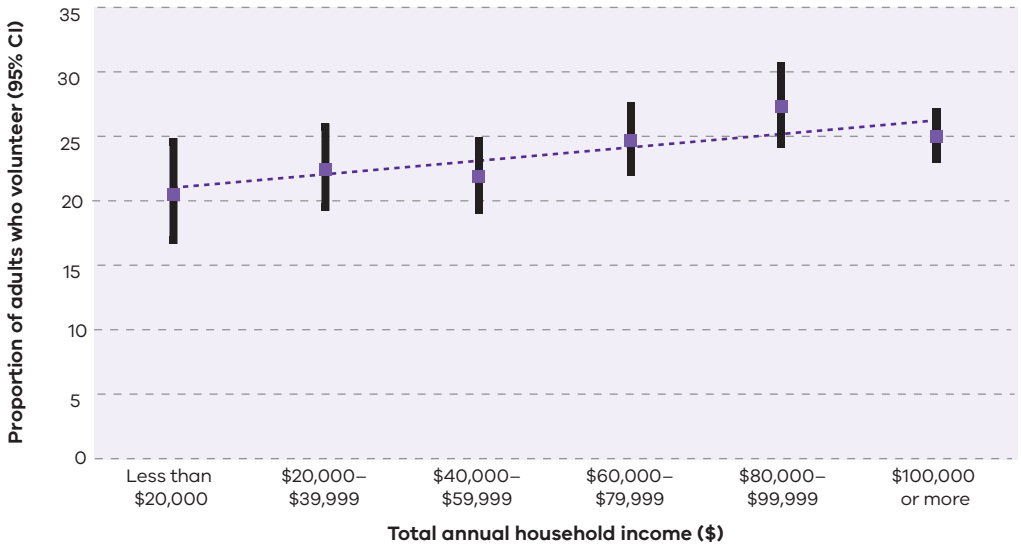
Figure 4-7: Proportion of Victorian adults who volunteer, by rural local government area



Does volunteerism vary by socioeconomic status?

Figure 4-8 shows that as the proportion of adults who volunteer increases, total annual household income increases. Therefore, volunteerism varies by socioeconomic status.

Figure 4-8: Proportion of Victorian adults who volunteer, by total annual household income

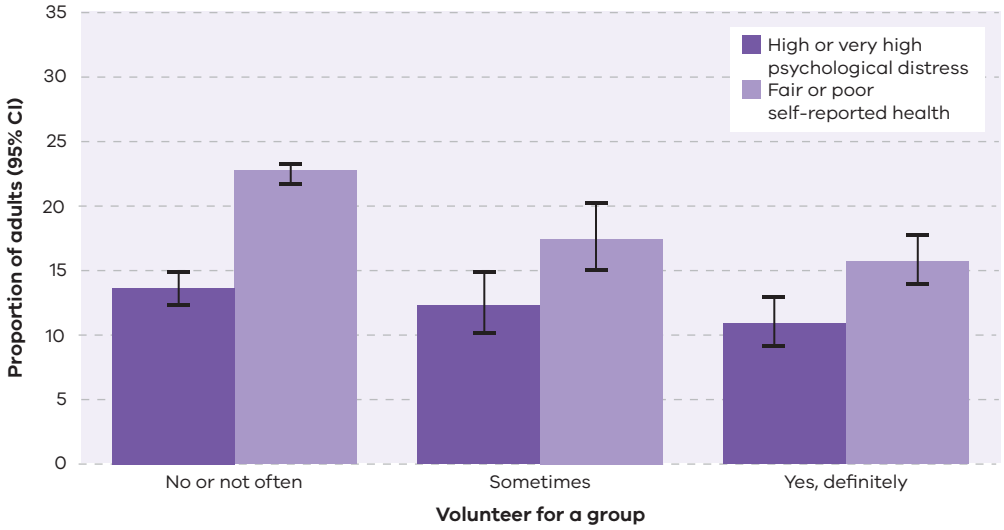


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is volunteerism associated with health outcomes?

Figure 4-9 shows that volunteerism is associated with both better mental and physical health. Victorian adults who 'sometimes' or 'definitely' volunteer are less likely to be psychologically distressed and to report being in fair or poor health.

Figure 4-9: The relationship between volunteerism and health outcomes



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of findings

- Approximately one in four Victorian adults volunteer. This is higher in women than men and higher among older adults than younger adults.
- People who live in rural Victoria are more likely to volunteer than those who live in metropolitan Victoria.
- Volunteerism is associated with socioeconomic status; volunteerism declines as household income declines.
- Volunteerism is associated with better mental and physical health.

Interpretation of the findings

Our findings that volunteerism, an indicator of civic engagement, is associated with better health is consistent with the literature (Gottlieb and Gillespie 2008). Numerous studies have documented the health benefits of volunteerism such as lower morbidity, longer survival, less depressive symptoms and higher quality of life (Gottlieb and Gillespie 2008).

Logically one would posit that only well people are in a position to volunteer; however, evidence from several longitudinal studies, which took into account initial health and socioeconomic status, showed that there is also credible evidence for a causal pathway where the act of volunteering is in itself protective for health. It has been hypothesised that volunteering promotes good health through raising self-esteem, increasing the number of quality social relationships, providing a sense of purpose and self-efficacy and improving self-care behaviours (Gottlieb and Gillespie 2008).

The finding that as socioeconomic status declines so do rates of volunteerism has also been noted in the literature. Whether this is due to logistical, psychological, personal-contextual factors, or a tendency for recruitment practices to be geared towards the social networks of those with higher socioeconomic status is not known and probably varies with context and type of voluntary organisation.

5. The social environment

Key messages

- **The lower the number of daily social contacts the worse the mental and physical health outcomes.**
- **The literature shows that low social contact precedes a decline in both mental and physical health, providing evidence for a direct causal link between social isolation and ill-health.**
- **Social relationships are postulated to impact on health by (a) influencing health-related behaviours, (b) providing social support and (c) acting as a buffer against the health-damaging impacts of chronic stress.**
- **Tolerance of diversity is essential for a socially cohesive society, but there is still work to be done to achieve this in Victoria. While 55 per cent of Victorian adults definitely agree that multiculturalism makes life in their area better and 25 per cent sometimes agree, 9 per cent of Victorian adults do not believe that multiculturalism makes their life better.**
- **Men, people 55 years of age or older, people of low socioeconomic status and those who live in rural Victoria are more likely to be intolerant of diversity.**
- **Intolerance of diversity is associated with poorer mental and physical health.**
- **Policies that build social relationships are likely to improve the mental and physical health of the population.**

Introduction

Social environments include the physical surroundings, social relationships and cultural context(s) within which groups of people interact (Barnett and Casper 2001). It is within the social environment that historical social and power relations become institutionalised over time and operate to cause social inequities. The social environment is dynamic and changes over time as the result of both internal and external forces.

The social environment is the context in which social and cultural factors, such as social capital, influence the health outcomes of an individual by 'shaping norms, enforcing patterns of social control, providing or not providing environmental opportunities to engage in particular behaviours, reducing or producing stress, and placing constraints on individual choice' (McNeill, Kreuter et al. 2006).

In non-homogenous multicultural societies, such as we have in Victoria, multiple social environments exist. These multiple social environments exert their impact at different levels such as the household level, the local community level, the regional level and so forth.

In 2014 survey respondents were asked a series of questions about their social environments, and this chapter reports on the findings. We report here the findings of our analysis of tolerance of diversity, daily social contact and neighbourhood tenure. Experiences of racism are not covered in this report as they are the subject of a separate report.

Tolerance of diversity

This section investigates tolerance of diversity in Victoria by evaluating the attitude of survey respondents to multiculturalism. Survey respondents are asked the question: 'Do you think that multiculturalism makes life in your area better?' Respondents could reply 'no', 'not often', 'sometimes', 'yes', 'not applicable to my area' or 'I don't know'.

A response of 'no' or 'not often' indicates disapproval of multiculturalism and the respondent is deemed to be intolerant of diversity, while a 'yes' response indicates approval and the respondent is deemed to be tolerant of diversity.

By age and sex

Overall, 9 per cent of Victorian adults do not agree that multiculturalism makes life in their area better, 25 per cent 'sometimes' agree, 55 per cent 'definitely' agree, 6 per cent say it is not applicable to the area in which they live and 5 per cent do not know or refused to say (Table 5-1).

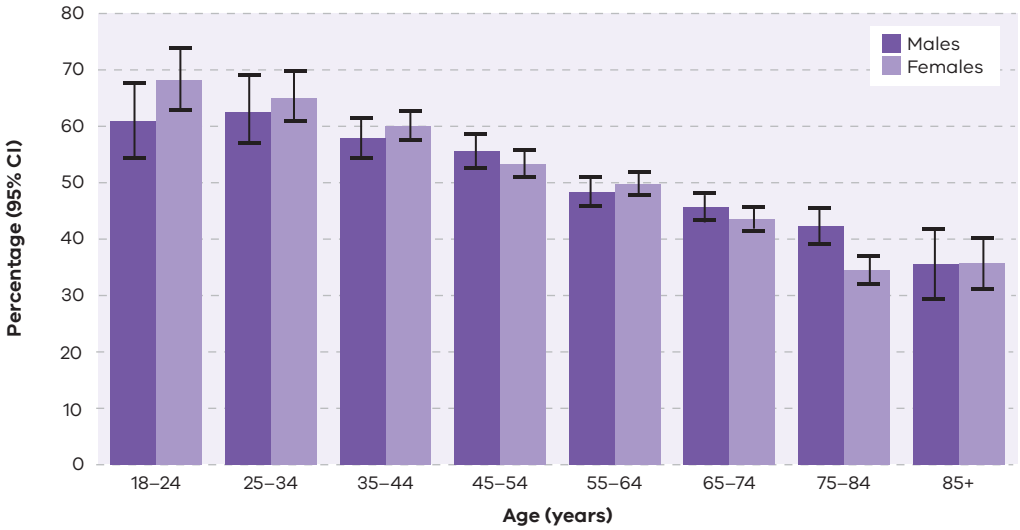
Tolerance of diversity declines with age (Figure 5-1), and while there is no difference between men and women who were tolerant of diversity, men are significantly more likely to be intolerant of diversity (Figure 5-2).

Table 5-1: Proportion of Victorian adults, by whether or not they think multiculturalism makes life in their area better, age and sex

Age group (years)	No or not often			Sometimes			Yes, definitely			No applicable			Did not know or refused to say		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
Males															
18–24	**8.4***	5.1	13.7	**25.1**	20.0	31.0	**60.9**	54.3	67.1	**2.7***	1.3	5.5	**2.9***	1.3	6.1
25–34	**8.1**	5.3	12.0	**27.3**	22.3	33.0	**62.5**	56.5	68.1	**0.8***	0.4	1.8	**1.2***	0.5	2.9
35–44	**8.2**	6.5	10.2	**25.8**	22.7	29.2	**57.8**	54.2	61.3	**4.7**	3.6	6.2	**3.5**	2.2	5.4
45–54	**9.6**	8.1	11.5	**24.4**	21.9	27.1	**55.5**	52.4	58.4	**5.1**	3.9	6.5	**5.4**	4.2	7.0
55–64	**11.8**	10.3	13.4	**27.1**	24.9	29.4	**48.3**	45.8	50.8	**8.1**	6.9	9.5	**4.7**	3.7	6.0
65–74	**15.1**	13.5	16.8	**22.1**	20.2	24.3	**45.6**	43.3	48.0	**9.2**	8.0	10.4	**8.0**	6.7	9.4
75–84	**17.2**	15.0	19.6	**21.0**	18.6	23.7	**42.2**	39.1	45.3	**9.3**	7.7	11.2	**10.3**	8.6	12.4
85+	**17.5**	13.5	22.3	**21.0**	16.1	26.8	**35.6**	29.6	42.0	**13.1**	9.6	17.7	**12.9**	9.1	17.9
18+	**10.3**	**9.3**	**11.4**	**25.3**	**23.7**	**26.8**	**54.9**	**53.2**	**56.7**	**5.1**	**4.6**	**5.6**	**4.4**	**3.9**	**5.1**
Females															
18–24	**2.2***	1.2	4.0	**24.8**	19.9	30.5	**68.2**	62.1	73.7	**3.2***	1.5	6.6	**1.6***	0.6	4.0
25–34	**5.5**	3.9	7.8	**24.8**	21.0	28.9	**65.0**	60.4	69.4	**3.0***	1.7	5.4	**1.6***	0.9	2.9
35–44	**7.6**	6.3	9.1	**24.5**	22.4	26.8	**60.0**	57.5	62.6	**4.4**	3.6	5.5	**3.4**	2.6	4.4
45–54	**8.0**	6.8	9.4	**27.7**	25.6	29.9	**53.2**	50.9	55.6	**6.2**	5.3	7.2	**4.9**	3.9	6.1
55–64	**9.5**	8.4	10.9	**26.0**	24.2	27.9	**49.7**	47.6	51.9	**8.3**	7.3	9.4	**6.4**	5.4	7.6
65–74	**11.3**	10.0	12.7	**25.2**	23.4	27.1	**43.5**	41.4	45.6	**11.4**	10.2	12.7	**8.6**	7.5	10.0
75–84	**13.3**	11.6	15.3	**22.9**	20.7	25.2	**34.5**	32.0	37.0	**14.2**	12.5	16.1	**15.1**	13.2	17.1
85+	**14.7**	11.3	18.7	**16.5**	13.3	20.4	**35.8**	31.2	40.5	**13.2**	10.6	16.2	**19.9**	16.3	24.1
18+	**7.8**	**7.2**	**8.4**	**25.2**	**24.0**	**26.4**	**55.4**	**54.0**	**56.7**	**6.5**	**5.9**	**7.0**	**5.2**	**4.7**	**5.6**
Persons															
18–24	**5.4**	3.5	8.2	**25.0**	21.3	29.0	**64.5**	60.0	68.7	**2.9***	1.7	4.9	**2.3***	1.2	4.1
25–34	**6.8**	5.1	9.0	**26.0**	22.8	29.5	**63.8**	60.0	67.4	**1.9**	1.2	3.1	**1.4***	0.9	2.4
35–44	**7.9**	6.8	9.1	**25.2**	23.3	27.2	**58.9**	56.7	61.1	**4.6**	3.9	5.4	**3.4**	2.6	4.4
45–54	**8.8**	7.8	9.9	**26.1**	24.4	27.8	**54.3**	52.4	56.2	**5.6**	4.9	6.4	**5.1**	4.3	6.1
55–64	**10.6**	9.7	11.7	**26.6**	25.1	28.0	**49.0**	47.4	50.7	**8.2**	7.4	9.1	**5.6**	4.8	6.4
65–74	**13.0**	12.0	14.1	**23.8**	22.5	25.2	**44.5**	42.9	46.1	**10.4**	9.5	11.3	**8.3**	7.5	9.3
75–84	**15.1**	13.7	16.6	**22.0**	20.4	23.8	**38.0**	36.1	40.0	**11.9**	10.7	13.3	**12.9**	11.6	14.3
85+	**15.8**	13.2	18.9	**18.4**	15.6	21.7	**35.7**	32.0	39.5	**13.1**	11.0	15.6	**16.9**	14.2	20.1
18+	**9.0**	**8.5**	**9.6**	**25.2**	**24.3**	**26.2**	**55.1**	**54.0**	**56.2**	**5.8**	**5.4**	**6.2**	**4.8**	**4.5**	**5.2**

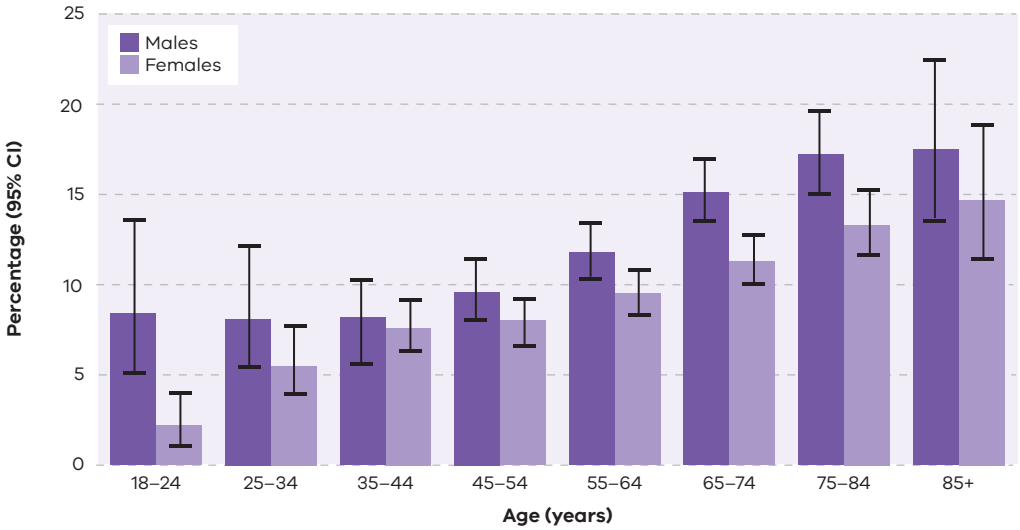
Data are crude estimates (not age-standardised).
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Figure 5-1: Proportion of Victorian adults who are tolerant of diversity, by age and sex



95% CI = 95 per cent confidence interval.

Figure 5-2: Proportion of Victorian adults who are intolerant of diversity, by age and sex



95% CI = 95 per cent confidence interval.

By geographic region

Table 5-2 and Table 5-3 show the attitudes of Victorian adults to multiculturalism by local government area in metropolitan and rural Victoria, respectively. Figure 5-3 shows the proportion of Victorian adults who are tolerant of diversity by local government area.

Adults who live in the metropolitan local government areas of Brimbank (15 per cent) and Cardinia (14 per cent) are significantly more likely than all Victorian adults (9 per cent) to disagree that multiculturalism makes life in their area better, suggesting that intolerance of diversity is a problem.

In contrast, adults who live in the metropolitan local government areas of Boroondara (73 per cent), Whitehorse (70 per cent), Darebin (75 per cent), Melbourne (73 per cent), Moonee Valley (67 per cent), Yarra (78 per cent), Bayside (72 per cent), Glen Eira (70 per

cent), Kingston (65 per cent), Port Phillip (77 per cent) and Stonnington (72 per cent) are significantly more likely than all Victorian adults (55 per cent) to 'definitely' agree that multiculturalism makes life in their area better (Figure 5-4).

Adults who live in the metropolitan local government areas of Yarra Ranges (12 per cent), Nillumbik (13 per cent), Cardinia (10 per cent) and Mornington Peninsula (15 per cent) are significantly more likely than all Victorian adults (6 per cent) to report that multiculturalism is not relevant to their area.

Overall, Victorian adults who live in the Eastern (61 per cent) and North & West Metropolitan (59 per cent) regions of Victoria 'definitely' approve of multiculturalism, which is significantly higher than all Victorian adults (55 per cent).

Table 5-2: Proportion of adults, by whether or not they think multiculturalism makes life in their area better, region and local government area in metropolitan Victoria

	No or not often			Sometimes			Yes, definitely			No applicable			Did not know or refused to say		
		95% CI			95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**6.6***	3.8	11.3	**17.1**	12.8	22.3	**73.2**	67.1	78.6	**2.1***	1.2	3.8	**1.0***	0.5	1.9
Knox (C)	**7.1**	4.9	10.2	**27.9**	21.2	35.8	**55.6**	47.8	63.2	**4.5***	2.7	7.3	**4.9**	3.2	7.3
Manningham (C)	**8.2**	5.5	12.1	**22.0**	16.3	29.0	**61.7**	54.0	68.7	**4.4***	2.0	9.5	**3.7**	2.3	5.7
Maroondah (C)	**10.8***	5.4	20.2	**25.9**	20.0	32.7	**45.6**	36.9	54.6	**6.2**	3.9	9.9	**11.5***	6.0	21.0
Monash (C)	**6.0**	3.9	9.0	**26.3**	20.8	32.6	**59.9**	53.5	66.1	**2.1***	1.0	4.7	**5.7**	3.7	8.7
Whitehorse (C)	**7.0**	4.7	10.4	**17.1**	13.3	21.7	**70.2**	65.0	75.0	**1.1***	0.6	1.9	**4.6**	3.0	7.1
Yarra Ranges (S)	**8.1**	6.0	10.8	**25.1**	17.8	34.2	**51.1**	42.2	59.9	**11.8**	7.3	18.5	**3.9**	2.5	6.1
Eastern Metropolitan Region	**7.4**	**6.2**	**8.8**	**22.9**	**20.6**	**25.5**	**60.7**	**57.9**	**63.4**	**4.3**	**3.4**	**5.3**	**4.7**	**3.8**	**5.9**
Banyule (C)	**7.8**	5.2	11.6	**19.4**	14.0	26.1	**59.5**	51.6	67.0	**6.7***	2.8	15.2	**6.5**	4.3	9.9
Brimbank (C)	**14.6**	11.0	19.2	**27.5**	22.5	33.1	**49.3**	43.6	55.0	**0.9***	0.4	1.9	**7.8**	5.4	11.1
Darebin (C)	**5.0**	3.5	7.2	**15.4**	11.7	20.0	**75.1**	70.4	79.2	**			**3.9**	2.9	5.3
Hobsons Bay (C)	**8.9**	5.5	14.1	**27.4**	20.2	36.0	**57.4**	48.8	65.6	**1.7***	0.9	3.1	**4.6**	3.3	6.4
Hume (C)	**12.3**	9.1	16.4	**26.8**	21.8	32.5	**52.8**	46.8	58.7	**3.9**	2.5	6.0	**4.2**	2.7	6.4
Maribyrnong (C)	**8.4***	4.8	14.3	**21.2**	16.2	27.3	**63.4**	56.4	69.9	**0.9***	0.4	1.9	**6.1**	3.8	9.8
Melbourne (C)	**7.5***	4.2	13.2	**15.6**	11.3	21.1	**73.1**	66.5	78.8	**			**3.2**	2.0	5.0
Melton (S)	**9.4**	7.0	12.5	**33.5**	26.6	41.2	**48.0**	40.7	55.4	**1.8***	0.8	3.7	**7.4**	4.8	11.2
Moonee Valley (C)	**5.1**	3.6	7.3	**21.7**	16.6	27.7	**67.0**	60.9	72.7	**1.1***	0.5	2.3	**5.1**	3.5	7.2
Moreland (C)	**7.7**	5.0	11.7	**22.8**	16.9	30.0	**62.0**	54.7	68.9	**			**6.5**	4.1	10.2
Nillumbik (S)	**5.5***	3.3	9.0	**28.8**	22.5	36.0	**49.4**	42.6	56.2	**12.6**	9.7	16.4	**3.7**	2.3	5.8
Whittlesea (C)	**9.0**	6.2	12.8	**32.8**	27.4	38.7	**45.3**	39.4	51.3	**3.3**	2.1	5.4	**9.6**	7.1	12.9
Wyndham (C)	**12.0**	8.6	16.5	**32.5**	27.0	38.6	**48.8**	42.8	54.8	**1.4***	0.7	2.7	**5.3***	2.8	9.7
Yarra (C)	**6.1***	3.4	10.7	**12.3**	7.6	19.4	**77.9**	70.5	83.9	**0.6***	0.3	1.6	**3.0**	2.0	4.5
North & West Metropolitan Region	**9.1**	**8.0**	**10.2**	**24.2**	**22.6**	**25.8**	**58.6**	**56.8**	**60.5**	**2.3**	**1.9**	**2.9**	**5.8**	**5.2**	**6.5**
Bayside (C)	**5.0**	3.3	7.5	**13.3**	9.6	18.1	**72.2**	66.2	77.5	**6.1***	3.3	10.9	**3.4**	2.1	5.4
Cardinia (S)	**14.3**	10.4	19.4	**34.7**	28.6	41.3	**34.9**	28.9	41.5	**9.6**	6.9	13.2	**6.6**	4.1	10.3
Casey (C)	**11.7**	7.8	17.3	**35.9**	30.0	42.2	**44.4**	37.9	51.1	**2.9***	1.8	4.8	**5.1**	3.6	7.1
Frankston (C)	**10.3**	7.3	14.4	**30.5**	25.2	36.5	**47.2**	41.1	53.4	**4.5**	3.0	6.8	**7.4**	4.9	11.2
Glen Eira (C)	**5.4***	3.2	9.0	**17.3**	13.4	22.2	**69.7**	63.5	75.3	**2.4***	0.9	6.2	**5.2***	2.9	9.0
Greater Dandenong (C)	**11.3**	7.9	15.9	**33.6**	27.0	40.9	**49.4**	42.6	56.2	**0.8***	0.3	1.7	**4.9**	3.2	7.6
Kingston (C)	**5.5***	3.3	9.1	**23.2**	17.2	30.6	**65.4**	58.1	72.0	**3.1***	1.8	5.2	**2.9**	1.9	4.2
Mornington Peninsula (S)	**8.0**	5.0	12.6	**22.4**	15.1	31.9	**50.5**	43.3	57.8	**15.3**	10.5	21.8	**3.8***	2.1	6.7
Port Phillip (C)	**2.6***	1.3	5.1	**16.4**	11.3	23.3	**76.8**	69.8	82.7	**0.7***	0.3	1.7	**3.4***	1.7	6.5
Stonnington (C)	**2.1***	1.2	3.6	**21.6**	16.2	28.1	**71.8**	65.3	77.5	**1.7***	1.0	2.8	**2.9***	1.8	4.8
Southern Metropolitan Region	**8.1**	**6.8**	**9.5**	**26.1**	**24.0**	**28.4**	**56.8**	**54.3**	**59.2**	**4.5**	**3.8**	**5.2**	**4.5**	**3.9**	**5.3**
Metropolitan Victoria	**8.3**	**7.6**	**9.0**	**24.5**	**23.4**	**25.7**	**58.7**	**57.4**	**60.0**	**3.5**	**3.1**	**3.9**	**5.0**	**4.6**	**5.5**
Victoria	**9.0**	**8.4**	**9.6**	**25.2**	**24.2**	**26.2**	**55.4**	**54.3**	**56.5**	**5.7**	**5.3**	**6.1**	**4.8**	**4.4**	**5.2**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

Adults who live in the rural local government areas of Wellington (19 per cent), Greater Shepparton (20 per cent), Mitchell (15 per cent), Moira (17 per cent), Campaspe (18 per cent), Gannawarra (19 per cent), Mildura (18 per cent) and Swan Hill (19 per cent) are significantly more likely than all Victorian adults (9 per cent) to disagree that multiculturalism makes life in their areas better, suggesting that intolerance of diversity is a problem.

In contrast, adults who live in the rural local government areas of Alpine (70 per cent) and Mount Alexander (72 per cent) are significantly more likely than all Victorian adults (55 per cent) to 'definitely' agree that multiculturalism makes life in their area better (Table 5-3).

Overall, residents of Gippsland, Hume and Loddon Mallee regions were more likely to be intolerant of diversity than all Victorians.

Adults who live in 40 of the 48 local government areas of rural Victoria are significantly more likely than all Victorian adults to report that multiculturalism is not relevant to their area (Table 5-3).

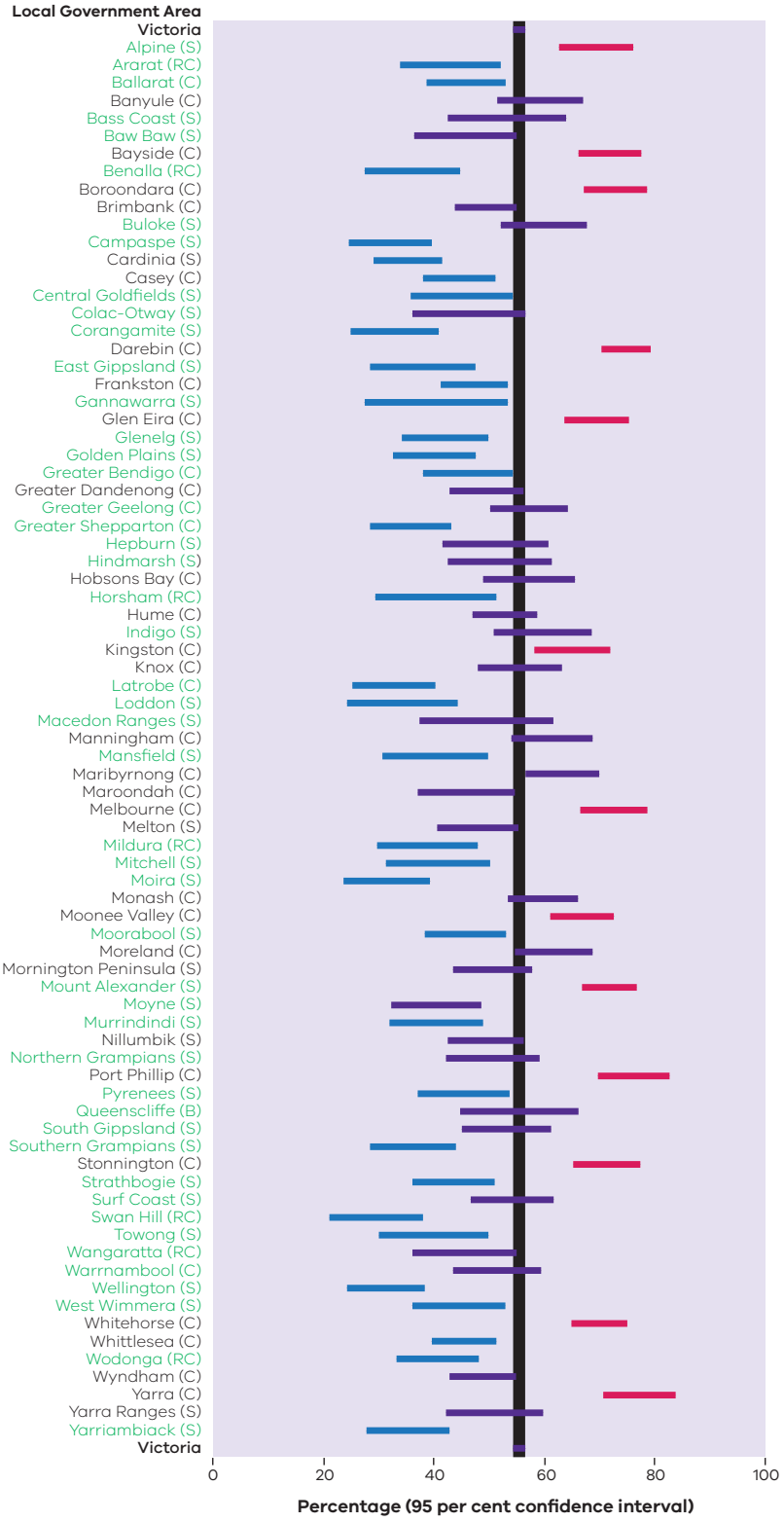
Table 5-3: Proportion of adults, by whether or not they think multiculturalism makes life in their area better, region and local government area in rural Victoria

	No or not often			Sometimes			Yes, definitely			No applicable			Did not know or refused to say		
		95% CI			95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	10.1	5.5	17.7	32.6	23.1	43.8	46.1	36.0	56.6	5.9	4.2	8.3	5.2	3.5	7.7
Corangamite (S)	6.8	4.0	11.4	33.8	25.7	42.9	32.3	24.8	40.8	24.2	19.6	29.4	2.9*	1.3	6.2
Glenelg (S)	7.3	5.1	10.2	33.9	26.6	42.1	41.8	34.2	49.8	14.6	11.3	18.7	2.4*	1.4	4.1
Greater Geelong (C)	7.6	4.9	11.7	22.4	16.8	29.2	57.4	50.1	64.3	7.8	5.6	10.7	4.8*	2.6	8.7
Moyne (S)	9.4	5.9	14.7	24.1	17.1	32.9	40.2	32.3	48.7	24.0	17.5	32.1	2.3*	1.3	3.8
Queenscliffe (B)	3.3*	1.7	6.4	9.3*	4.6	18.1	55.7	44.6	66.2	28.8	18.5	41.9	2.9*	1.2	6.7
Southern Grampians (S)	8.9	6.2	12.7	36.6	28.6	45.5	35.7	28.3	43.9	13.9	10.4	18.3	4.9	2.5	9.2
Surf Coast (S)	8.0	5.0	12.5	19.2	13.5	26.6	54.3	46.7	61.7	16.5	13.1	20.6	2.0	1.2	3.2
Warrnambool (C)	10.4	6.6	16.1	23.3	17.1	30.9	51.5	43.5	59.4	10.4	7.2	14.7	4.4	2.7	7.0
Barwon-South Western Region	8.2	6.2	10.8	24.1	20.2	28.5	52.7	47.9	57.4	10.9	9.3	12.7	4.2	2.7	6.2
Bass Coast (S)	7.1	4.6	10.8	25.7	16.5	37.6	53.3	42.4	64.0	11.4	7.4	17.2	2.5*	1.5	4.2
Baw Baw (S)	13.5*	7.8	22.4	27.9	21.7	35.0	45.6	36.5	55.0	8.9	6.5	12.1	4.1	2.6	6.4
East Gippsland (S)	11.3*	5.6	21.3	35.0	25.0	46.4	37.4	28.4	47.5	11.2	7.9	15.6	5.2	3.3	8.1
Latrobe (C)	15.2*	9.0	24.6	38.5	30.0	47.9	32.2	25.0	40.3	8.4*	5.0	13.8	5.7	3.9	8.0
South Gippsland (S)	11.1	6.8	17.6	18.4	12.7	26.0	53.2	45.0	61.2	12.2	8.9	16.5	5.1*	2.9	8.9
Wellington (S)	18.7*	10.8	30.5	34.8	26.6	44.1	31.0	24.3	38.5	12.1	9.2	15.8	3.3*	1.9	5.7
Gippsland Region	13.5	10.4	17.4	31.9	27.6	36.4	39.7	35.4	44.1	10.5	8.8	12.5	4.5	3.7	5.4
Ararat (RC)	14.4	8.9	22.5	29.9	22.1	39.1	42.8	34.0	52.2	8.6	6.3	11.5	4.3	2.7	6.8
Ballarat (C)	7.3	5.1	10.4	25.8	19.5	33.4	45.7	38.6	53.0	16.3	10.7	24.0	4.9*	2.9	8.2
Golden Plains (S)	10.6	6.7	16.5	24.6	18.1	32.5	39.7	32.4	47.5	19.2	14.7	24.7	5.8	3.6	9.1
Hepburn (S)	12.4*	6.6	22.0	16.8	10.3	26.1	51.1	41.4	60.8	17.4	13.3	22.5	2.3*	1.2	4.2
Hindmarsh (S)	7.4	4.8	11.3	20.7	15.3	27.4	51.9	42.4	61.3	17.2	10.4	27.3	2.7*	1.6	4.5
Horsham (RC)	7.7	5.3	11.1	41.5	31.1	52.8	39.9	29.5	51.3	7.1	5.1	9.7	3.9*	1.9	7.9
Moorabool (S)	11.1	7.2	16.8	25.4	19.4	32.4	45.6	38.4	53.0	11.3	8.5	14.9	6.6	4.2	10.0
Northern Grampians (S)	11.1	6.7	17.8	25.7	18.2	35.0	50.6	42.1	59.1	9.6	7.0	12.9	3.0*	1.7	5.2
Pyrenees (S)	10.2	6.7	15.3	17.6	12.2	24.6	45.2	37.0	53.7	23.2	18.4	28.9	3.8*	1.8	7.8
West Wimmera (S)	10.4	6.8	15.6	15.9	11.6	21.4	44.4	36.2	52.9	27.5	21.5	34.4	1.9*	0.8	4.1
Yarriambiack (S)	13.2	8.9	19.1	32.8	24.5	42.3	34.9	27.6	42.9	16.9	12.7	22.0	2.3*	1.0	5.2
Grampians Region	9.0	7.6	10.6	26.7	22.8	30.9	44.1	40.0	48.2	15.8	12.4	19.9	4.5	3.4	5.9
Alpine (S)	7.0	4.3	11.1	13.4	9.5	18.4	69.7	62.5	76.1	8.6	5.4	13.6	1.3*	0.7	2.3
Benalla (RC)	11.4	7.3	17.3	33.1	25.2	42.1	35.6	27.3	44.8	16.1	11.4	22.2	3.8*	2.1	7.0
Greater Shepparton (C)	19.6	14.9	25.4	39.8	31.7	48.4	35.5	28.4	43.2	2.5*	1.5	4.1	2.7*	1.6	4.5
Indigo (S)	6.3	4.4	8.8	20.5	13.3	30.2	60.0	50.7	68.6	11.5	8.8	15.0	**		
Mansfield (S)	7.0	5.0	9.8	35.5	24.2	48.7	39.7	30.5	49.8	16.0	10.0	24.6	1.8*	0.9	3.5
Mitchell (S)	14.7	10.0	20.9	27.7	19.7	37.4	40.3	31.1	50.3	10.3	7.3	14.3	7.1*	3.5	13.6
Moira (S)	17.0	11.9	23.6	39.3	30.7	48.7	30.9	23.7	39.2	9.6	6.5	13.9	3.2	2.1	4.9
Murrindindi (S)	11.1*	5.9	19.9	18.6	12.3	27.3	40.2	31.9	49.0	21.3	16.4	27.2	8.7*	3.3	21.0
Strathbogie (S)	9.1	6.7	12.4	20.6*	11.8	33.5	43.3	35.9	51.0	24.1*	14.2	37.7	2.9*	1.5	5.6
Towong (S)	8.4	5.4	12.9	32.3	23.7	42.4	39.4	29.9	49.8	15.8	12.0	20.5	4.1*	2.1	7.6
Wangaratta (RC)	7.4	5.1	10.6	25.5	16.2	37.6	45.3	35.9	55.0	14.7	9.6	21.8	7.2*	2.8	17.3
Wodonga (RC)	14.5	9.1	22.4	33.0	25.8	41.1	40.5	33.3	48.1	9.0	6.9	11.8	2.9	1.9	4.5
Hume Region	13.9	11.9	16.1	31.3	27.7	35.2	40.4	37.1	43.7	10.5	9.3	11.8	3.9	3.0	5.2
Buloke (S)	8.6*	4.9	14.6	13.9	9.7	19.5	60.1	51.9	67.7	12.1	8.6	16.8	5.3*	2.6	10.6
Campaspe (S)	17.8	12.3	25.0	33.3	25.6	41.9	31.5	24.4	39.6	12.3	8.4	17.5	5.2*	2.4	10.7
Central Goldfields (S)	14.3*	8.0	24.3	16.5	12.5	21.4	44.9	35.9	54.3	16.2	11.8	21.9	8.1	5.3	12.3
Gannawarra (S)	19.4	10.2	33.9	17.8	11.7	26.0	39.7	27.5	53.4	18.4	13.6	24.5	4.7*	2.6	8.1
Greater Bendigo (C)	11.0	7.8	15.2	27.9	20.7	36.5	46.0	37.9	54.3	11.2	8.4	14.7	4.0	2.5	6.4
Loddon (S)	9.7	6.2	15.0	27.2	18.1	38.7	33.4	24.1	44.3	25.1	18.6	32.9	**		
Macedon Ranges (S)	5.8*	3.3	10.1	18.8	13.9	24.9	49.4	37.3	61.6	22.3*	12.4	36.7	3.7*	2.0	6.9
Mildura (RC)	18.2	13.3	24.3	33.1	24.7	42.7	38.4	29.7	48.0	3.3	2.1	5.2	7.0	4.5	10.9
Mount Alexander (S)	6.0	3.8	9.4	10.0	7.7	13.0	72.1	66.9	76.8	9.3	6.3	13.6	2.5*	1.4	4.5
Swan Hill (RC)	19.3	12.2	29.3	46.1	35.8	56.8	28.8	21.1	38.0	2.4*	1.3	4.2	3.3*	2.0	5.5
Loddon Mallee Region	12.8	10.8	15.1	27.6	23.7	31.9	43.3	39.1	47.7	11.7	9.4	14.5	4.6	3.7	5.6
Rural Victoria	11.3	10.2	12.5	28.0	26.1	29.9	44.7	42.7	46.8	11.7	10.7	12.8	4.3	3.7	4.9
Victoria	9.0	8.4	9.6	25.2	24.2	26.2	55.4	54.3	56.5	5.7	5.3	6.1	4.8	4.4	5.2

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

Figure 5-3 shows the proportions of adults in Victoria who 'definitely' agree that multiculturalism makes life in their local government areas better and are therefore deemed to be tolerant of diversity.

Figure 5-3: Proportion of Victorian adults who are tolerant of diversity, by local government area



Data were age-standardised to the 2011 Victorian population.
The horizontal bars represent the 95 per cent confidence interval around the estimate for each local government area.
The vertical line on the graph is the Victorian estimate and the vertical column is the 95 per cent confidence interval around the estimate for Victoria.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Metropolitan and rural local government areas are identified by colour as follows: metropolitan/rural
B = Borough; C = City; S = Shire; RC = Rural City.

Figures 5-4 and 5-5 show the proportions of Victorian adults who are tolerant of diversity, by local government area.

Figure 5-4: Proportion of Victorian adults who are tolerant of diversity, by metropolitan local government area

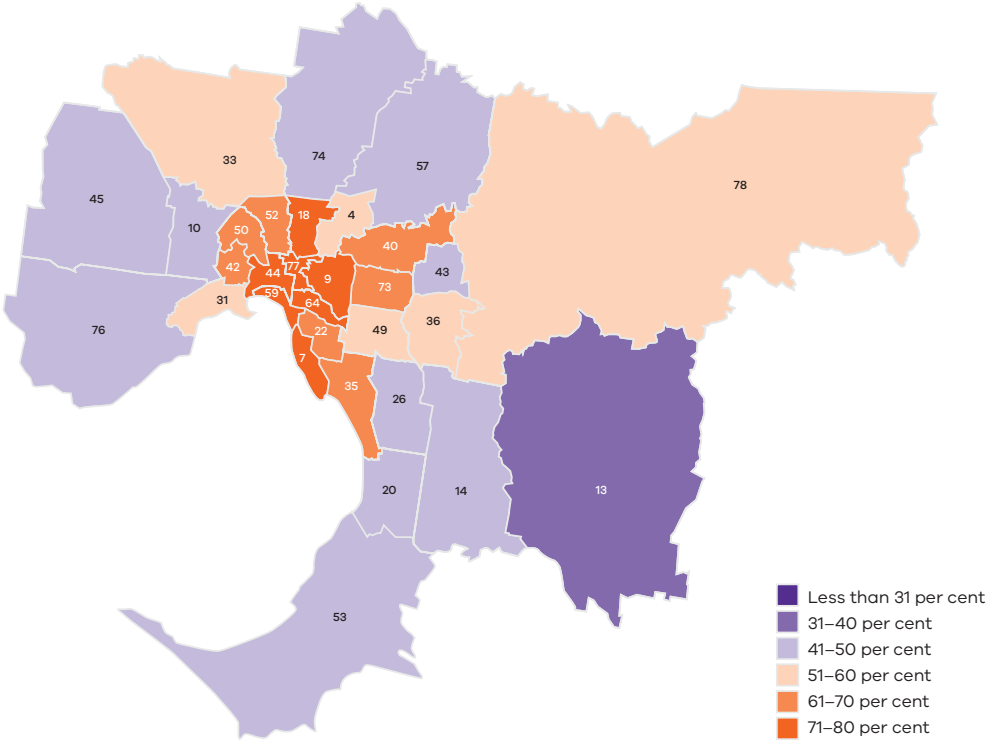
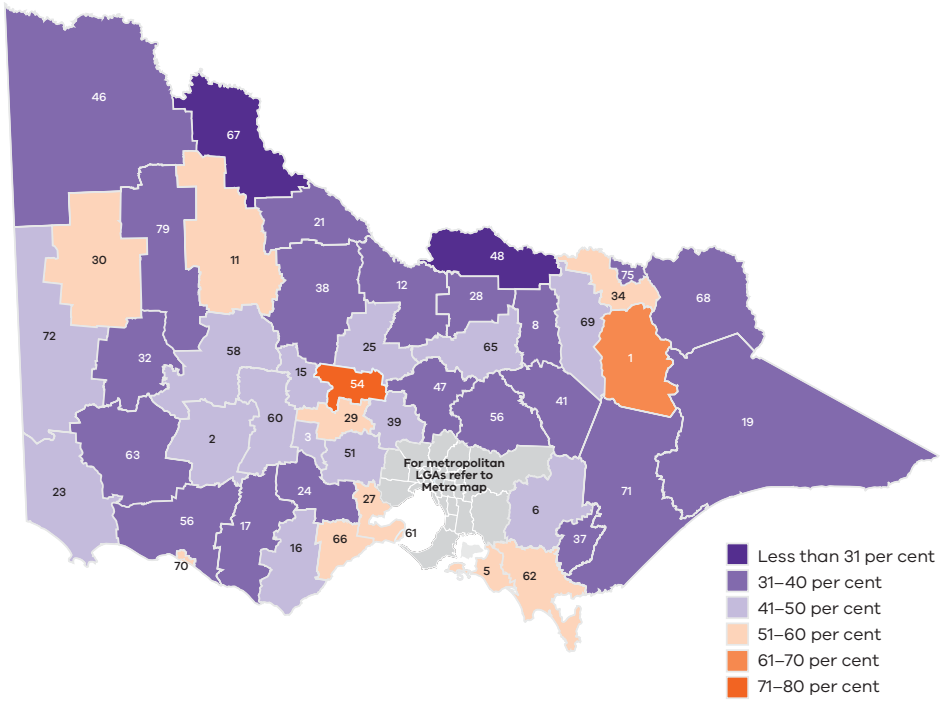


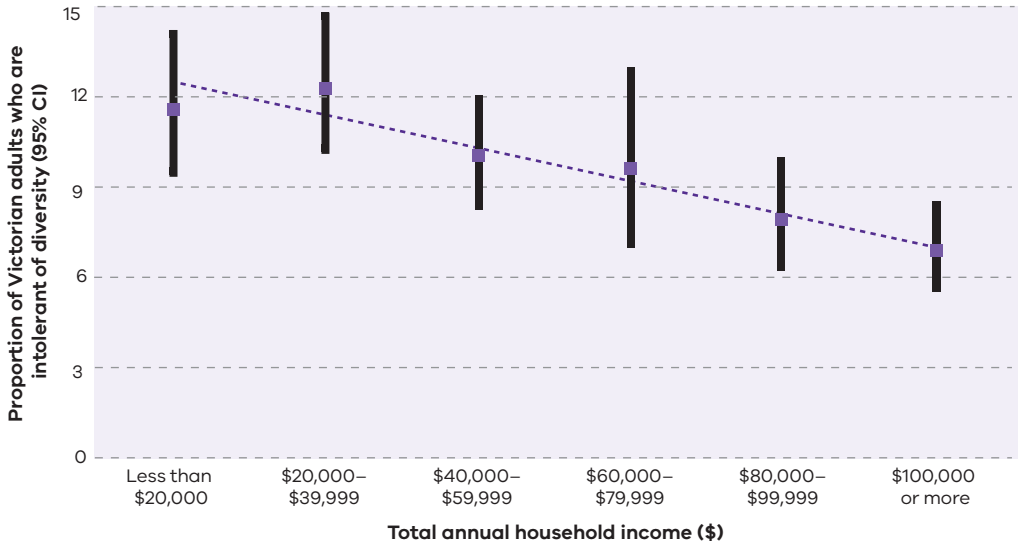
Figure 5-5: Proportion of Victorian adults who are tolerant of diversity, by rural local government area



Does tolerance of diversity vary by socioeconomic status?

Figure 5-6 shows the relationship between tolerance of diversity and total annual household income. As total annual household income increases, the proportion of Victorian adults who are intolerant of diversity significantly declines. Therefore, tolerance of diversity is strongly associated with higher socioeconomic status.

Figure 5-6: The relationship between intolerance of diversity and socioeconomic status

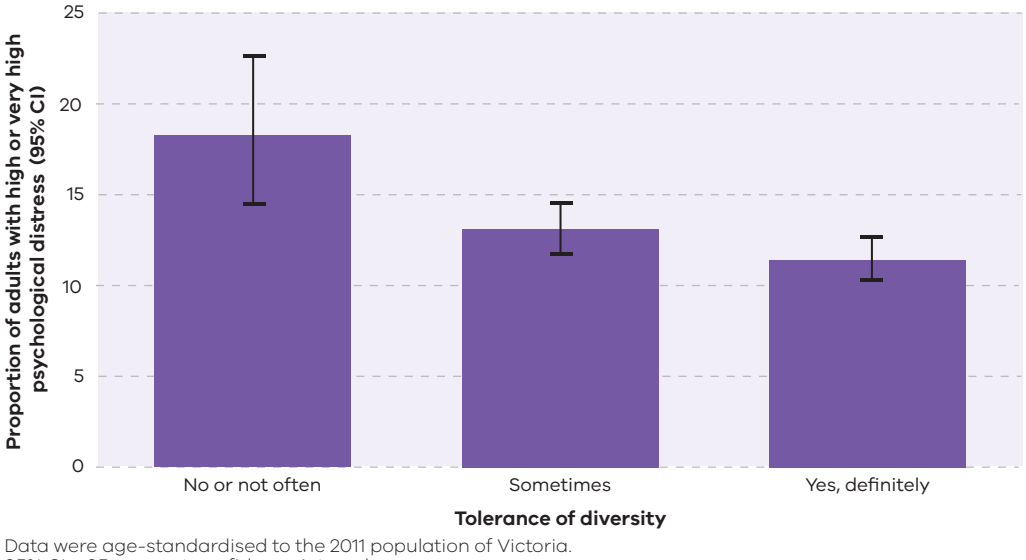


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is tolerance of diversity associated with health outcomes?

Figure 5-7 shows that Victorian adults who are intolerant of diversity are more likely to have high or very high levels of psychological distress than those who are tolerant of diversity. Therefore, intolerance of diversity is associated with poorer mental health.

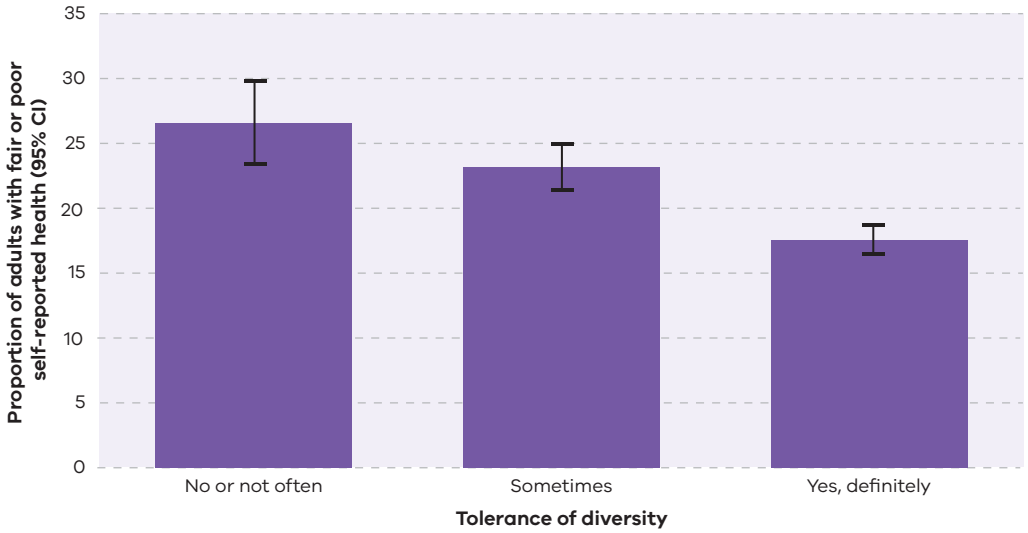
Figure 5-7: The relationship between tolerance of diversity and mental health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 5-8 shows that Victorian adults who are intolerant of diversity are more likely to report being in fair or poor health than those who are tolerant of diversity. Therefore, intolerance of diversity is also associated with poorer physical health.

Figure 5-8: The relationship between tolerance of diversity and physical health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of findings

- The majority of Victorian adults either 'definitely' agree or 'sometimes' agree that multiculturalism makes life in their area better. However, 9 per cent of Victorian adults do not agree that multiculturalism makes life in their area better.
- Victorian men and people 55 years of age or older are more likely to be intolerant of diversity than women and people 18–54 years of age.
- Significantly higher proportions of people who live in the metropolitan local government areas of Brimbank and Cardinia are intolerant of diversity.
- Significantly higher proportions of people who live in the rural local government areas of Wellington, Greater Shepparton, Mitchell, Moira, Campaspe, Gannawarra, Mildura and Swan Hill are intolerant of diversity.
- Intolerance of diversity is associated with lower total annual household income.
- Intolerance of diversity is associated with poor mental and physical health.

Interpretation of the findings

This study found that the majority of Victorian adults (55 per cent) definitely agree that multiculturalism makes life in their area better. Another 25 per cent believe this is the case 'sometimes', 9 per cent disagree, 6 per cent feel it is not applicable to the area in which they live and 5 per cent do not know or refused to say at interview.

In contrast, another telephone survey of 5,056 residents in New South Wales and Queensland found that 85 per cent agree it is 'a good thing for a society to be made up of people from different cultures', suggesting a significantly higher level of tolerance of diversity compared with the findings of this report (Dunn, Forrest et al. 2004). However,

it is important to note that responses are highly dependent on the questions asked and the response options available. Our question on multiculturalism specifically asks the respondent about the area in which they live, while the latter survey doesn't. Our question gives respondents a 'sometimes' response option, which the latter survey does not. When questions only allow 'yes' or 'no' responses this can have the effect of biasing responses towards the positive (Harrison 2007).

A second question asked in the survey conducted in New South Wales and Queensland revealed that the same survey respondents simultaneously expressed contradictory concerns about migrant groups retaining their cultural identities. While 85 per cent agreed it is a good thing for a society to be made up of different cultures, when asked whether they agreed with the statement, 'Is Australia weakened by different ethnicities sticking to their old ways', 45 per cent agreed. The authors concluded that these contradictory views are due to competing discourses, whereby cultural diversity is valued as a reflection of the liberal values of cultural equality, while the belief of what it takes to construct strong communities and nations is based on the idea that this can only be achieved under conditions of cultural homogeneity (Dunn, Forrest et al. 2004).

While our results suggest that Victoria is a broadly tolerant and inclusive community, they also suggest that there is a substantial minority who do not support multiculturalism.

This study found that Victorian adults who are intolerant of diversity are more likely to be male and/or 55 years of age or older, which is consistent with the literature (Dunn, Forrest et al. 2004). Victorian adults of low socioeconomic status are also more likely to be intolerant of diversity. There is evidence to suggest that people of low socioeconomic status may be hostile and intolerant of new immigrants because they are seen as competition for scarce resources (Sanson, Augoustinos et al. 1998).

Adults who live in rural Victoria are also less likely to be tolerant of diversity. However, they are also more likely to report that multiculturalism isn't applicable to their area, given that most non-European immigrants have tended to settle in metropolitan Victoria. Across the world there has been the consistent observation that low levels of contact between different ethnic groups is frequently associated with greater intolerance (Hodson and Busseri 2012).

This study found that Victorian adults who are intolerant of diversity have poorer mental and physical health than those who are tolerant of diversity. Given that lower socioeconomic status is also associated with poorer mental and physical health, this finding may simply reflect their low socioeconomic status. However, we performed an additional statistical analysis (logistic regression) where we controlled for the effect of socioeconomic status, measured by household income, and found that intolerance of diversity remained associated with poorer mental and physical health independent of socioeconomic status. Therefore, we hypothesise that intolerance of diversity may in itself act as a chronic stressor for the person who is intolerant of diversity, with negative consequences for health.

Contact with others

We asked the 2014 survey respondents, 'In relation to your local neighbourhood, community and friendships, how many people did you talk with yesterday?' This included family members, speaking with people on the telephone and speaking with people as part of work. This is a crude measure of the quantity of social relationships an individual has. It is crude in the sense that it assumes that the day preceding the survey interview is a typical day for that individual and does not take into account the type or quality of social contact. Nevertheless, it may indicate the level of social connectedness within a given population.

By age and sex

Table 5-4 shows that Victorian men have a higher number of social contacts than women, although there is no difference between the sexes in the proportion of men and women who do not have any social contact. The number of daily social contacts declines with age in both men and women.

The proportion of Victorian adults who have no social contact is just over 2 per cent. In contrast, almost half the Victorian adult population (47 per cent) have daily social contact with 10 or more people.

There is no difference by age in the proportion of women who have no social contact. However, men 55–64 years of age are significantly more likely to have no social contact than any other age group.

Table 5-4: Proportion of Victorian adults, by number of daily social contacts, age and sex

Age group (years)	None			1–4 people			5–9 people			10+ people		
	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL
Males												
18–24	**			**15.8**	11.6	21.2	**26.7**	21.1	33.1	**55.2**	48.6	61.7
25–34	**1.4***	0.6	3.4	**17.5**	13.3	22.7	**30.6**	25.3	36.4	**50.2**	44.1	56.3
35–44	**0.9***	0.5	1.7	**15.4**	12.9	18.2	**25.9**	22.8	29.2	**57.6**	54.0	61.2
45–54	**2.9**	2.0	4.3	**14.8**	12.8	17.1	**26.1**	23.5	28.8	**56.0**	53.0	59.0
55–64	**3.6**	2.7	4.8	**20.7**	18.7	22.8	**29.2**	27.0	31.6	**46.3**	43.8	48.8
65–74	**2.3**	1.7	3.1	**25.3**	23.3	27.5	**34.6**	32.4	36.9	**37.4**	35.1	39.7
75–84	**2.8**	1.9	4.1	**28.9**	26.2	31.8	**32.2**	29.4	35.2	**35.2**	32.2	38.3
85+	**2.7***	1.5	4.8	**34.9**	29.0	41.4	**35.2**	29.3	41.6	**23.1**	18.6	28.4
18+	**2.1**	**1.7**	**2.6**	**18.6**	**17.3**	**20.0**	**28.8**	**27.2**	**30.4**	**50.1**	**48.3**	**51.9**
Females												
18–24	**2.6***	1.1	6.4	**14.3**	9.9	20.1	**28.3**	22.9	34.3	**54.5**	47.9	61.0
25–34	**2.2***	1.2	3.8	**22.1**	18.4	26.3	**29.8**	25.5	34.5	**45.9**	41.0	51.0
35–44	**1.7**	1.1	2.6	**17.2**	15.3	19.3	**32.1**	29.7	34.7	**48.7**	46.1	51.4
45–54	**2.1**	1.5	2.9	**19.1**	17.3	21.0	**28.7**	26.6	30.9	**50.0**	47.6	52.4
55–64	**2.5**	1.9	3.3	**23.1**	21.3	24.9	**31.0**	29.0	33.0	**43.1**	41.0	45.2
65–74	**2.6**	2.0	3.4	**28.2**	26.4	30.2	**35.2**	33.2	37.2	**33.5**	31.5	35.5
75–84	**2.2**	1.4	3.4	**33.6**	31.1	36.1	**33.3**	30.9	35.8	**29.4**	27.1	31.8
85+	**2.1***	1.3	3.5	**40.5**	35.8	45.3	**34.6**	30.2	39.4	**21.6**	18.0	25.8
18+	**2.2**	**1.8**	**2.7**	**21.7**	**20.6**	**22.8**	**30.9**	**29.6**	**32.3**	**44.8**	**43.4**	**46.3**
Persons												
18–24	**2.1***	1.0	4.3	**15.1**	11.9	18.9	**27.4**	23.5	31.8	**54.9**	50.2	59.5
25–34	**1.8**	1.1	2.9	**19.8**	16.9	23.1	**30.2**	26.7	33.9	**48.1**	44.1	52.0
35–44	**1.3**	0.9	1.9	**16.3**	14.7	18.0	**29.0**	27.1	31.1	**53.1**	50.9	55.3
45–54	**2.5**	1.9	3.2	**17.0**	15.6	18.5	**27.4**	25.7	29.1	**52.9**	51.0	54.8
55–64	**3.0**	2.5	3.7	**21.9**	20.6	23.3	**30.1**	28.6	31.7	**44.7**	43.1	46.3
65–74	**2.5**	2.0	3.0	**26.9**	25.5	28.3	**34.9**	33.4	36.5	**35.3**	33.8	36.8
75–84	**2.5**	1.9	3.3	**31.4**	29.6	33.3	**32.8**	30.9	34.7	**32.1**	30.2	34.0
85+	**2.4**	1.6	3.4	**38.1**	34.4	42.0	**34.9**	31.2	38.7	**22.3**	19.4	25.5
18+	**2.2**	**1.9**	**2.5**	**20.2**	**19.3**	**21.1**	**29.9**	**28.9**	**30.9**	**47.4**	**46.3**	**48.5**

Data are crude estimates (not age-standardised
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval. Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

By geographic location

There are no significant differences between the metropolitan regions in the number of social contacts, nor between the local government areas, with the exception that a higher proportion of residents of the local government area of Port Phillip have social contact with five to nine people and a lower proportion of residents of Nillumbik have social contact with one to four people, compared with all metropolitan local government areas (Table 5-5).

The proportion of Victorian adults who have no social contact ranged from 0.9 per cent in the local government area of Yarra Ranges to 4.2 per cent in Wyndham. The difference between the Yarra Ranges and Wyndham is statistically significant, indicating that adults who live in Wyndham are more likely to have no social contact than adults who live in the Yarra Ranges.

Table 5-5: Proportion of adults, by number of daily social contacts and local government area in metropolitan Victoria

	None			1–4 people			5–9 people			10+ people		
		95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**1.1***	0.5	2.4	**15.7**	11.5	21.0	**33.1**	26.5	40.4	**49.9**	42.6	57.1
Knox (C)	**1.2***	0.6	2.4	**21.3**	14.8	29.7	**31.5**	24.9	38.9	**46.0**	37.9	54.2
Manningham (C)	**2.5***	1.3	4.8	**18.6**	14.1	24.3	**34.4**	27.0	42.6	**44.1**	36.3	52.1
Maroondah (C)	**			**17.6**	12.4	24.4	**37.8**	29.1	47.4	**44.2**	35.7	53.0
Monash (C)	**4.1***	1.9	8.8	**21.7**	16.9	27.4	**30.3**	24.7	36.6	**43.2**	36.8	49.7
Whitehorse (C)	**3.8***	1.5	9.6	**20.1**	14.4	27.4	**28.4**	23.1	34.3	**47.4**	40.0	55.0
Yarra Ranges (S)	**0.9**	0.4	1.9	**22.0**	17.2	27.8	**26.9**	19.6	35.7	**50.2**	41.6	58.7
Eastern Metropolitan Region	**2.1**	**1.4**	**3.3**	**19.9**	**17.7**	**22.4**	**31.0**	**28.4**	**33.9**	**46.6**	**43.6**	**49.6**
Banyule (C)	**2.3***	0.9	5.8	**20.7**	15.5	27.1	**24.7**	19.8	30.4	**52.3**	45.0	59.5
Brimbank (C)	**2.6***	1.5	4.3	**24.4**	19.8	29.8	**29.7**	24.3	35.7	**42.9**	36.9	49.1
Darebin (C)	**1.9***	0.9	3.8	**21.2**	16.5	26.8	**30.8**	24.0	38.6	**45.5**	37.6	53.7
Hobsons Bay (C)	**			**24.0**	16.7	33.3	**28.6**	22.2	35.9	**46.5**	37.9	55.4
Hume (C)	**2.7***	1.6	4.5	**22.2**	18.0	27.0	**29.0**	23.3	35.4	**46.1**	39.9	52.4
Maribyrnong (C)	**2.9***	1.2	6.9	**19.7**	15.3	24.8	**32.8**	26.3	40.0	**44.4**	37.2	51.7
Melbourne (C)	**1.9***	0.7	4.7	**21.1**	16.1	27.1	**29.8**	23.6	36.8	**47.0**	40.1	54.1
Melton (S)	**4.0**	2.4	6.4	**19.3**	15.1	24.2	**26.6**	20.9	33.1	**49.9**	43.1	56.8
Moonee Valley (C)	**1.5***	0.8	3.0	**17.9**	13.8	22.9	**34.3**	28.0	41.3	**45.6**	38.7	52.5
Moreland (C)	**2.9***	1.5	5.7	**21.7**	16.3	28.2	**27.6**	21.7	34.3	**47.7**	40.5	55.1
Nillumbik (S)	**			**13.3**	10.0	17.4	**32.1**	25.7	39.3	**52.0**	44.7	59.2
Whittlesea (C)	**2.9***	1.6	5.3	**23.1**	18.8	28.0	**29.1**	23.9	34.9	**43.6**	37.8	49.6
Wyndham (C)	**4.2***	2.2	7.7	**21.2**	16.7	26.6	**30.6**	25.3	36.5	**42.8**	36.8	49.0
Yarra (C)	**3.2***	1.3	7.7	**18.8**	12.5	27.4	**27.1**	20.1	35.5	**50.4**	40.7	60.1
North & West Metropolitan Region	**2.7**	**2.2**	**3.3**	**21.5**	**20.0**	**23.0**	**29.3**	**27.5**	**31.1**	**46.1**	**44.1**	**48.1**
Bayside (C)	**1.1***	0.5	2.5	**13.0**	8.4	19.6	**38.4**	30.3	47.2	**47.1**	39.2	55.0
Cardinia (S)	**2.9***	1.3	6.5	**19.7**	15.4	24.8	**31.2**	25.2	38.0	**45.9**	39.3	52.7
Casey (C)	**3.2***	1.8	5.4	**20.0**	15.3	25.7	**27.4**	22.6	32.7	**49.0**	42.6	55.4
Frankston (C)	**2.5***	1.4	4.3	**24.3**	19.5	29.9	**24.8**	19.6	30.7	**48.0**	41.6	54.6
Glen Eira (C)	**			**16.2**	12.0	21.5	**27.7**	21.5	34.8	**53.9**	46.2	61.4
Greater Dandenong (C)	**3.0***	1.4	6.1	**25.2**	19.6	31.7	**28.6**	22.6	35.4	**42.5**	35.5	49.9
Kingston (C)	**			**24.3**	18.1	31.6	**30.0**	22.9	38.1	**43.8**	36.1	51.8
Mornington Peninsula (S)	**			**21.3**	14.8	29.8	**24.9**	19.0	31.9	**49.8**	41.6	57.9
Port Phillip (C)	**1.1***	0.6	2.2	**18.4**	13.5	24.5	**40.7**	31.4	50.7	**39.8**	31.3	49.0
Stonnington (C)	**1.3***	0.5	3.4	**20.8**	14.3	29.3	**25.4**	19.3	32.5	**52.4**	44.2	60.5
Southern Metropolitan Region	**2.2**	**1.6**	**2.8**	**20.4**	**18.5**	**22.5**	**29.7**	**27.4**	**32.1**	**47.3**	**44.7**	**49.9**
All metropolitan regions	**2.4**	**2.0**	**2.8**	**20.7**	**19.6**	**21.8**	**29.9**	**28.6**	**31.2**	**46.6**	**45.2**	**48.1**
Victoria	**2.2**	**1.9**	**2.5**	**20.1**	**19.2**	**21.0**	**29.8**	**28.8**	**30.9**	**47.5**	**46.3**	**48.7**

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per centand is not reported because it is unreliable.

Table 5-6 shows that adults who live in the rural regions of Barwon-South Western, Gippsland and Hume are significantly less likely to have no social contact than all Victorian adults.

Of the 48 rural local government areas, the proportion of people who have no social contact could not be measured accurately in 13 local government areas due to the small numbers of people reporting that they had not had any social contact on the day preceding the survey. Of the remaining 35 rural local government areas, the proportion of people who had no social contact ranged from 0.5 per cent in the local government areas of Ararat, Moira, Towong, Central Goldfields and Mount Alexander to 3.4 per cent in the local government area of Golden Plains.

Conversely, there are higher proportions of adults who live in the local government areas of Southern Grampians, Warrnambool, Moira and Mildura who report having 10 or more social contacts, suggesting higher levels of social connectedness compared with Victoria overall.

Table 5-6: Proportion of adults, by number of daily social contacts and local government area in rural Victoria

	None			1–4 people			5–9 people			10+ people		
		95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	0.8*	0.3	1.8	19.6	13.5	27.5	31.9	24.0	41.1	47.7	37.5	58.1
Corangamite (S)	1.1*	0.4	2.7	15.0	10.7	20.7	32.4	24.4	41.7	50.4	41.3	59.5
Glenelg (S)	**			15.6	11.5	20.7	29.3	22.7	36.8	52.7	45.0	60.4
Greater Geelong (C)	1.2*	0.6	2.4	18.4	13.1	25.3	30.4	23.8	37.9	49.7	41.6	57.8
Moyne (S)	**			21.9	14.9	30.9	30.2	22.5	39.3	47.1	39.2	55.1
Queenscliffe (B)	**			11.2	7.1	17.3	23.5	15.7	33.6	54.9	40.1	68.8
Southern Grampians (S)	**			10.7	8.1	14.0	26.6	20.4	33.9	62.2	54.8	69.0
Surf Coast (S)	0.6*	0.2	1.3	10.9	7.4	15.7	39.1	30.0	49.0	49.2	40.6	57.8
Warrnambool (C)	**			14.1	9.7	20.3	27.5	20.9	35.2	57.6	49.5	65.4
Barwon-South Western Region	1.1	0.7	1.8	17.4	13.7	21.8	30.3	26.0	35.0	50.9	45.7	56.2
Bass Coast (S)	**			20.8	12.9	31.8	39.6	29.1	51.1	37.9	30.7	45.7
Baw Baw (S)	1.9*	0.9	3.9	16.0	11.6	21.6	26.8	18.9	36.5	54.8	44.8	64.5
East Gippsland (S)	1.2*	0.7	2.1	15.3	10.2	22.4	25.7	19.8	32.7	57.2	48.6	65.4
Latrobe (C)	1.9*	0.9	4.0	25.2	17.3	35.2	20.5	15.3	26.9	52.1	42.6	61.5
South Gippsland (S)	1.3*	0.6	2.9	17.0	13.1	21.8	37.5	29.7	46.0	43.6	35.5	52.1
Wellington (S)	**			16.2	12.7	20.4	34.4	26.1	43.8	47.9	39.0	56.9
Gippsland Region	1.5	1.0	2.2	19.5	16.1	23.4	28.6	25.0	32.6	49.9	45.5	54.4
Ararat (RC)	0.5*	0.2	1.1	16.1	11.3	22.4	26.7	20.4	34.1	55.8	47.4	63.9
Ballarat (C)	0.7*	0.3	1.6	15.7	10.8	22.3	33.3	26.4	40.9	50.3	42.7	57.8
Golden Plains (S)	3.4*	1.5	7.6	23.3	16.4	32.0	26.3	20.3	33.3	46.9	39.1	54.8
Hepburn (S)	0.8*	0.4	1.6	18.2	13.7	23.9	43.6	34.4	53.2	37.1	28.7	46.3
Hindmarsh (S)	**			11.5	8.7	15.2	29.9	21.9	39.4	57.5	48.3	66.3
Horsham (RC)	**			16.5	10.0	26.1	30.6	21.7	41.1	52.6	40.9	64.0
Moorabool (S)	1.8*	0.9	3.6	19.1	14.1	25.3	26.1	20.4	32.8	51.3	44.0	58.6
Northern Grampians (S)	2.7*	1.1	6.9	18.9	12.3	27.8	34.2	25.6	44.0	43.7	34.6	53.2
Pyrenees (S)	2.6*	1.2	6.0	23.8	16.4	33.1	36.3	27.4	46.3	37.3	28.2	47.3
West Wimmera (S)	0.6*	0.2	1.4	22.2	16.4	29.3	29.8	21.0	40.5	47.1	38.1	56.2
Yarriambiack (S)	2.5*	1.3	5.0	18.3	12.8	25.5	36.4	28.0	45.9	42.4	34.6	50.6
Grampians Region	1.3	0.9	1.7	17.5	14.5	21.0	31.9	28.0	36.1	49.0	44.7	53.3
Alpine (S)	0.7*	0.3	1.6	25.2	17.4	34.9	23.0	17.8	29.0	51.2	43.3	59.0
Benalla (RC)	2.2*	0.9	5.5	20.9	14.4	29.2	26.2	20.4	32.9	50.7	41.8	59.5
Greater Shepparton (C)	0.9*	0.4	2.3	28.5	20.6	38.1	26.0	20.0	33.0	43.7	35.9	51.9
Indigo (S)	0.6*	0.2	1.6	19.6	12.9	28.5	32.4	22.9	43.5	47.5	37.6	57.5
Mansfield (S)	0.8*	0.3	2.1	16.1	10.5	23.9	40.2	29.9	51.5	42.8	32.4	53.9
Mitchell (S)	0.8*	0.3	2.0	19.6	14.3	26.2	44.7	35.6	54.2	34.7	26.9	43.4
Moira (S)	0.5*	0.2	1.2	16.8	12.1	23.0	21.8	16.8	27.8	60.9	53.8	67.5
Murrindindi (S)	1.2*	0.6	2.3	20.1	14.5	27.3	32.5	24.2	42.0	46.0	37.4	54.8
Strathbogie (S)	0.9*	0.4	1.9	15.1	9.9	22.3	31.7	20.9	44.8	52.2	39.6	64.5
Towong (S)	0.5*	0.2	1.2	21.3	13.4	32.3	26.1	20.3	33.0	51.7	42.1	61.3
Wangaratta (RC)	**			11.5	8.3	15.7	31.3	23.7	40.0	55.1	46.3	63.7
Wodonga (RC)	1.0*	0.5	1.9	20.5	14.9	27.6	28.0	22.0	35.0	50.3	43.0	57.7
Hume Region	0.9	0.6	1.2	21.3	18.2	24.7	30.0	26.9	33.4	47.4	43.9	51.0
Buloke (S)	1.2*	0.7	2.3	20.6	12.8	31.3	30.2	22.2	39.6	47.9	38.5	57.4
Campaspe (S)	1.4*	0.6	3.5	19.5	13.6	27.0	27.6	20.3	36.2	51.4	42.2	60.5
Central Goldfields (S)	0.5*	0.2	1.0	22.3	14.7	32.3	32.3	24.1	41.8	44.5	36.7	52.6
Gannawarra (S)	0.7*	0.3	1.8	15.5*	7.3	29.7	34.1	22.1	48.6	49.6	40.3	58.9
Greater Bendigo (C)	**			17.4	13.6	22.1	26.7	21.5	32.7	50.9	42.8	58.9
Loddon (S)	0.6*	0.3	1.3	15.2	10.3	21.7	29.5	20.4	40.7	54.6	43.6	65.2
Macedon Ranges (S)	**			26.6	16.2	40.6	25.3	20.9	30.2	46.5	34.5	58.9
Mildura (RC)	0.9*	0.3	2.2	12.0	9.3	15.3	28.5	20.7	37.9	58.4	49.3	67.0
Mount Alexander (S)	0.5*	0.2	1.1	21.6	14.7	30.7	35.5	26.3	45.9	41.8	32.6	51.7
Swan Hill (RC)	**			15.5	9.8	23.5	29.0	20.8	38.9	52.7	42.7	62.5
Loddon Mallee Region	**			17.8	15.1	20.9	27.3	24.2	30.5	51.9	47.6	56.1
All rural regions	1.5	1.0	2.3	18.7	17.1	20.4	29.5	27.8	31.4	50.0	47.9	52.0
Victoria	2.2	1.9	2.5	20.1	19.2	21.0	29.8	28.8	30.9	47.5	46.3	48.7

Data were age-standardised to the 2011 Victorian population.
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

Figure 5-9 and Figure 5-10 show the proportions of Victorian adults who have daily social contact with less than five people, by local government area.

Figure 5-9: Proportion of adults who have fewer than five daily social contacts, by local government area in metropolitan Victoria

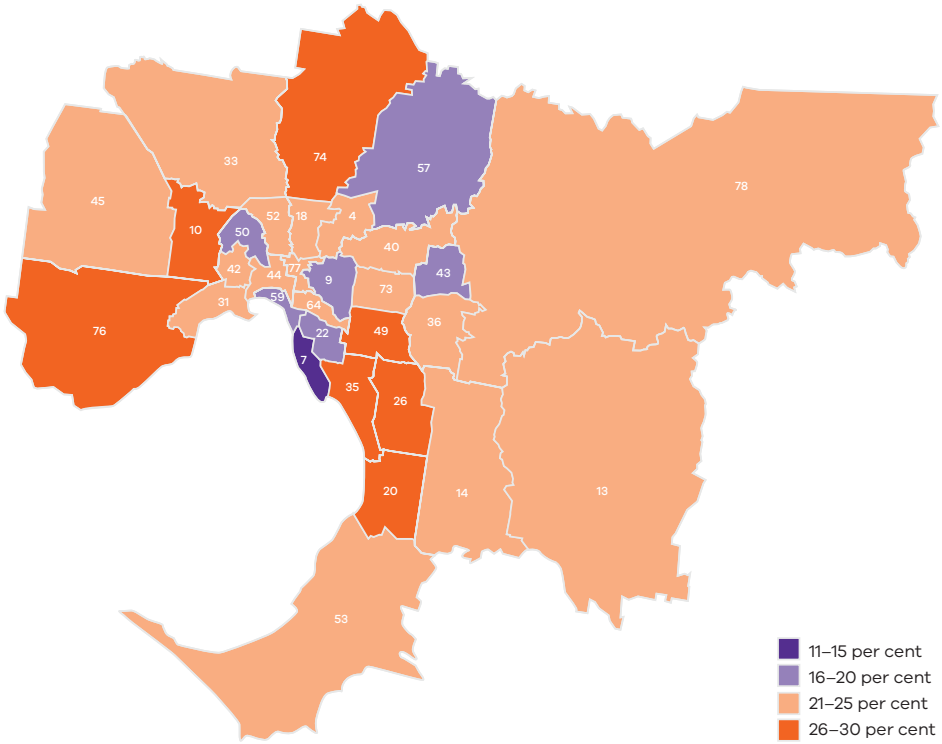
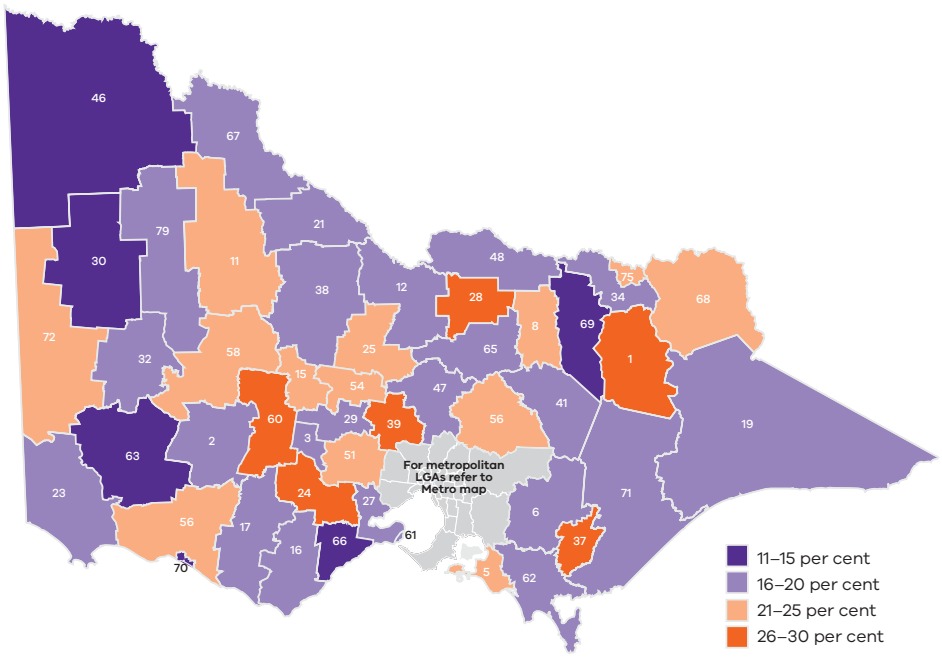


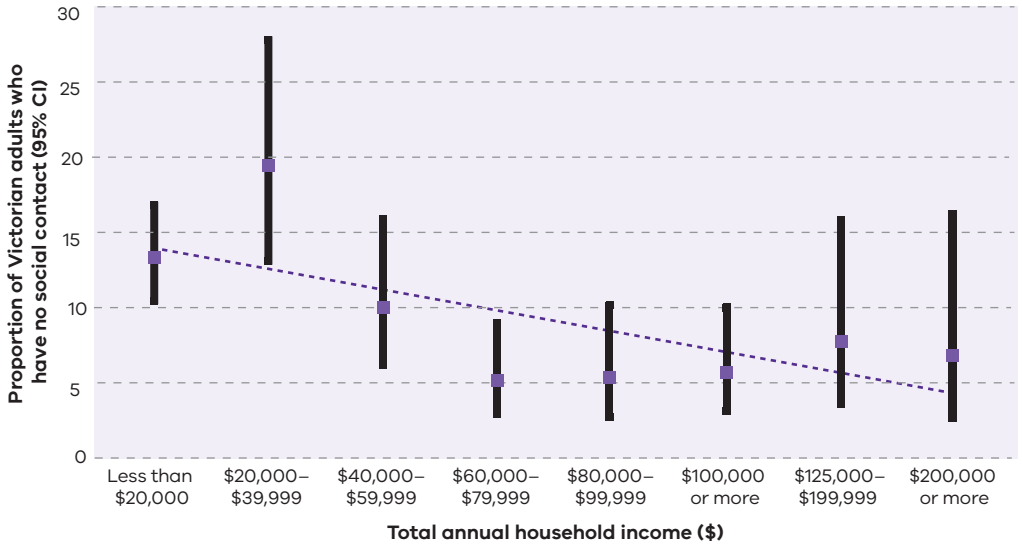
Figure 5-10: Proportion of adults who have fewer than five daily social contacts, by local government area in rural Victoria



Does the level of social contact vary by socioeconomic status?

While visual observation of Figure 5-11 would suggest that there is a relationship between not having had any social contact on the day preceding the survey and socioeconomic status, the trend did not reach statistical significance and therefore is not considered to be associated with socioeconomic status.

Figure 5-11: Proportion of Victorian adults who have no social contact, by total annual household income

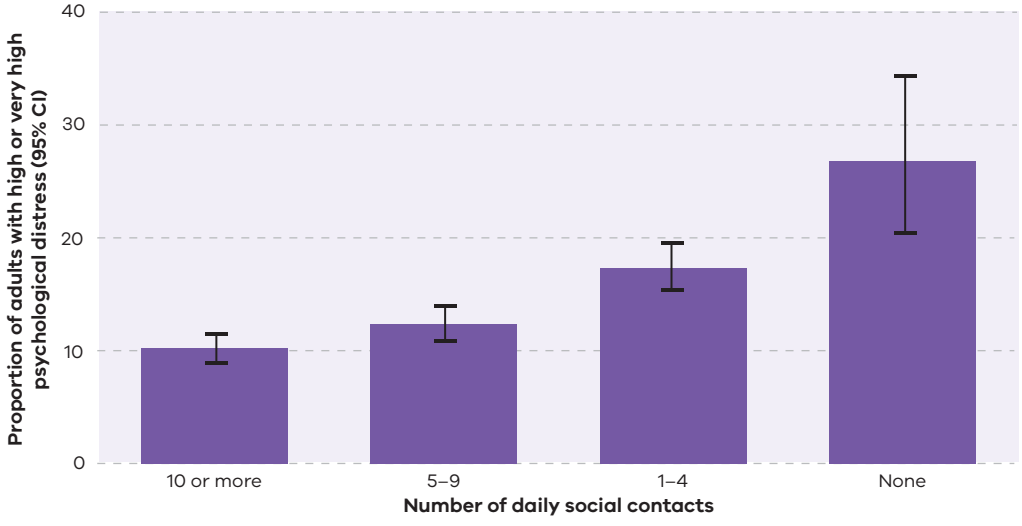


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is social contact associated with health outcomes?

Figure 5-12 shows that the lower the numbers of social contacts the higher the proportion of Victorian adults with high or very high psychological distress. Therefore, social contact is associated with mental health.

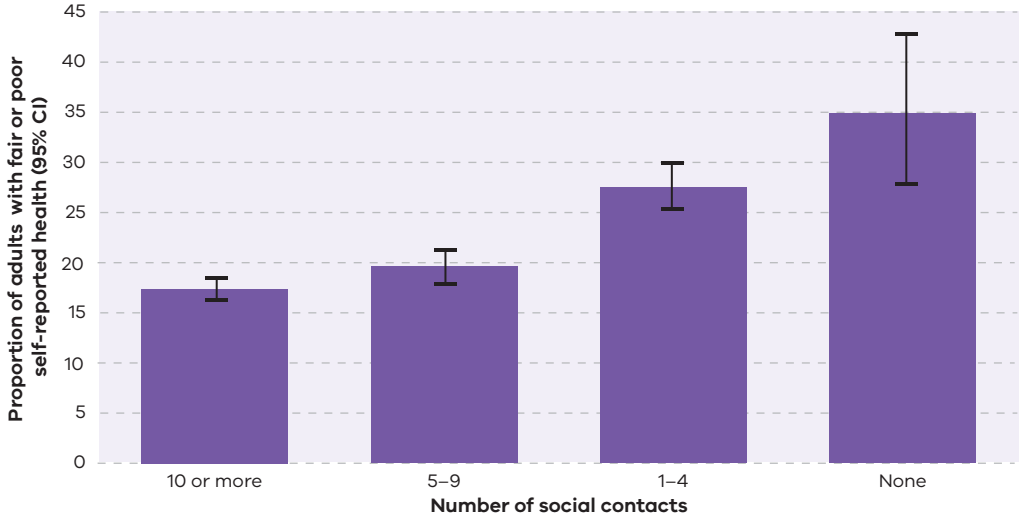
Figure 5-12: The relationship between social contact and mental health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 5-13 shows that self-reported health status is strongly associated with numbers of social contacts; the lower the number of social contacts the higher the proportion of Victorian adults who reported being in fair or poor health. These data were controlled for age, which means that although we observed that the number of social contacts declined with age as does health, age did not explain these findings. Therefore, social contact is associated with physical health, independent of age.

Figure 5-13: The relationship between social contact and physical health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of findings

- Numbers of daily social contacts decline with age.
- Victorian adults who live in the local government areas of Southern Grampians, Warrnambool, Moira and Mildura have significantly higher levels of social contact compared with Victorian adults overall.
- Lack of social contact is not associated with total annual household income.
- As the number of daily social contacts declines, so does mental and physical health.

Interpretation of the findings

The evidence, drawn from population-based and longitudinal studies, shows that people with fewer social relationships have a higher risk of premature mortality than those with many social relationships (Umberson, Crosnoe et al. 2010).

We observed strong associations between numbers of daily social contacts and both mental and physical health. However, it is important to note that the cross-sectional design of this particular study does not allow any assertions to be made about causality or its direction. Therefore it is possible that low social contact causes poor health and/or poor health causes low social contact. Nevertheless, there is an abundance of literature, based on studies of longitudinal design, that show that low social contact precedes both poor mental and physical health, providing evidence of a direct causal link from low social contact to poor physical and mental health (Umberson and Montez 2010). This does not, however, preclude the causal direction running both ways.

The relationship between social relationships and health has been well studied. However, while most of the evidence shows a positive association between social relationships and health and wellbeing, some social relationships are harmful (Umberson and Montez 2010). For example, high-conflict dysfunctional relationships can be a source of extreme stress that puts an individual at risk of poor mental and physical health. Moreover, some individuals with high numbers of social relationships may be overburdened with multiple responsibilities to the point where the associated stress impacts negatively on their health. This is because the positive benefits of social relationships are not always shared equally across the population. For example, most societies expect women to take the primary responsibility for caring for both children and elderly relatives.

The evidence shows that social relationships, or the lack of, exert their impact on mental and physical health in several concomitant ways:

- by influencing health behaviours (good or bad)
- by providing social support (instrumental, informational and/or emotional support)
- as a buffer (positive) or source (negative) of chronic stress.

While these findings suggest that the majority of Victorian adults enjoy high levels of social contact, there are some subpopulations that may benefit from policies designed to increase social contact, such as adults 65 years of age or older. Such policies could include increasing opportunities for volunteering, ensuring that public spaces are safe and available for people to congregate and exercise, and developing coordinated programs that seek to identify those with few daily social contacts in order to offer them instrumental and social support.

Neighbourhood tenure

Neighbourhood tenure refers to the duration of time spent living in a given neighbourhood; the lower the duration, the higher the probability that an individual has recently relocated. Therefore, neighbourhood tenure is an indirect measure of recent geographic relocation. In 2014 survey respondents were asked to report the number of years that they had lived in their local neighbourhood. Neighbourhood tenure was categorised into: less than one year, one to five years, six to 10 years, or more than 10 years.

By age and sex

Table 5-7 shows neighbourhood tenure by age and sex. There is no difference between the sexes; however, older age is associated with longer duration of neighbourhood tenure. A significantly higher proportion of Victorian adults 45 years of age or older have lived in their local neighbourhoods for 10 years or more compared with all Victorian adults. In contrast, a higher proportion of men 18–34 years of age (19 per cent) and women 25–34 years of age (9 per cent) have lived in their local neighbourhood for less than a year, suggesting at least one recent geographic relocation.

Table 5-7: Proportion of Victorian adults, by neighbourhood tenure, age and sex

Age group (years)	Less than one year			1 to 5 years			6 to 10 years			More than 10 years		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
Males												
18–24	**8.9**	5.9	13.1	**19.5**	14.6	25.7	**18.9**	14.2	24.6	**52.7**	46.0	59.2
25–34	**9.8**	7.0	13.6	**34.8**	29.2	40.8	**18.8**	14.8	23.5	**36.1**	30.3	42.4
35–44	**4.9**	3.5	6.8	**29.9**	26.7	33.4	**28.9**	25.8	32.3	**36.1**	32.7	39.7
45–54	**2.3**	1.5	3.4	**16.9**	14.7	19.4	**17.3**	15.1	19.7	**63.4**	60.5	66.3
55–64	**1.7**	1.2	2.4	**10.8**	9.3	12.5	**12.5**	10.9	14.3	**74.8**	72.6	77.0
65–74	**1.5**	1.0	2.3	**9.2**	7.9	10.7	**11.1**	9.7	12.6	**78.0**	75.9	79.9
75–84	**1.4***	0.8	2.5	**6.7**	5.3	8.6	**8.5**	7.0	10.3	**83.2**	80.7	85.4
85+	**			**7.1***	4.2	11.9	**6.7**	4.4	10.0	**85.2**	80.0	89.2
18+	**4.9**	**4.1**	**5.8**	**20.7**	**19.2**	**22.4**	**17.9**	**16.6**	**19.3**	**56.2**	**54.4**	**58.0**
Females												
18–24	**4.4***	2.6	7.4	**16.6**	12.3	22.0	**22.0**	16.3	28.9	**56.7**	50.0	63.3
25–34	**9.4**	7.0	12.6	**38.1**	33.4	43.0	**24.8**	20.9	29.1	**27.5**	23.0	32.5
35–44	**5.2**	4.1	6.6	**29.7**	27.3	32.2	**27.1**	24.9	29.5	**37.7**	35.2	40.3
45–54	**3.2**	2.4	4.2	**14.4**	12.8	16.1	**16.9**	15.2	18.8	**65.5**	63.2	67.7
55–64	**2.1**	1.5	2.8	**11.9**	10.5	13.3	**11.4**	10.1	12.8	**74.6**	72.7	76.4
65–74	**2.5**	1.8	3.4	**8.8**	7.8	10.0	**10.2**	9.0	11.6	**78.2**	76.4	79.9
75–84	**1.3**	0.8	2.1	**7.8**	6.5	9.4	**8.3**	7.0	9.8	**82.2**	80.1	84.1
85+	**			**5.7**	3.8	8.5	**7.3**	5.0	10.7	**85.5**	81.4	88.8
18+	**4.5**	**3.8**	**5.2**	**20.3**	**19.0**	**21.6**	**18.6**	**17.3**	**19.8**	**56.5**	**55.0**	**57.9**
Persons												
18–24	**6.7**	4.8	9.2	**18.1**	14.7	22.1	**20.4**	16.6	24.8	**54.7**	49.9	59.3
25–34	**9.6**	7.7	12.0	**36.4**	32.7	40.3	**21.8**	18.9	24.9	**31.8**	28.0	35.8
35–44	**5.0**	4.1	6.1	**29.8**	27.8	31.9	**28.0**	26.1	30.0	**36.9**	34.8	39.1
45–54	**2.7**	2.2	3.4	**15.6**	14.2	17.1	**17.1**	15.7	18.6	**64.5**	62.6	66.3
55–64	**1.9**	1.5	2.4	**11.3**	10.3	12.4	**11.9**	10.9	13.0	**74.7**	73.3	76.1
65–74	**2.1**	1.6	2.6	**9.0**	8.1	9.9	**10.6**	9.7	11.6	**78.1**	76.8	79.4
75–84	**1.4**	0.9	2.0	**7.3**	6.3	8.5	**8.4**	7.4	9.5	**82.6**	81.1	84.1
85+	**1.1***	0.4	2.6	**6.3**	4.5	8.7	**7.1**	5.3	9.3	**85.3**	82.2	88.0
18+	**4.7**	**4.2**	**5.3**	**20.5**	**19.5**	**21.6**	**18.3**	**17.4**	**19.2**	**56.3**	**55.2**	**57.5**

Data were crude estimates (not age-standardised).
% = per cent (proportion), LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different for the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

By geographic location

Table 5-8 shows the proportion of adults who live in the local government areas of metropolitan Victoria by neighbourhood tenure. There are few notable findings with the exception that there are twice as many adults who have lived in the local government area of Cardinia (10 per cent) for less than a year compared with all Victorian adults (5 per cent), suggesting a higher rate of recent geographic relocation and possibly a more mobile population. Conversely, adults who live in the local government areas of Whitehorse and Moonee Valley are more likely than all Victorian adults to have lived in their local neighbourhoods for more than 10 years, suggesting less mobile populations.

Table 5-8: Proportion of adults, by neighbourhood tenure and local government area in metropolitan Victoria

	Less than one year			1 to 5 years			6 to 10 years			More than 10 years		
		95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**4.1***	1.8	9.0	**17.5**	12.9	23.3	**16.1**	11.4	22.2	**62.4**	55.2	69.0
Knox (C)	**1.4***	0.5	3.5	**17.6**	12.5	24.3	**21.8**	14.8	30.9	**59.2**	51.4	66.5
Manningham (C)	**1.9***	0.9	4.2	**14.7**	9.7	21.5	**21.3**	14.9	29.5	**62.1**	54.9	68.8
Maroondah (C)	**4.3***	1.7	10.5	**23.7**	16.0	33.6	**16.0**	11.4	21.9	**56.0**	47.4	64.2
Monash (C)	**5.6***	3.2	9.7	**21.3**	16.2	27.5	**17.6**	13.2	23.0	**55.5**	49.3	61.5
Whitehorse (C)	**5.4***	2.8	10.4	**12.3**	8.6	17.4	**13.9**	9.2	20.5	**68.1**	60.6	74.8
Yarra Ranges (S)	**3.8***	1.4	9.7	**22.6**	16.2	30.5	**22.0**	14.9	31.4	**51.5**	43.1	59.8
Eastern Metropolitan Region	**4.0**	**2.9**	**5.5**	**18.5**	**16.2**	**21.0**	**18.0**	**15.6**	**20.7**	**59.4**	**56.5**	**62.3**
Banyule (C)	**			**18.4**	12.2	26.9	**16.4**	11.6	22.6	**62.9**	55.3	69.9
Brimbank (C)	**6.2***	3.5	10.7	**16.8**	12.8	21.8	**16.7**	12.2	22.4	**59.6**	53.7	65.3
Darebin (C)	**4.2***	2.1	8.2	**19.3**	13.0	27.7	**10.2**	7.3	14.0	**66.2**	57.3	74.1
Hobsons Bay (C)	**10.0***	4.4	21.0	**15.1**	9.8	22.4	**16.5**	10.7	24.5	**58.1**	50.6	65.2
Hume (C)	**4.8***	2.4	9.4	**22.0**	16.8	28.3	**15.8**	12.3	20.0	**57.4**	51.0	63.5
Maribyrnong (C)	**5.3***	2.7	10.3	**18.6**	13.2	25.5	**23.8**	18.3	30.3	**52.3**	45.3	59.3
Melbourne (C)	**6.7***	3.8	11.4	**24.1**	18.4	31.0	**28.6**	22.5	35.6	**40.6**	34.2	47.4
Melton (S)	**2.7***	1.2	6.1	**24.6**	18.2	32.2	**22.4**	16.9	29.2	**50.2**	43.4	57.1
Moonee Valley (C)	**5.3***	2.8	10.1	**11.6**	8.0	16.5	**14.4**	9.7	21.0	**68.4**	61.8	74.3
Moreland (C)	**8.3***	4.3	15.5	**14.9**	10.0	21.7	**19.1**	13.6	26.3	**57.6**	50.6	64.3
Nillumbik (S)	**4.5***	1.7	11.6	**15.6**	11.2	21.4	**16.1**	12.0	21.3	**63.7**	56.5	70.4
Whittlesea (C)	**3.0***	1.3	7.0	**28.7**	23.5	34.5	**13.8**	10.5	18.1	**54.2**	48.7	59.6
Wyndham (C)	**4.7***	2.6	8.3	**30.0**	24.9	35.6	**18.8**	14.6	23.9	**46.5**	40.7	52.3
Yarra (C)	**5.5***	2.6	11.2	**20.0**	13.2	29.1	**17.4**	11.8	24.8	**56.1**	46.0	65.8
North & West Metropolitan Region	**5.3**	**4.3**	**6.5**	**21.0**	**19.2**	**22.8**	**17.4**	**15.9**	**18.9**	**56.2**	**54.2**	**58.1**
Bayside (C)	**3.8***	1.8	8.0	**13.1**	8.7	19.1	**21.9**	14.3	32.0	**60.9**	51.8	69.3
Cardinia (S)	**9.6***	5.7	15.8	**26.3**	21.0	32.4	**20.8**	15.8	26.9	**42.9**	36.9	49.2
Casey (C)	**3.2***	1.6	6.3	**22.0**	16.9	28.1	**25.9**	20.9	31.5	**48.8**	42.1	55.5
Frankston (C)	**3.7***	1.9	7.3	**30.7**	24.7	37.4	**12.9**	9.6	17.1	**52.5**	46.1	58.8
Glen Eira (C)	**5.2***	2.5	10.5	**24.3**	18.1	31.7	**18.2**	12.2	26.2	**51.2**	44.5	57.8
Greater Dandenong (C)	**3.4***	1.7	6.3	**19.7**	14.1	26.8	**24.5**	18.4	31.8	**52.5**	45.9	59.0
Kingston (C)	**1.6***	0.6	4.0	**18.7**	13.3	25.7	**22.3**	16.3	29.7	**57.5**	50.1	64.5
Mornington Peninsula (S)	**6.3***	2.6	14.5	**27.8**	20.2	37.0	**13.2**	8.5	20.0	**52.0**	44.4	59.5
Port Phillip (C)	**			**26.5**	17.9	37.4	**21.0**	13.8	30.8	**51.2**	43.0	59.3
Stonnington (C)	**4.8***	2.5	9.1	**16.6**	11.6	23.2	**19.8**	14.0	27.2	**58.6**	51.2	65.5
Southern Metropolitan Region	**3.9**	**3.1**	**5.0**	**22.5**	**20.2**	**24.8**	**20.5**	**18.4**	**22.7**	**52.8**	**50.3**	**55.3**
Victoria	**4.7**	**4.2**	**5.3**	**20.6**	**19.5**	**21.6**	**18.2**	**17.3**	**19.2**	**56.2**	**55.1**	**57.4**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

Table 5-9 shows the proportion of adults who live in the local government areas of rural Victoria by neighbourhood tenure. Adults who live in the local government areas of Corangamite (14 per cent), Pyrenees (14 per cent) and Wodonga (11 per cent) are more likely to have lived in their neighbourhood for less than one year compared with all Victorian adults (5 per cent), suggesting a higher rate of recent geographic relocation and possibly more mobile populations.

Conversely, residents of the local government areas of Corangamite (68 per cent), Glenelg (70 per cent), Hindmarsh (72 per cent), West Wimmera (70 per cent), Yarriambiack (68 per cent), Moira (68 per cent), Towong (69 per cent), Gannawarra (68 per cent) and Mount Alexander (65 per cent) are more likely to have lived in their neighbourhood for more than 10 years, suggesting less mobile populations.

Table 5-9: Proportion of adults, by neighbourhood tenure and local government area in rural Victoria

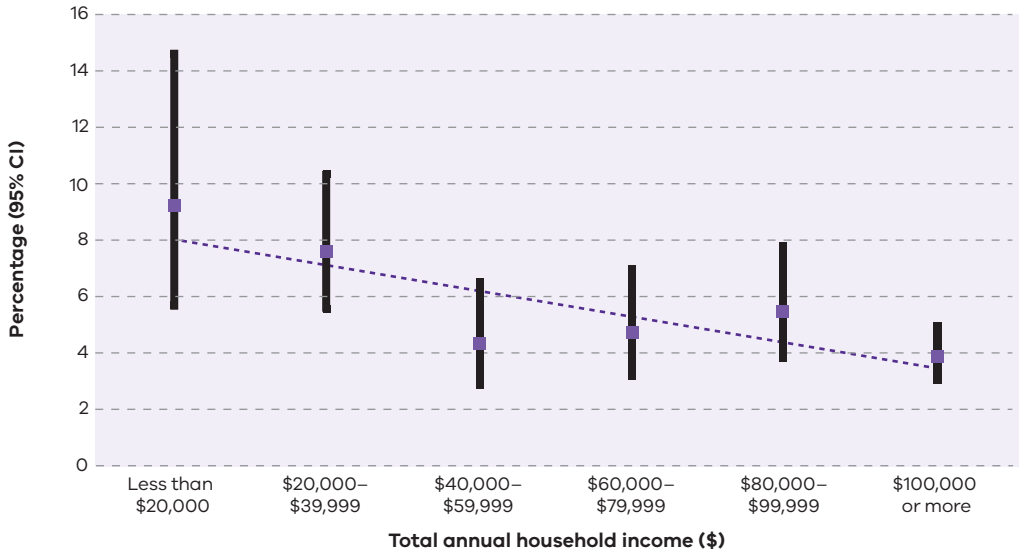
	Less than one year			1 to 5 years			6 to 10 years			More than 10 years		
		95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	7.0*	2.9	15.9	18.8	11.7	28.8	13.7*	8.3	22.0	60.4	49.7	70.2
Corangamite (S)	13.6*	7.4	23.5	5.0*	2.5	9.8	13.1	8.2	20.1	67.5	58.3	75.5
Glenelg (S)	**			10.9	7.1	16.5	16.2	11.6	22.2	69.8	62.9	75.9
Greater Geelong (C)	4.7*	2.1	10.4	20.1	13.8	28.3	13.1	8.4	20.0	62.0	54.2	69.3
Moyne (S)	0.6*	0.3	1.6	23.3	16.0	32.5	17.8	11.9	25.6	58.3	49.4	66.8
Queenscliffe (B)	11.7*	5.2	24.4	24.2*	12.6	41.4	13.9*	7.0	25.6	50.2	38.7	61.6
Southern Grampians (S)	**			18.3	11.0	28.9	19.7	12.7	29.2	54.3	45.5	62.8
Surf Coast (S)	1.4*	0.7	2.8	17.7	11.3	26.7	24.2	16.4	34.2	56.5	48.8	63.8
Warrnambool (C)	7.5*	3.4	15.5	19.1	13.1	27.0	16.4	11.2	23.4	57.0	49.6	64.1
Barwon-South Western Region	5.1*	3.1	8.5	19.1	14.7	24.4	15.2	11.7	19.4	60.5	55.3	65.4
Bass Coast (S)	**			16.6	10.9	24.4	10.8	7.5	15.2	65.1	53.6	75.1
Baw Baw (S)	**			24.7	18.8	31.9	14.6	10.5	20.0	50.1	40.6	59.5
East Gippsland (S)	**			27.9	18.5	39.9	14.1	9.3	20.9	56.3	45.3	66.8
Latrobe (C)	5.5*	2.5	11.6	17.1	11.1	25.5	14.3	9.8	20.3	61.1	53.0	68.7
South Gippsland (S)	1.9*	0.8	4.7	15.0	10.3	21.5	22.4	15.7	31.0	60.6	52.3	68.4
Wellington (S)	**			18.4	11.7	27.9	17.7	11.6	25.9	59.9	51.9	67.5
Gippsland Region	5.7*	3.1	10.1	19.9	16.6	23.6	15.3	12.9	18.1	58.5	54.0	62.7
Ararat (RC)	9.8*	4.7	19.3	24.8	17.1	34.5	14.4	9.2	21.6	50.8	43.0	58.7
Ballarat (C)	4.7*	2.2	9.4	22.8	17.4	29.3	16.8	11.9	23.1	55.3	48.0	62.3
Golden Plains (S)	5.1*	2.5	10.2	22.7	16.3	30.7	23.2	17.4	30.3	49.1	41.3	56.9
Hepburn (S)	**			31.2	21.5	42.7	13.9	8.6	21.9	50.8	41.0	60.6
Hindmarsh (S)	**			12.5*	6.8	22.1	14.7	9.5	22.1	72.4	63.6	79.8
Horsham (RC)	1.6*	0.7	3.4	18.1	12.1	26.2	29.3	21.3	38.9	50.9	42.3	59.4
Moorabool (S)	7.7*	4.4	13.2	18.5	12.8	26.0	15.7	11.3	21.5	58.1	51.5	64.4
Northern Grampians (S)	**			12.3	7.8	18.9	23.1	16.0	32.1	60.5	51.4	69.0
Pyrenees (S)	13.6*	5.8	28.9	21.4	14.1	31.1	14.1*	8.2	23.3	50.8	43.1	58.5
West Wimmera (S)	1.8*	0.8	4.0	18.3	12.0	26.9	10.4	7.0	15.1	69.5	61.4	76.5
Yarriambiack (S)	**			15.7*	9.0	26.0	14.3	9.5	21.0	68.3	58.0	77.0
Grampians Region	5.1	3.4	7.5	20.9	17.7	24.4	17.6	14.6	21.1	56.2	52.0	60.2
Alpine (S)	**			14.2*	8.4	23.1	14.8*	8.6	24.2	59.3	47.5	70.2
Benalla (RC)	**			25.1	17.1	35.3	11.2	7.3	16.7	59.9	50.5	68.7
Greater Shepparton (C)	2.8*	1.2	6.1	18.8	13.1	26.3	23.6	15.9	33.7	54.8	47.1	62.2
Indigo (S)	**			24.3	17.0	33.4	15.1	10.1	22.1	55.5	45.9	64.8
Mansfield (S)	**			16.6	10.4	25.4	15.0	10.2	21.4	62.5	53.1	71.0
Mitchell (S)	11.0*	4.6	23.9	15.9	10.8	22.9	20.3	14.7	27.3	52.7	44.9	60.4
Moira (S)	4.6*	2.0	10.3	12.8	8.8	18.4	14.3	9.8	20.3	68.3	61.4	74.5
Murrindindi (S)	4.2*	1.8	9.6	14.1	8.5	22.5	20.2	13.8	28.5	61.5	52.4	69.9
Strathbogie (S)	3.9*	1.5	9.7	26.1	19.7	33.7	16.4*	8.3	29.9	53.6	42.2	64.6
Towong (S)	4.0*	1.7	9.1	12.4	7.9	18.9	14.2	9.7	20.3	69.2	61.8	75.8
Wangaratta (RC)	**			21.3	13.9	31.1	16.6	12.2	22.1	58.1	48.5	67.1
Wodonga (RC)	10.6*	5.5	19.6	21.7	15.9	28.9	15.3	10.4	22.1	52.4	45.2	59.5
Hume Region	6.4	4.1	9.9	18.5	16.0	21.3	18.5	15.5	22.0	56.5	53.2	59.8
Buloke (S)	**			18.5*	10.9	29.7	17.5	11.3	26.0	60.3	51.3	68.6
Campaspe (S)	2.5*	1.0	5.8	19.8	13.2	28.5	15.3	10.7	21.3	62.2	54.1	69.7
Central Goldfields (S)	9.1*	3.7	20.7	12.5	8.1	18.9	15.4	9.8	23.2	62.5	52.6	71.4
Gannawarra (S)	4.9*			14.3	9.7	20.8	13.1*	7.4	22.2	67.6	58.7	75.4
Greater Bendigo (C)	3.6*	2.1	6.1	17.1	12.5	22.9	25.1	18.2	33.5	54.2	46.3	62.0
Loddon (S)	1.5*	0.6	3.3	22.5	14.5	33.2	10.3*	4.9	20.6	65.7	54.5	75.4
Macedon Ranges (S)	2.5*	1.1	5.7	18.6	13.1	25.8	16.1	12.3	20.8	62.8	55.4	69.7
Mildura (RC)	**			18.0	12.1	26.0	13.8	9.7	19.3	63.5	53.8	72.3
Mount Alexander (S)	8.1*	3.9	15.9	13.1	9.2	18.4	13.8	10.1	18.5	65.0	58.6	70.9
Swan Hill (RC)	2.2*	1.0	4.5	12.8*	7.6	20.7	25.8	16.6	37.9	59.1	48.9	68.5
Loddon Mallee Region	3.6	2.4	5.5	17.2	14.6	20.1	19.4	16.0	23.3	59.7	55.6	63.7
Victoria	4.7	4.2	5.3	20.6	19.5	21.6	18.2	17.3	19.2	56.2	55.1	57.4

Data were age-standardised to the 2011 Victorian population
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.
** Estimate has an RSE of greater than or equal to 50 per cent and is not reported because it is unreliable.

Does neighbourhood tenure vary by socioeconomic status?

Figure 5-14 shows that as total annual household income increases the proportion of Victorian adults who have lived in their neighbourhood for less than one year decreases. Therefore neighbourhood tenure for less than a year is associated with lower socioeconomic status. In contrast, there is no relationship between socioeconomic status and neighbourhood tenure when neighbourhood tenure exceeds one year (data not shown).

Figure 5-14: Proportion of Victorian adults who have lived in their neighbourhood for less than one year, by total annual household income

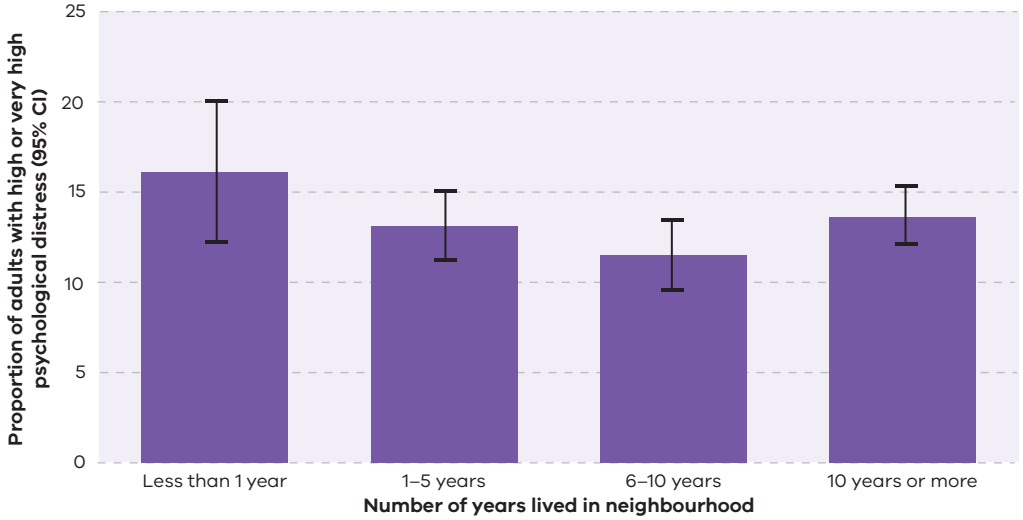


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is neighbourhood tenure associated with health outcomes?

The proportion of Victorian adults with high or very high levels of psychological distress does not vary by duration of neighbourhood tenure (Figure 5-15). Therefore there is no association between neighbourhood tenure and mental health.

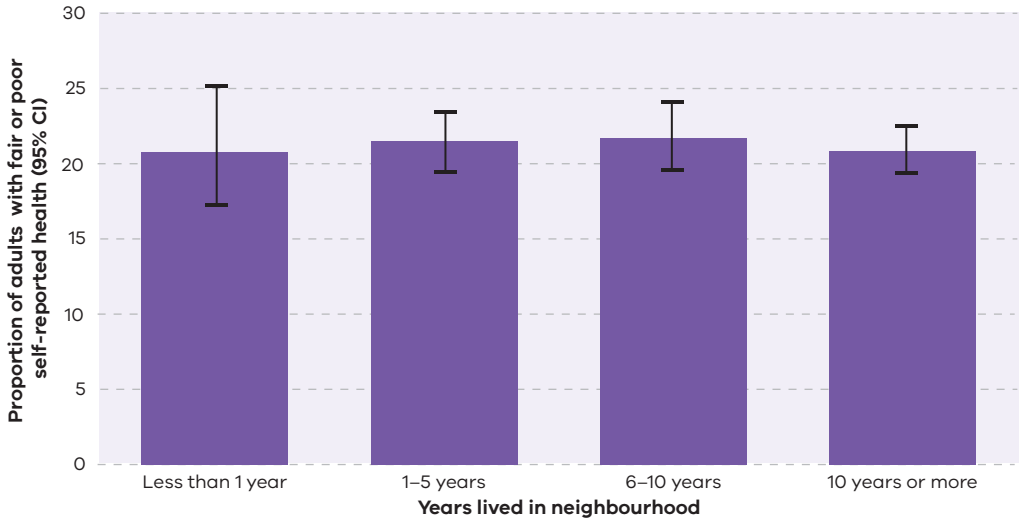
Figure 5-15: The relationship between neighbourhood tenure and mental health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Similarly, the proportion of adults with fair or poor self-reported health does not vary by duration of neighbourhood tenure. Therefore, there is no association between neighbourhood tenure and physical health (Figure 5-16).

Figure 5-16: Relationship between neighbourhood tenure and physcial health



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of key findings

- Neighbourhood tenure may be an indirect measure of the most recent geographic relocation of an individual, but it does not provide any information about frequency or past experiences of geographic relocation.
- Older age (45 years or older) is associated with longer neighbourhood tenure.
- 19 per cent of men 18–34 years of age and 9 per cent of women 25–34 years of age have lived in their neighbourhood for less than a year.
- Adult residents of the metropolitan local government area of Cardinia and rural local government areas of Corangamite, Pyrenees and Wodonga are more likely than all Victorian adults to have lived in their neighbourhood for less than a year.
- Neighbourhood tenure of less than one year is associated with lower total annual household income.
- There is no association between neighbourhood tenure and mental and physical health.

Interpretation of the findings

Frequent geographic relocation is a well-described life event stressor that is also associated with poverty, housing tenure, unemployment, family disruption and single parenting (Jelleyman and Spencer 2008). Experienced as a child, frequent geographic relocation is a risk factor for the health and wellbeing of adolescents and adults (Dong, Anda et al. 2005); (Jelleyman and Spencer 2008); (Oishi and Schimmack 2010); (Tseliou, Maguire et al. 2015). The greater the number of geographic relocations, the lower the level of wellbeing (Oishi 2010). This is because frequent relocation is emotionally, socially, economically and educationally disruptive.

In a systematic review of 22 studies, the authors concluded that frequent geographic relocation experienced in childhood was associated with higher levels of behavioural and emotional problems, increased teenage pregnancy rates, depression and illicit drug use, even after taking into account socioeconomic status (Jelleyman and Spencer 2008). Moreover, a longitudinal study of 7,108 American adults who were followed for 10 years showed that the greater the number of relocations experienced as a child, the lower the level of wellbeing as an adult and the higher the rate of mortality, but only among adults who were deemed to be introverts (Oishi and Schimmack 2010). There was no such finding in adults deemed to be extroverts. The study further showed that it was a lack of social relationships that appeared to explain these findings.

While neighbourhood tenure is an indirect measure of the timing of the most recent geographic relocation, it does not capture information about geographic relocations that occurred when the respondent was a child, nor the frequency of such geographic relocations. This may explain why we do not find an association between low neighbourhood tenure and mental or physical health. However, since many of the survey respondents have children themselves, low neighbourhood tenure may pose a health risk factor for their children in the future if their low neighbourhood tenure is indicative of frequent relocation.

Our finding that there are four local government areas with significantly higher proportions of adults who have only lived in their neighbourhood for less than a year may indicate that the children who live in these areas are at higher risk of poor mental and physical health in the future. Three of the four local government areas are rural

(Corangamite, Pyrenees and Wodonga), while the fourth is the metropolitan local government area of Cardinia.

Low neighbourhood tenure in Cardinia may reflect the rapidly growing population as Cardinia is located in the growth corridor of Melbourne. If this is so, this may be of less concern than the situation in the rural local government areas because a rapidly growing population may indicate the birth of a new community where people subsequently choose to remain.

However, the population is in decline in Corangamite and below average in Pyrenees and Wodonga. It is possible that, being agricultural areas, the high proportion of adults who have only lived in their neighbourhoods for less than a year may reflect the movement of a seasonal workforce. If this is true and these include families with young children, further investigation may be warranted.

The finding that neighbourhood tenure is only associated with socioeconomic status when the duration is of less than one year is entirely consistent with the literature on poverty. People in poverty often have to relocate for multiple reasons, such as being more likely to be evicted from rental housing due to being unable to meet the rental payments and having to seek poorly paid insecure employment opportunities such as seasonal employment.

While we did not find that neighbourhood tenure is associated with mental or physical health, this may be due to the fact that current neighbourhood tenure does not provide any information about past neighbourhood tenure or the frequency of geographic relocation over an extended period of time.

For further reading we suggest:

Jelleyman T, Spencer N 2008, 'Residential mobility in childhood and health outcomes: a systematic review', *Journal of Epidemiology and Community Health*, no. 62, pp. 584–592.

6. Social isolation

Key messages

- **Social isolation is an important health risk factor for both mental and physical health.**
- **Social isolation increases with declining socioeconomic status.**
- **Adults who live in the local government areas of Yarriambiack (rural Victoria) and Greater Dandenong (metropolitan Victoria) are most likely to experience social isolation.**

Introduction

To be social isolated is to be deprived of social connectedness. Social isolation has been measured in many different ways across different disciplines (Zavaleta, Samuel et al. 2016). It has been measured using single indicators such as living alone, infrequent contact with a social network and being unmarried. It has also been measured using composite indicators where single indicators are compiled into a single index to reflect the multidimensional nature of social isolation.

Cornwell and Waite (2009) proposed that social isolation consists of two dimensions: lack of social support and loneliness. Although we measured social support in the 2014 Victorian Population Health Survey, we did not measure loneliness. However, trust has been included in some composite indicators of social isolation (Zavaleta, Samuel et al. 2016) and we did measure social and civic trust. Therefore, we created a composite indicator to measure social isolation using all three social support and three of the four trust questions (see Appendix 1 for further details). We did not include the social trust question about whether a person felt safe walking alone down their street after dark because we did not feel this necessarily reflects social isolation since more women and elderly people do not feel safe due to their disproportionate over-representation as victims of physical assault. Moreover, this question is not applicable to a substantial proportion of people who live in rural Victoria.

By age and sex

Table 6-1 shows that social isolation does not appear to be associated with age with the exception that women 18–24 years of age are more likely to be socially isolated than all Victorian women. However, there are significantly higher proportions of Victorian adults 65 years of age or older who either do not know or refused to answer some or all of the questions. Therefore, we cannot definitively state that social isolation is not associated with age, as it may be that older adults who are socially isolated are uncomfortable answering the social support and trust questions.

Overall, there is no difference between the sexes.

Table 6-1: Level of social isolation among Victorian adults, by age and sex

Age group (years)	High or very high			Low			Very low			Did not know or refused to say		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
18–24	**17.3**	12.7	23.1	**41.3**	35.0	47.8	**35.4**	29.3	42.1	**6.0***	3.5	10.2
25–34	**20.5**	16.0	25.8	**42.4**	36.4	48.6	**28.9**	23.8	34.5	**8.2**	5.5	12.1
35–44	**18.2**	15.6	21.1	**35.1**	31.7	38.7	**39.0**	35.6	42.6	**7.6**	5.8	10.0
45–54	**17.8**	15.5	20.4	**32.1**	29.4	35.0	**40.4**	37.5	43.4	**9.6**	8.0	11.5
55–64	**14.5**	12.8	16.3	**31.5**	29.3	33.9	**41.9**	39.4	44.4	**12.1**	10.5	13.9
65–74	**12.7**	11.2	14.4	**28.0**	25.9	30.2	**43.8**	41.5	46.2	**15.5**	13.8	17.3
75–84	**13.7**	11.7	16.0	**29.1**	26.4	32.1	**36.4**	33.5	39.5	**20.7**	18.2	23.4
85+	**16.0**	12.2	20.7	**28.0**	22.3	34.4	**29.7**	24.3	35.7	**26.4**	21.2	32.3
18+	**17.1**	**15.7**	**18.5**	**35.2**	**33.4**	**36.9**	**37.4**	**35.8**	**39.1**	**10.3**	**9.4**	**11.3**
Females												
18–24	**23.9**	18.9	29.6	**48.1**	41.6	54.7	**25.4**	20.1	31.6	**2.6***	1.3	5.1
25–34	**20.5**	16.9	24.6	**44.0**	39.0	49.1	**26.7**	22.8	31.1	**8.7**	6.4	11.9
35–44	**18.2**	16.2	20.3	**37.4**	34.9	40.0	**37.4**	34.9	40.0	**6.9**	5.7	8.4
45–54	**15.2**	13.5	16.9	**32.8**	30.6	35.1	**43.6**	41.3	46.0	**8.4**	7.2	9.9
55–64	**14.3**	12.9	15.9	**31.9**	30.0	33.9	**42.8**	40.7	45.0	**10.9**	9.6	12.4
65–74	**13.3**	11.9	14.8	**29.6**	27.7	31.6	**40.2**	38.1	42.3	**16.9**	15.3	18.6
75–84	**12.5**	10.7	14.4	**25.7**	23.5	28.1	**36.2**	33.7	38.7	**25.6**	23.4	28.0
85+	**13.9**	10.6	18.1	**23.0**	19.3	27.2	**32.9**	28.6	37.5	**30.1**	25.9	34.7
18+	**17.2**	**16.1**	**18.4**	**36.5**	**35.0**	**38.0**	**35.9**	**34.6**	**37.3**	**10.3**	**9.6**	**11.1**
Persons												
18–24	**20.5**	17.0	24.4	**44.6**	40.0	49.3	**30.6**	26.4	35.1	**4.4**	2.8	6.7
25–34	**20.5**	17.5	23.8	**43.2**	39.3	47.2	**27.8**	24.5	31.3	**8.5**	6.6	10.9
35–44	**18.2**	16.6	20.0	**36.3**	34.2	38.5	**38.2**	36.1	40.4	**7.3**	6.1	8.6
45–54	**16.5**	15.0	18.0	**32.5**	30.7	34.3	**42.1**	40.2	44.0	**9.0**	8.0	10.2
55–64	**14.4**	13.3	15.6	**31.7**	30.2	33.3	**42.4**	40.8	44.0	**11.5**	10.5	12.6
65–74	**13.0**	12.0	14.1	**28.9**	27.4	30.3	**41.9**	40.3	43.4	**16.2**	15.1	17.5
75–84	**13.1**	11.7	14.5	**27.3**	25.5	29.2	**36.3**	34.4	38.2	**23.3**	21.6	25.1
85+	**14.8**	12.2	17.8	**25.1**	21.8	28.7	**31.6**	28.1	35.2	**28.6**	25.2	32.1
18+	**17.1**	**16.3**	**18.1**	**35.8**	**34.7**	**37.0**	**36.7**	**35.6**	**37.7**	**10.3**	**9.7**	**11.0**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

By geographic location

Table 6-2 shows that approximately one in four (26 per cent) adults who live in the local government area of Greater Dandenong in metropolitan Victoria have a high or very high level of social isolation, which is higher than all Victorian adults (17 per cent).

Conversely, adults who live in the local government areas of Boroondara and Stonnington are significantly less likely to be socially isolated than all Victorian adults.

Table 6-2: Level of social isolation among adults, by local government area in metropolitan Victoria

	High or very high			Low			Very low			Did not know or refused to say		
		95% CI			95% CI			95% CI			95% CI	
LGA	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Boroondara (C)	**16.5**	11.6	23.0	**30.7**	24.4	37.8	**45.2**	37.9	52.7	**7.6**	5.1	11.3
Knox (C)	**16.3**	11.8	22.1	**40.7**	33.7	48.1	**32.9**	26.8	39.8	**10.1**	7.0	14.2
Manningham (C)	**13.6**	9.5	19.2	**38.4**	30.8	46.7	**36.0**	28.5	44.2	**11.9**	8.6	16.4
Maroondah (C)	**13.2**	8.3	20.3	**39.3**	30.6	48.8	**35.0**	28.1	42.7	**12.4***	6.9	21.4
Monash (C)	**17.8**	12.9	24.1	**26.5**	21.3	32.4	**42.1**	35.8	48.7	**13.6**	10.0	18.3
Whitehorse (C)	**12.6**	9.2	17.2	**33.7**	26.6	41.5	**44.2**	37.3	51.2	**9.5**	6.0	14.7
Yarra Ranges (S)	**18.4**	11.9	27.4	**39.5**	30.9	48.7	**34.9**	27.4	43.2	**7.2**	5.0	10.3
Eastern Metropolitan Region	**15.8**	**13.7**	**18.1**	**34.8**	**31.9**	**37.8**	**39.2**	**36.4**	**42.1**	**10.3**	**8.8**	**12.0**
Banyule (C)	**15.7**	11.1	21.8	**39.0**	31.6	46.9	**38.0**	31.8	44.6	**7.3**	4.9	10.8
Brimbank (C)	**18.2**	14.0	23.3	**39.7**	33.7	46.0	**26.1**	20.9	32.0	**16.1**	12.3	20.6
Darebin (C)	**18.1**	12.5	25.3	**40.4**	33.0	48.3	**31.6**	25.5	38.3	**10.0**	7.7	12.8
Hobsons Bay (C)	**15.1**	10.0	22.1	**36.8**	28.8	45.6	**37.3**	29.0	46.5	**10.8**	7.7	15.0
Hume (C)	**20.5**	16.0	25.9	**36.1**	30.2	42.5	**32.8**	27.1	39.0	**10.6**	7.5	14.8
Maribyrnong (C)	**21.0**	15.5	27.8	**34.7**	27.9	42.2	**29.8**	24.6	35.6	**14.5**	10.0	20.6
Melbourne (C)	**16.2**	11.3	22.6	**43.0**	36.0	50.3	**31.3**	25.2	38.1	**9.5**	7.4	12.2
Melton (S)	**20.2**	14.3	27.9	**42.4**	35.3	49.9	**26.6**	21.5	32.4	**10.8**	7.8	14.8
Moonee Valley (C)	**18.4**	13.3	25.0	**36.6**	30.0	43.7	**37.5**	31.4	44.0	**7.5**	5.7	10.0
Moreland (C)	**19.6**	14.2	26.4	**28.6**	22.5	35.7	**35.4**	28.9	42.5	**16.4**	12.3	21.6
Nillumbik (S)	**10.5**	7.2	15.3	**41.1**	34.4	48.3	**39.7**	33.9	45.9	**8.6**	5.7	12.7
Whittlesea (C)	**19.7**	15.3	25.0	**35.4**	29.9	41.4	**31.9**	26.8	37.4	**13.0**	9.9	16.9
Wyndham (C)	**20.3**	15.8	25.8	**38.0**	32.2	44.2	**25.9**	21.2	31.2	**15.7**	11.4	21.3
Yarra (C)	**22.0**	15.1	31.0	**24.9**	17.9	33.4	**39.8**	29.5	51.0	**13.3**	8.3	20.8
North & West Metropolitan Region	**18.5**	**17.0**	**20.2**	**37.1**	**35.2**	**39.1**	**32.4**	**30.6**	**34.2**	**12.0**	**10.9**	**13.1**
Bayside (C)	**8.5***	4.4	15.6	**36.2**	27.7	45.6	**43.2**	34.6	52.4	**12.1***	6.9	20.4
Cardinia (S)	**20.1**	15.0	26.4	**35.7**	29.5	42.5	**31.8**	26.1	38.2	**12.4**	8.6	17.5
Casey (C)	**21.2**	16.2	27.3	**40.9**	34.5	47.6	**28.5**	23.5	34.2	**9.4**	7.1	12.2
Frankston (C)	**18.8**	14.2	24.4	**40.5**	34.1	47.2	**28.6**	23.1	34.9	**12.1**	9.0	16.1
Glen Eira (C)	**16.9**	12.1	23.0	**32.4**	25.7	39.9	**41.5**	33.8	49.5	**9.3**	6.1	13.8
Greater Dandenong (C)	**25.9**	19.7	33.1	**33.2**	26.9	40.2	**29.1**	22.9	36.1	**11.8**	8.9	15.5
Kingston (C)	**15.5**	10.9	21.5	**36.4**	28.6	45.0	**35.3**	28.0	43.3	**12.9**	8.1	19.9
Mornington Peninsula (S)	**11.9**	7.6	18.1	**38.0**	29.3	47.5	**42.8**	34.2	51.8	**7.4**	5.4	10.1
Port Phillip (C)	**20.5**	13.1	30.5	**31.0**	23.3	39.8	**39.6**	31.3	48.5	**8.9***	5.2	14.9
Stonnington (C)	**9.0**	6.0	13.3	**35.2**	27.7	43.5	**48.6**	40.4	56.8	**7.2**	5.2	10.0
Southern Metropolitan Region	**17.6**	**15.6**	**19.8**	**36.7**	**34.1**	**39.4**	**35.6**	**33.2**	**38.1**	**10.1**	**8.94**	**11.4**
All metropolitan regions	**17.5**	**16.4**	**18.6**	**36.4**	**35**	**37.8**	**35.2**	**33.9**	**36.4**	**10.9**	**10.2**	**11.65**
Victoria	**17.3**	**16.4**	**18.3**	**36.1**	**34.9**	**37.3**	**36.3**	**35.2**	**37.4**	**10.3**	**9.7**	**10.9**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 6-3 shows that 28 per cent of adults who live in the rural local government area of Yarriambiack have a high or very high level of social isolation, which is higher than all rural Victorian adults (17 per cent) and all Victorian adults (17 per cent).

Conversely, adults who live in the local government areas of Moyne, Surf Coast, Warrnambool, Hepburn, Hindmarsh, Pyrenees, West Wimmera, Alpine, Indigo, Strathbogie, Towong, Buloke and Gannawarra are significantly more likely to *not* be socially isolated than all Victorian adults.

Table 6-3: Level of social isolation among adults, by local government area in rural Victoria

LGA	High or very high			Low			Very low			Did not know or refused to say		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Colac-Otway (S)	**20.8***	12.2	33.1	**32.7**	24.4	42.2	**41.1**	32.9	49.8	**5.5**	4.0	7.4
Corangamite (S)	**13.3***	7.9	21.5	**32.4**	24.4	41.6	**45.8**	36.8	55.2	**8.5**	5.7	12.4
Glenelg (S)	**11.2**	8.0	15.5	**42.7**	35.5	50.2	**38.7**	31.7	46.1	**7.5**	4.7	11.6
Greater Geelong (C)	**12.9**	8.8	18.5	**41.6**	33.8	49.8	**36.4**	29.6	43.7	**9.2**	5.9	14.0
Moyne (S)	**13.4***	8.0	21.5	**29.1**	21.2	38.4	**49.5**	41.4	57.6	**8.0***	4.6	13.7
Queenscliffe (B)	**15.9***	6.6	33.6	**27.4**	18.2	39.0	**53.2**	1.0	65.7	**3.4**	2.3	5.2
Southern Grampians (S)	**9.2**	5.9	14.1	**40.0**	31.4	49.3	**45.3**	36.9	54.0	**5.4**	3.7	8.0
Surf Coast (S)	**12.0***	7.2	19.2	**29.4**	22.3	37.6	**54.1**	46.0	61.9	**4.6**	3.3	6.3
Warrnambool (C)	**13.1**	9.0	18.8	**34.2**	26.4	42.9	**46.2**	38.2	54.4	**6.6**	4.4	9.7
Barwon-South Western Region	**13.0**	**10.2**	**16.6**	**38.3**	**33.2**	**43.6**	**40.6**	**36.1**	**45.2**	**8.1**	**5.9**	**11.1**
Bass Coast (S)	**9.7**	6.6	14.1	**41.9**	32.4	52.0	**40.8**	31.3	51.0	**7.7**	5.2	11.1
Baw Baw (S)	**15.7**	9.5	24.7	**35.6**	27.7	44.3	**40.3**	30.7	50.8	**8.4**	6.2	11.2
East Gippsland (S)	**24.4**	16.1	35.2	**31.3**	22.5	41.7	**39.0**	29.9	48.8	**5.3**	3.4	8.2
Latrobe (C)	**20.6**	13.4	30.4	**28.7**	20.2	39.1	**37.4**	28.9	46.8	**13.2***	7.8	21.5
South Gippsland (S)	**22.5**	16.0	30.8	**29.8**	22.8	37.9	**38.3**	31.3	45.8	**9.4***	5.7	14.9
Wellington (S)	**18.5**	11.5	28.5	**39.6**	30.9	49.0	**32.9**	26.8	39.6	**9.0**	5.6	14.2
Gippsland Region	**18.7**	**15.3**	**22.8**	**33.9**	**29.7**	**38.3**	**37.9**	**33.7**	**42.2**	**9.5**	**7.3**	**12.2**
Ararat (RC)	**18.0**	11.9	26.3	**25.1**	18.2	33.6	**43.3**	35.3	51.6	**13.6***	7.8	22.8
Ballarat (C)	**17.9**	13.2	23.8	**39.8**	32.8	47.1	**34.8**	28.8	41.4	**7.5***	4.1	13.4
Golden Plains (S)	**17.3**	11.2	25.7	**40.0**	32.3	48.1	**35.8**	29.5	42.7	**6.9**	4.4	10.6
Hepburn (S)	**16.7**	11.5	23.8	**29.8**	21.0	40.4	**48.2**	39.2	57.3	**5.3**	3.8	7.2
Hindmarsh (S)	**13.7**	8.3	21.8	**19.8**	15.1	25.5	**61.2**	53.8	68.1	**5.3**	3.3	8.3
Horsham (RC)	**15.3***	8.6	25.8	**29.2**	21.3	38.6	**46.6**	35.5	58.0	**8.9***	4.9	15.7
Moorabool (S)	**18.0**	12.5	25.2	**34.6**	27.9	42.1	**37.6**	30.7	45.0	**9.8**	7.2	13.1
Northern Grampians (S)	**17.8**	11.6	26.3	**38.5**	29.7	48.1	**36.7**	29.0	45.2	**7.0***	4.2	11.4
Pyrenees (S)	**20.2**	13.8	28.5	**16.4**	11.8	22.4	**49.2**	42.6	55.9	**14.2***	7.7	24.8
West Wimmera (S)	**9.8**	6.9	13.7	**28.8**	22.2	36.5	**55.5**	47.9	62.9	**5.9**	4.1	8.6
Yarriambiack (S)	**27.9**	20.9	36.3	**26.2**	20.4	33.1	**38.9**	32.3	46.0	**6.9**	4.5	10.5
Grampians Region	**17.5**	**14.7**	**20.6**	**35.9**	**31.8**	**40.2**	**38.4**	**34.8**	**42.1**	**8.3**	**6.0**	**11.3**
Alpine (S)	**12.5**	8.0	19.0	**31.3**	22.2	42.2	**49.0**	40.9	57.2	**7.2**	4.9	10.3
Benalla (RC)	**21.3**	14.0	31.0	**32.7**	24.9	41.7	**36.9**	28.5	46.2	**9.1**	5.8	14.0
Greater Shepparton (C)	**20.9**	14.5	29.2	**35.6**	28.1	43.8	**31.0**	25.4	37.2	**12.5***	6.7	22.0
Indigo (S)	**13.9***	7.1	25.4	**29.0**	20.7	39.1	**51.1**	41.1	61.1	**5.9**	4.1	8.4
Mansfield (S)	**15.8***	8.6	27.2	**36.0**	25.5	48.0	**43.2**	34.6	52.2	**5.1**	3.3	7.8
Mitchell (S)	**18.7**	13.2	25.9	**36.8**	29.4	44.9	**35.5**	27.5	44.4	**9.0**	6.2	12.7
Moira (S)	**18.4**	12.2	26.6	**35.2**	27.3	44.0	**38.7**	29.0	49.4	**7.7**	4.8	12.1
Murrindindi (S)	**17.4**	11.2	25.9	**33.5**	25.3	42.7	**37.5**	30.0	45.7	**11.6***	5.5	22.7
Strathbogie (S)	**12.1**	8.3	17.3	**23.9**	16.5	33.2	**56.8**	47.5	65.5	**7.3**	5.0	10.6
Towong (S)	**18.7**	12.3	27.5	**28.1**	20.1	37.9	**45.9**	38.6	53.4	**7.2***	4.0	12.7
Wangaratta (RC)	**23.0**	14.3	35.0	**31.8**	22.2	43.3	**41.5**	36.3	47.0	**3.6**	2.6	5.0
Wodonga (RC)	**16.5**	11.3	23.4	**41.5**	34.7	48.6	**33.9**	28.0	40.4	**8.1**	6.1	10.8
Hume Region	**18.7**	**15.9**	**21.8**	**34.9**	**31.6**	**38.5**	**37.6**	**34.7**	**40.5**	**8.8**	**6.6**	**11.8**
Buloke (S)	**10.1***	5.6	17.5	**23.0**	16.4	31.1	**59.9**	51.8	67.6	**7.0***	3.6	13.2
Campaspe (S)	**20.7**	13.7	29.9	**28.5**	21.1	37.3	**43.1**	34.1	52.6	**7.7***	4.6	12.8
Central Goldfields (S)	**25.5**	17.3	35.9	**28.0**	22.3	34.5	**37.6**	29.2	46.9	**8.8***	5.3	14.2
Gannawarra (S)	**9.0***	5.2	15.1	**24.4**	17.2	33.4	**54.8**	41.4	67.5	**11.8***	4.5	27.5
Greater Bendigo (C)	**22.3**	15.6	30.9	**28.3**	22.2	35.4	**38.7**	31.1	46.9	**10.6**	6.8	16.2
Loddon (S)	**16.4***	9.7	26.4	**41.6**	31.3	52.6	**33.7**	26.7	41.6	**8.3**	6.0	11.3
Macedon Ranges (S)	**9.9**	6.7	14.3	**45.7**	39.1	52.5	**35.9**	29.8	42.5	**8.5**	5.6	12.6
Mildura (RC)	**19.1**	14.1	25.3	**30.9**	22.6	40.6	**41.9**	32.8	51.6	**8.2**	5.9	11.3
Mount Alexander (S)	**17.3***	8.1	33.4	**30.9**	21.3	42.6	**44.2**	34.3	54.7	**7.5**	4.8	11.6
Swan Hill (RC)	**12.7***	7.2	21.5	**34.9**	25.7	45.4	**44.2**	34.5	54.4	**8.2***	4.7	13.8
Loddon Mallee Region	**18.5**	**15.0**	**22.6**	**31.3**	**27.4**	**35.5**	**41.1**	**37.1**	**45.2**	**9.1**	**7.2**	**11.5**
Rural Victoria	**16.9**	**15.4**	**18.5**	**35.1**	**33.0**	**37.2**	**39.2**	**37.4**	**41.1**	**8.8**	**7.7**	**10.0**
Victoria	**17.3**	**16.4**	**18.3**	**36.1**	**34.9**	**37.3**	**36.3**	**35.2**	**37.4**	**10.3**	**9.7**	**10.9**

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: **above** or **below**.
* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Figure 6-1 and Figure 6-2 show the proportions of Victorian adults by level of social isolation and local government area.

Figure 6-1: Proportion of Victorian adults, by level of social isolation and metropolitan local government area

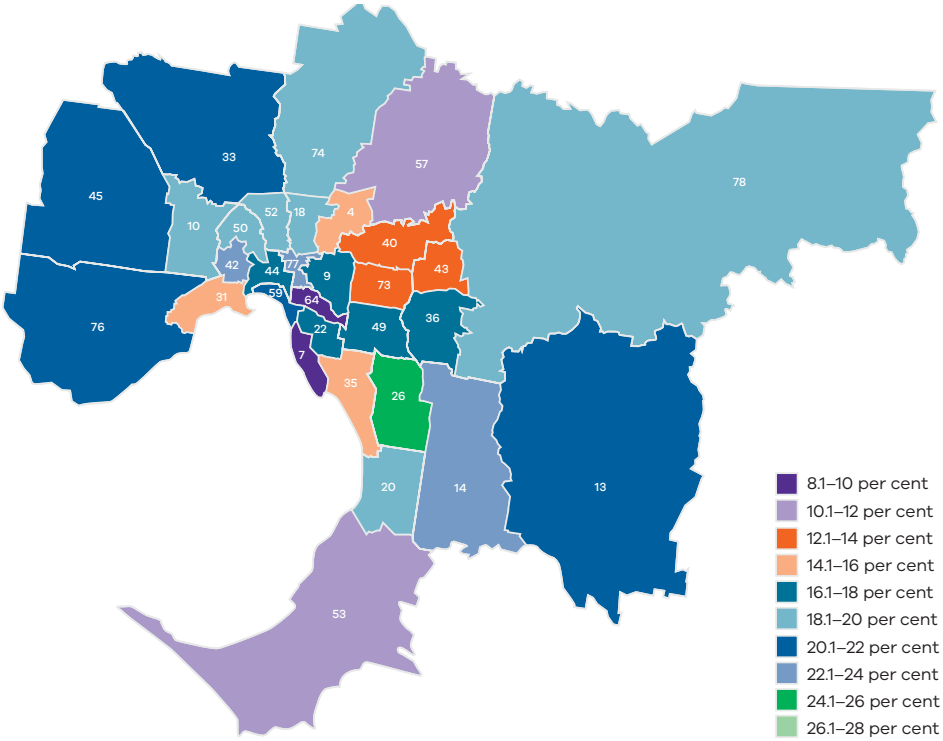
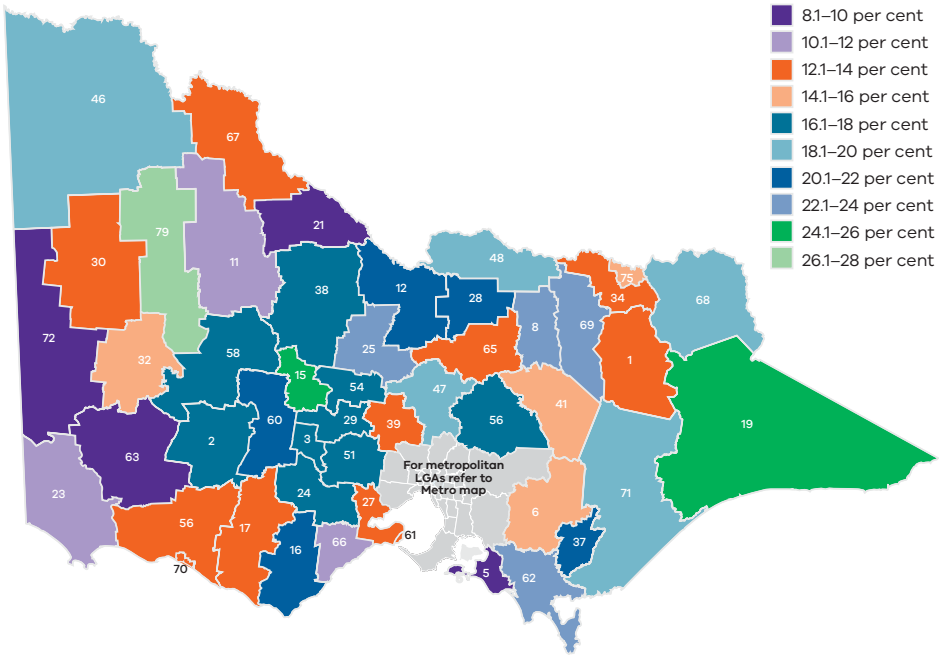


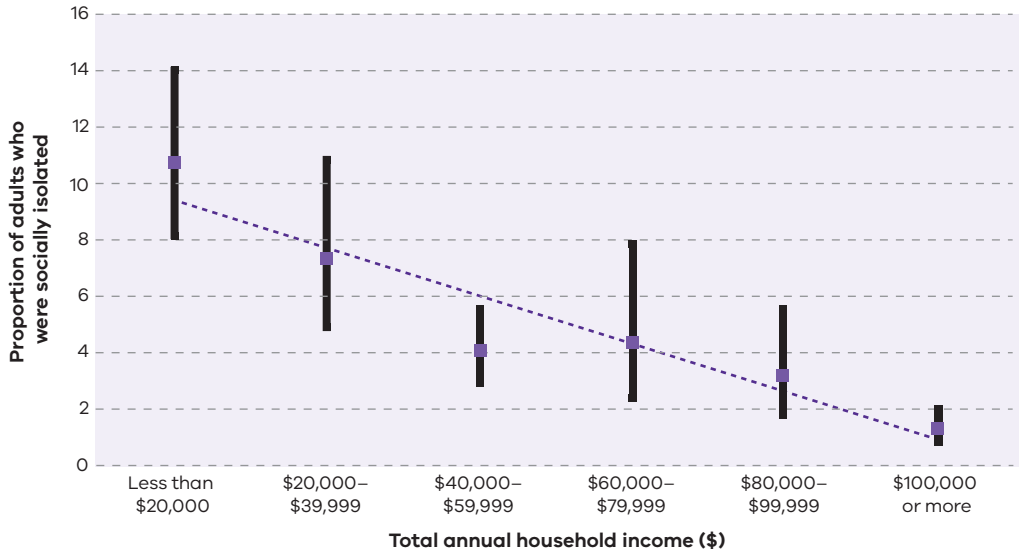
Figure 6-2: Proportion of Victorian adults, by level of social isolation and rural local government area



Does social isolation vary by socioeconomic status?

Figure 6-3 shows that social isolation is associated with socioeconomic status; the higher the total annual household income the less likely adults are to be socially isolated.

Figure 6-3: Proportion of Victorian adults with a high or very high level of social isolation, by total annual household income

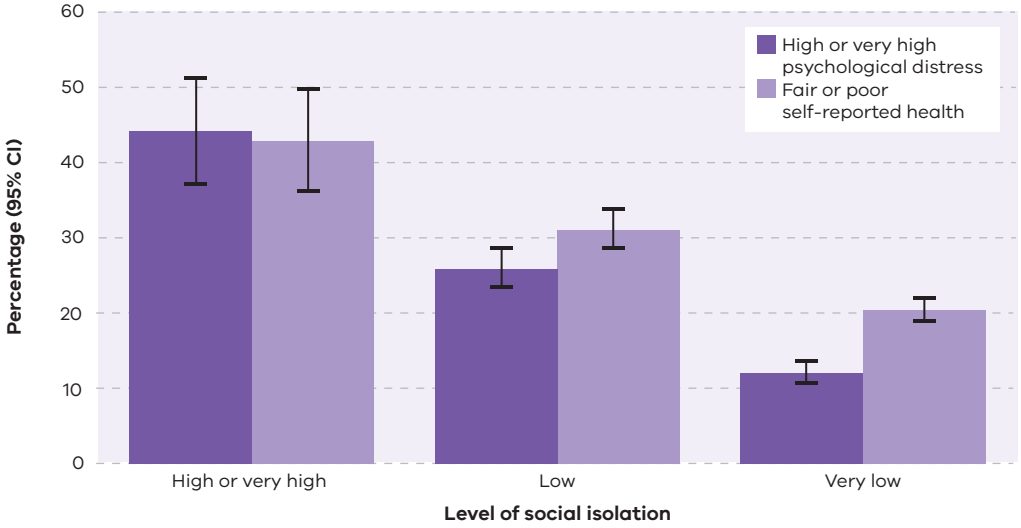


Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Is social isolation associated with health outcomes?

Figure 6-4 shows that social isolation is associated with both mental health and physical health. Victorian adults who experience a high or very high level of social isolation are more likely to be psychologically distressed and to report being in fair or poor health compared with those with a low or very low level of social isolation.

Figure 6-4: The relationship between social isolation and health outcomes



Data were age-standardised to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Summary of findings

- A significant proportion of Victorian adults 65 years of age or older appear to be reluctant to answer some of the questions used to create a composite index of social isolation. Therefore, the true prevalence of social isolation in this age group is not discernible from the data.
- Almost 24 per cent of young women 18–24 years of age are socially isolated; higher than all Victorian women (17 per cent).
- More than one-quarter (28 per cent) of adults who live in the local government area of Yarriambiack and 26 per cent of those who live in Greater Dandenong are socially isolated; higher than all Victoria adults.
- Social isolation declines with increasing total annual household income.
- Social isolation is associated with poor mental and physical health.

Interpretation of the findings

We did not find any differences between men and women or between different age groups in the proportions of socially isolated adults in Victoria, with the single exception of young women 18–24 years of age, who appear to have a higher prevalence of social isolation than all women. However, between 15 and 30 per cent of adults 65 years of age or older answered 'I don't know' or refused to answer at least one of the six questions used to create the composite indicator of social isolation. It is therefore entirely possible that the prevalence of social isolation is much higher among these age groups than we are able to measure in the survey. This would be consistent with the literature, which shows that social isolation increases with age (Cornwell and Waite 2009). If this is the case, then the overall prevalence of social isolation among Victorian adults in the survey would have been higher and we would not have detected a statistically significantly higher prevalence of social isolation among women 18–24 years of age. We therefore assert that the finding of a higher prevalence of social isolation among women 18–24 years of age is possibly spurious.

Our finding that 28 per cent of adults who live in the rural local government area of Yarriambiack are socially isolated is noteworthy. Yarriambiack is surrounded by the local government area of Mildura to the north, Hindmarsh to the west, Horsham and Northern Grampians to the south, and Buloke to the east. Yet none of the surrounding local government areas have such a high prevalence of social isolation, ranging from 10 per cent in Buloke to 19 per cent in Mildura. All surrounding local government areas with the exception of Horsham have Index of Relative Socio-economic Disadvantage (IRSED) scores that place them in the most socioeconomically disadvantaged quintile, while Horsham is placed in the second most socioeconomically disadvantaged quintile. Therefore, differences in socioeconomic status do not explain the higher prevalence of social isolation in Yarriambiack. The relative proportions of respondents who failed to answer a question and the age distribution are also similar across Yarriambiack and its surrounding local government areas. In short, there is no obvious explanation for the substantially higher prevalence of social isolation in Yarriambiack, but given the negative impacts of social isolation on health, this may warrant further investigation. It is interesting to note that the local government area of Buloke is one of the three previously identified local government areas that had high levels of social and civic trust despite being socioeconomically disadvantaged.

The metropolitan local government area of Greater Dandenong has the second highest prevalence of social isolation at 26 per cent. Greater Dandenong is the most socioeconomically disadvantaged local government area in Victoria. It also has the highest level of cultural diversity, with over 55 per cent born in a non-English speaking country and 20 per cent of new settler arrivals are refugees. It has a high level of unemployment, the lowest level of citizen engagement, and the highest rate of mortgage stress across Victoria. All this information and the high level of social isolation suggests that Greater Dandenong is not a socially cohesive community and may benefit from policies designed to build bridging social capital between the ethnically diverse groups.

The evidence, drawn from population-based and longitudinal studies, shows that people with fewer social relationships have a higher risk of premature mortality than those with many social relationships (Umberson, Crosnoe et al. 2010). Moreover, a complete lack of social relationships is particularly harmful to health. For example, a study showed that the risk of cardiac death among adults with coronary heart disease is 2.4 times greater for those who were socially isolated compared with those who were socially connected (Brummett, Barefoot et al. 2001). This is consistent with our findings that social isolation is strongly associated with both poor mental and physical health.

However, it is important to note that the cross-sectional design of the Victorian Population Health Survey does not allow any assertions to be made about causality or its direction. Therefore it is possible that social isolation causes poor health and/or poor health causes social isolation. Nevertheless, there is an abundance of literature, based on studies of longitudinal design, that show that social isolation precedes both poor mental and physical health, providing evidence of a direct causal link from social isolation to poor physical and mental health (Umberson and Montez 2010).

Our finding that social isolation is associated with lower socioeconomic status, measured by household income, is also consistent with the literature (Nicholson 2012).

For further reading we suggest:

Umberson D, Montez JK 2010, 'Social relationships and health: A flashpoint for health policy', *Journal of Health and Social Behavior*, no. 51(S), S54–S66.

7. Discussion

Key messages

- **In order of ranking by the strength of the association between poor mental health and various predictors, the strength of association with social isolation, low trust and low perceived social support far exceeds the strength of the association with smoking or obesity.**
- **In order of ranking by the strength of the association between poor physical health and various predictors, social isolation, low trust and very low perceived social support far exceeds the strength of the association between poor physical health and smoking, but not obesity.**
- **The strength of association between poor physical health and social isolation is similar to the strength of the association with obesity.**

Introduction

This chapter investigates the relative strength of association between each social capital indicator and health outcome, and how social capital indicators compare with the lifestyle risk factors of smoking and obesity. It then goes on to discuss the mechanisms by which social capital impacts on health and presents a conceptual model. Finally, there is a broader discussion on how policies can be developed to address social capital in the population.

In order to tease out the variance in association between different levels of social isolation and health outcomes, we have used a wider range of categories for the composite indicator of social isolation than we used in chapter 6.

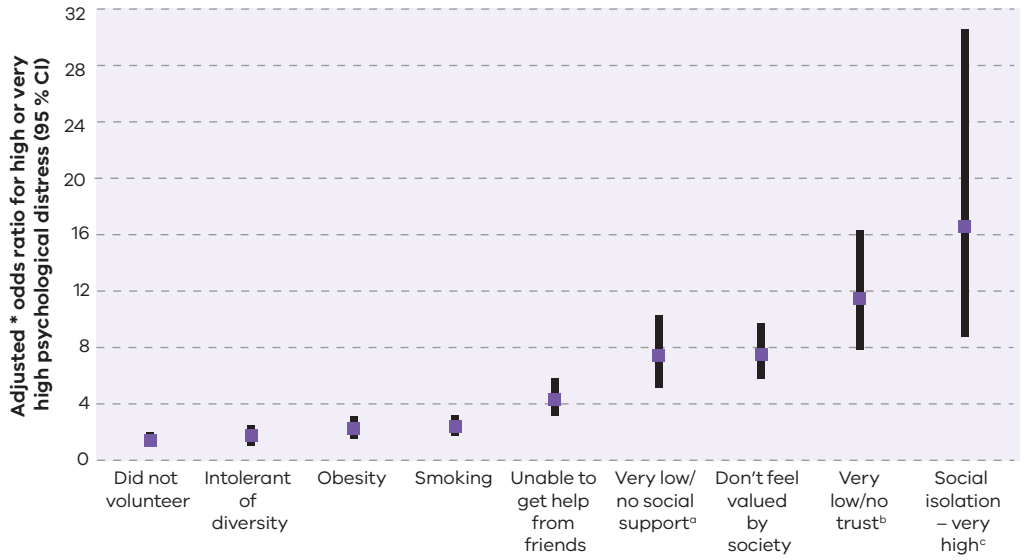
Ranking of indicators by strength of association with mental health

Figure 7-1 shows the strength of the association between selected indicators and mental health, expressed as an odds ratio. For the entire list of indicators see Table A2-1 in Appendix 2. Only the indicators that had a statistically significant association with mental health are included in the table.

The odds ratio is a measure of association between an exposure and an outcome. It can be used to provide one of the pieces of evidence needed to determine whether a particular exposure (for example, social isolation) is a risk factor for a particular outcome (for example, psychological distress). The higher the odds ratio the greater the magnitude of risk of the outcome.

Taking the example of obesity, the odds ratio is 2.2, which indicates that people who are obese are 2.2 times more likely than people who are not obese to have poor mental health. Similarly, people who smoke are 2.4 times more likely than non-smokers to have poor mental health. Figure 7-1 shows that a lack or low level of social support, a lack or low level of social and civic trust, and social isolation are more strongly associated with poor mental health than obesity or smoking. Moreover, as social support and/or social and civic trust declines, the prevalence of poor mental health increases. Victorian adults who had an extremely high level of social isolation are 23 times more likely than those who are not socially isolated to have poor mental health (not shown in figure; see Table A2-1 in Appendix 2).

Figure 7-1: Ranking of selected social capital indicators and lifestyle risk factors associated with poor mental health



Outcome variable was high or very high psychological distress.
* Odds ratios were adjusted for age, sex, and socioeconomic status.
a Based on responses to three social support questions
b Based on responses to four social and civic trust questions
c Based on responses to three of four social and civic trust and three social support questions.

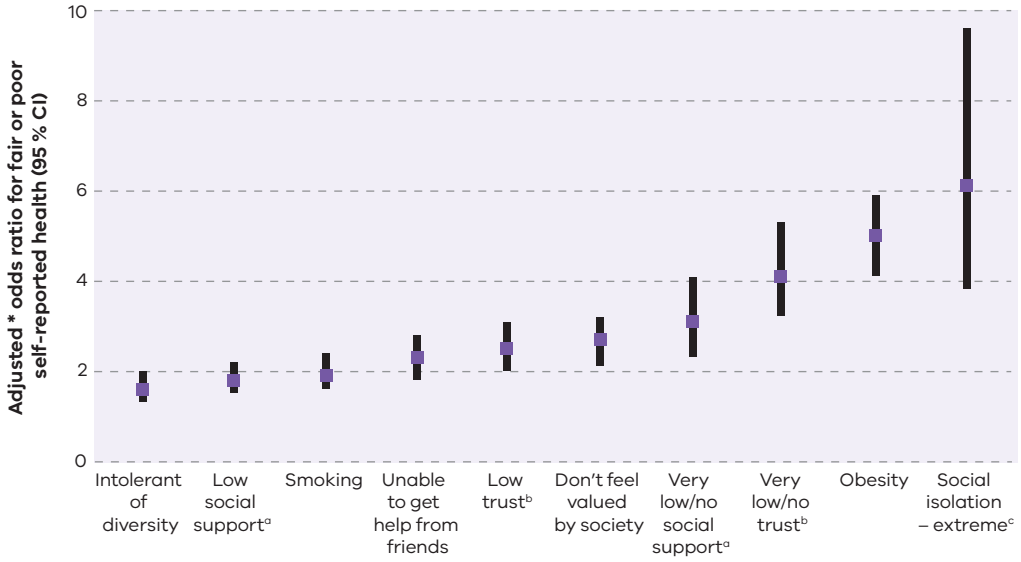
Ranking of indicators by strength of association with physical health

Figure 7-2 shows the strength of the association between selected indicators and self-reported health, expressed as an odds ratio. For the entire list of indicators see Table A2-2 in Appendix 1. Again, only the indicators that had a statistically significant association with self-reported health are included in the table.

A lack or low level of social support, lack or low level of social and civic trust and social isolation have higher odds ratios than smoking, indicating that they have a stronger association with poor physical health than smoking.

This is not the case for obesity, where the odds ratio of 5.0 indicates that people who are obese are five times more likely than non-obese people to have poor physical health. However, Victorian adults who are extremely socially isolated are six times more likely than those who are not to have poor physical health.

Figure 7-2: Ranking of social capital indicators and lifestyle risk factors associated with poor physical health



Outcome variable was fair or poor self-reported health.
* Odds ratio was adjusted for age, sex, and socioeconomic status.
a Based on responses to three social support questions
b Based on responses to four social and civic trust questions
c Based on responses to three of four social and civic trust and three social support questions.

How does social capital affect health?

There are three broad mechanisms by which social capital affects health, listed below (Umberson and Montez 2010).

Behavioural mechanisms

- Instilling a sense of responsibility and concern for others that encourages health-promoting behaviours and discourages unhealthy behaviours
- Providing information about health and establishing norms of behaviour

Psychosocial mechanisms

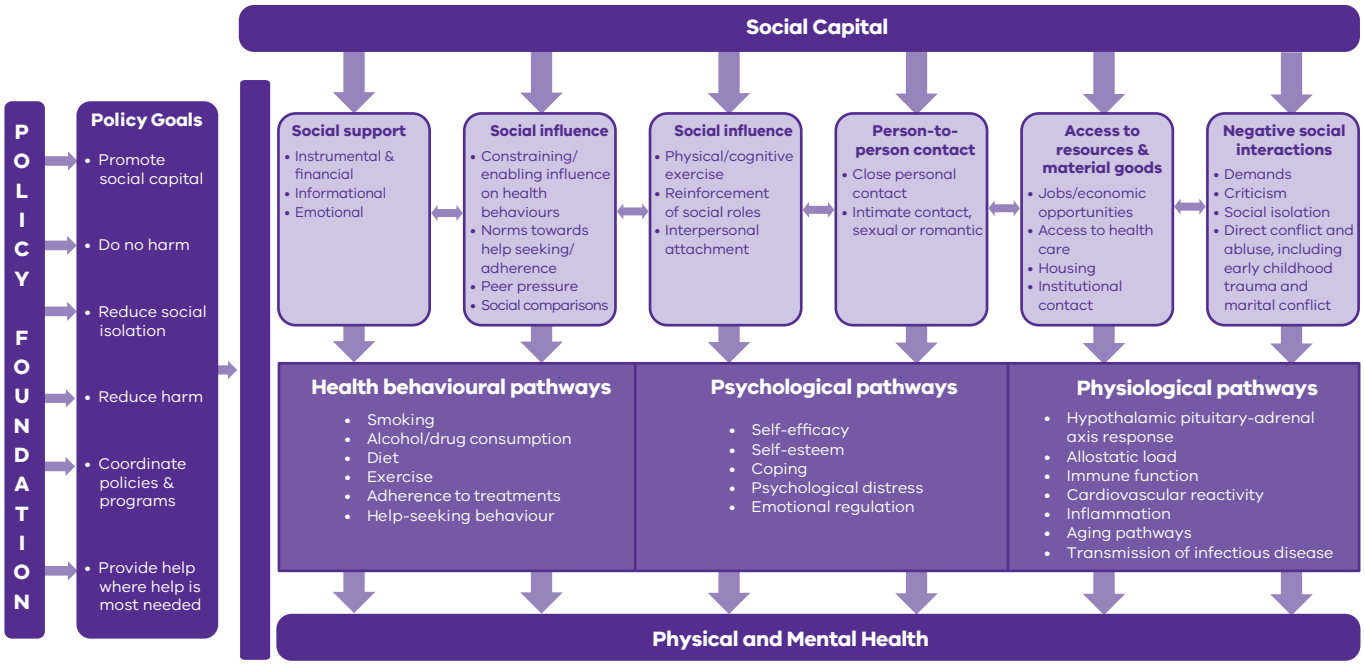
- Providing social support that reduces the impact of stress and fosters a sense of purpose and meaning in life
- Enhancing personal control – the belief that an individual can control their life outcomes through their own actions, which is important for developing good health habits

Physiological mechanisms

- Reducing allostatic load. Allostatic load is 'the wear and tear on the body' that grows over time when the individual is exposed to repeated or chronic stress. It represents the physiological consequences of chronic exposure to stressors
- Emotionally supportive childhoods enable the healthy development of the immune, metabolic and autonomic nervous systems, and the hypothalamic–pituitary–adrenal axis
- Emotional support in adulthood reduces physiological response such as cardiovascular reactivity to anticipated and existing stressors

Figure 7-3 illustrates the pathways by which social capital impacts on health. This model acknowledges that not all social capital is good. For example, not all social interactions are positive, and the negative side of social relationships can include demands, criticism, perceived isolation, conflict and abuse. These act as stressors that can be damaging to health.

Figure 7-3: Conceptual model of how social capital influences health



Adapted from Berkman and Krishna, 2014 (in Berkman, L. F., I. Kawachi and M. M. Glymour, Eds. (2014). *Social epidemiology*. New York, NY, Oxford University Press) and Umberson and Montez, 2010.

Policy foundation and goals

Umberson and Montez (2010) proposed that we can build a policy foundation based on the following premises:

- Social capital affects health, both mental and physical.
- Social capital is a potential resource that can be harnessed to promote population health.
- Social capital is a resource that should be protected as well as promoted.
- Social capital has both immediate and long-term cumulative effects on health and therefore represents an opportunity for both short- and long-term investment in population health.

At this point it is important to remember that social capital also has a dark side that can undermine health. Moreover, the link between social capital and health may not be shared equally across all social groups. Gender, ethnicity, age and socioeconomic status are associated with different levels and types of responsibilities. For example, women take the brunt of caring for children, the sick and the elderly, and therefore care needs to be taken when developing policies to improve social capital without imposing additional burdensome responsibility on care providers.

Moreover, careful consideration must be given to the type of social capital a policy may create. For example, strengthening bonding social capital among unemployed youth could be harmful. However, creating bridging social capital between unemployed youth and employed adults may provide role models and offer opportunities for mentoring. Therefore, to that effect we add three more policy components to the list above:

- Caveat: Social capital can undermine health.
- The costs and benefits of social capital are not shared equally across all social groups.
- Different types of social capital will matter in different contexts and for different objectives.

Umberson and Montez (2010) suggested six fundamental policy goals, and these have been incorporated into the conceptual model in Box 7-1:

1. To promote the benefits of social capital
2. To do no harm
3. To reduce social isolation
4. To reduce harm
5. To coordinate policies and programs
6. To provide help where help is most needed.

Box 7-1: Directions of future research

- To identify individuals most at risk, such as those who are socially isolated and at high risk of mental ill-health and adverse physical health outcomes.
- To further our knowledge of the broader social context, as structured by age, class, ethnicity and gender, in order to understand how these influence the development and quality of social capital.
- To further understand how the positive and negative effects of social capital work together to influence health outcomes and how the balance varies across the life course and across different social groups.
- To investigate how social conditions foster cumulative advantage or disadvantage for health across the life course.
- Since most research on social capital is based on quantitative data, there is a need to complement the evidence base with qualitative data in order to explain the meanings, dynamics and processes by which social capital impacts on health over time.

Study designs

- A longitudinal study would offer more insights than a cross-sectional study in measuring the impacts and benefits of social capital.

Source: Umberson & Montez 2010

Concluding remarks

This report has shown that social capital is important for both mental and physical health. Social capital can have positive effects on health through mechanisms such as the normalisation and encouragement of healthy behaviours and the provision of social support to buffer the pathological impacts of stress. However, social capital can also have negative effects such as creating stress through placing onerous demands on already overburdened care providers.

We found that lacking in perceived social support and/or social and civic trust, and being socially isolated, are more strongly associated with mental ill-health than the lifestyle risk factors of smoking and obesity.

Similarly, we found that lacking in perceived social support and/or social and civic trust, and being socially isolated, are more strongly associated with physical ill-health than the lifestyle risk factor of smoking. However, obesity is more strongly associated with physical ill-health, with the exception of extreme social isolation.

Appendix 1: Methods

The Victorian Population Health Survey

The Victorian Population Health Survey is a population-representative, cross-sectional, computer-assisted telephone interview (CATI) survey conducted annually since 2001 in adults 18 years of age or older who resided in private dwellings in Victoria. The purpose of the survey is to collect relevant, timely and valid health information for policy, planning and decision making. The Department of Health and Human Services Human Research Ethics Committee approved the survey method and questionnaire content. The department outsourced the fieldwork data collection to a market research organisation, which department staff supervised. All data were self-reported and stored directly in the CATI system.

Stratification

There are five rural and three metropolitan former Department of Health regions in Victoria that comprise 79 local government areas. (The Department of Health transitioned into the Department of Health and Human Services at the beginning of 2015, changing the boundaries of its regions.)The survey sample was stratified by local government area, with a target sample size of 426 respondents per local government area. In 2014, 33,654 interviews were completed, including 940 interviews in languages other than English.

Sampling frame

Victorian Population Health Surveys up to and including 2009 used a 'list assisted' form of random digit dialling (RDD) for the sample frame. While list-assisted RDD approaches have provided a good contemporary coverage of households with a landline telephone connection, they tend to under-represent phone numbers in new exchanges and generate a relatively high proportion of non-working telephone numbers, which leads to some loss in fieldwork efficiency. An exchange-based approach to RDD was employed for the first time in 2010, using a commercial list provider to provide the RDD landline telephone sample. For the 2014 survey, a customised approach to RDD sample generation was agreed with the commercial list provider, whereby RDD numbers were generated and tested at the time of each request, rather than being drawn from a pre-existing (and potentially ageing) pool of numbers.

The advantages of this exchange-based approach to random digit dialling sample generation include:

- improved coverage in areas where new telephone number ranges have been activated
- improved coverage in growth corridors, peri-urban areas and central business district developments
- representing each bank of phone numbers in the sampling frame in proportion to the current population of working landline numbers
- higher connection rates and therefore greater fieldwork efficiency.

Sample generation

RDD was used to generate a sample of telephone numbers that formed the household sample for CATI. All residential households with landline telephone connections were considered 'in-scope' for the survey. People who are homeless or itinerant were excluded

from the survey, as were people in hospitals or institutions, the frail aged and people with disabilities who are unable to participate in an interview.

Sample size

The sample size for each local government area for the Victorian Population Health Survey (conducted in 2008, 2011–12 and 2014) was 426. The sample size is based on the following formula assuming a prevalence of 7.5 per cent for a variable of interest, with a confidence interval of 2.5 per cent (7.5 (5.0, 10.0) per cent), all percentages being expressed as a proportion:

$$\text{Sample size } (n) = \frac{Z^2 \times p \times (1 - p)}{c^2} = 426$$

where:

p = proportion	(0.075)
Z = 1.96	(Z-score of level of significance (alpha = 0.05))
c = confidence interval	(0.025).

Data collection

Almost two-thirds of all completed interviews were achieved within the first three calls. This proportion is consistent with national experience on similar surveys.

Call routine

The algorithm spreads call attempts over different times of day and days of the week. Other features of the call regime included:

- call initiation on weekday evenings and weekends only (since these are proven to be the best times to establish initial contact with households)
- appointments made for any time the call centre was operational
- appointments set for five days' time after leaving the first answering machine message and eight days' time after leaving the second answering machine message.

After establishing contact, interviewers could make calls, by appointment, outside the time block hours. After contacting a household, an interviewer would select for interview the person 18 years of age or older with the most recent birthday.

The department operated a survey hotline number during business hours throughout the data collection period to help establish survey bona fides and address sample member queries about the survey or survey process and arrange appointment times with respondents for their interview.

Interviewing in languages other than English

Interviews were conducted in nine community languages. As for previous surveys in the series, the department provided translated survey questionnaires in Italian, Greek, Mandarin, Cantonese, Vietnamese, Arabic, Turkish, Serbian and Croatian, with a view to achieving a more representative sample in those areas with a relatively high proportion of speakers of these languages. CATI interviewers were recruited to undertake the interviews in these other languages, as required. The average interview length was 25.4 minutes.

Participation

In 2014 the response rate, defined as the proportion of households contacted that were not identified as out of scope and an interview completed, was 69.6 per cent. The response rate was higher in the rural local government areas (72.7 per cent) compared with metropolitan local government areas (65.2 per cent) and ranged from 53.2 per cent in Brimbank (C) to 79.7 per cent in Queenscliffe (B).

Weighting

The survey data was weighted to reflect the following.

(i) The probability of selecting the respondent within the household

Although a single respondent was randomly selected from within a household, the size of any household can vary upwards from one person. To account for this variation, each respondent was treated as representing the whole household, so his or her weight factor included a multiplier of the number of persons in the household. Further, a household may have more than one telephone line (that is, landlines used primarily for contact with the household), which would increase that household's probability of selection over those households with only one telephone line. To ensure the probability of contacting any household was the same, the project team divided the weight factor by the number of telephone lines connected to the household.

The formula for the selection weight (*sw*) component:

$$sw = nah/npl$$

where:

nah = the number of adults 18 years of age or older in the household
npl = the number of telephone lines in the household.

(ii) The age/sex/geographic distribution of the population

The project team applied a population benchmark (*pbmark*) component to ensure the adjusted sample distribution matched the population distribution for the combined cross-cells of age group and sex by local government area, based on the 2011 estimated resident population of Victoria. The categories used for each of the variables were:

- *age group*: 18–24, 25–34, 35–44, 45–54, 55–64 and 65 years or older
- *sex*: male, female
- *geography*: 79 local government areas.

We calculated the *pbmark* component by dividing the population of each cross-cell by the sum of the selection weight components for all the respondents in the sample within that cross-cell. For each cross-cell, the formula for this component was:

$$pbmark_i = Ni/\Sigma swij$$

where:

i = the *i* th cross-cell
j = the *j* th person in the cross-cell
Ni = the population of the *i* th cross-cell
Σswij = the sum of selection weights for all respondents (1 to j) in the i th cross-cell.

Calculating the person weight to be applied

The project team assigned respondent records a weight factor (*pwt*) by multiplying the selection weight (*sw*) value by the population benchmark value (*pbmark*):

$$pwtij = swij \times pbmarki$$

where:

i = the *i* th cross-cell
j = the *j* th person in the cross-cell.

Statistical analysis

We used Stata statistical software package (Version 14.1, StatCorp LP, College Station Texas) to analyse the survey data.

Crude rates

A crude rate is an estimate of a proportion of a population that experiences a specific event over a specified time period. It is calculated by dividing the number of events recorded for a given period by the number at people in the population. Crude rates (expressed as percentages) are only presented in the report where estimates are broken down by age group. Crude rates are useful for service planning purposes as they indicate the absolute estimate of the indicator of interest.

However, in making comparisons of estimates over time, crude rates can be difficult to interpret because the age distribution of the population is also changing over time. If one does *not* take into account changes in the age distribution, any observed increases, or decreases, in the prevalence of the indicator of interest may just reflect changes in the age distribution. For example, the risk of heart disease increases with age. Therefore, an observed increase in the crude rate of heart disease over time could be due to (a) more people developing heart disease due to a change in the prevalence of a predisposing factor or (b) an increase in the proportion of older people. There is no way to distinguish between the two possible explanations. However, if we take into account (adjust for) the changing age distribution and still see an increase in the prevalence of heart disease, we can rule out explanation (b). To adjust for age, we calculate an **age-standardised rate** (described below). Only age-standardised rates are reported for time-series data in this report. Similarly, only age-standardised rates are reported when making comparisons between different geographic areas. This is particularly pertinent for Victoria because rural local government areas tend to have populations characterised by larger proportions of older people compared with metropolitan local government areas.

Age standardisation

We calculated age-standardised prevalence estimates (also known as age adjusted prevalence estimates) using the direct method of standardisation. The direct age-standardised rates that are presented in this report are based on the weighted sum of age-specific rates applied to a standard population – the 2011 estimated resident population of Victoria. We used five-year age groups to calculate the age-specific rates for data at the state and Department of Health region level. However, we used 10-year age groups to calculate the age-specific rates for data at the local government area level, because the sample size of individual analysis cells was too small in some of the smaller local government areas.

Standard error

The standard error is a measure of the variation in an estimate produced by sampling a population. The standard error can be used to calculate confidence intervals and relative standard errors, providing the likely range of the true value of an estimate and an indication of the reliability of an estimate.

Confidence interval (95 per cent)

A confidence interval is a range in which it is estimated that the true population value lies. A common confidence interval used in statistics is the 95 per cent confidence interval. This is interpreted as: if we were to draw several random samples from the same population, on average, 19 of every 20 (95 per cent) such confidence intervals would contain the true population estimate and one of every 20 (five per cent) would not. 95 per cent confidence intervals are reported for all estimates throughout the report and used to ascertain statistical significance (see below). The width of a confidence interval expresses the precision of an estimate; the wider the interval the less the precision.

95% confidence interval = point estimate ± (standard error × 1.96)

Statistical significance

Only statistically significant trends and patterns are reported for the 2014 Victorian Population Health Survey. Statistical significance provides an indication of how likely a result is due to chance. With the exception of time trends over time (see below), statistically significant differences between estimates were deemed to exist where the 95 per cent confidence intervals for two prevalence estimates did not overlap.

The term 'significance' is used to denote statistical significance. It is not used to describe clinical significance, the relative importance of a particular finding, or the actual magnitude of difference between two estimates.

Relative standard error

A relative standard error (RSE) provides an indication of the reliability of an estimate. Estimates with RSEs less than 25 per cent are generally regarded as 'reliable' for general use. The percentages presented in tables and graphs in this report have RSEs less than 25 per cent, unless otherwise stated. Rates that have an RSE between 25 and 50 per cent have been marked with an asterisk (*) and should be interpreted with caution. For the purposes of this report, percentages with RSEs over 50 per cent were not considered reliable estimates and have not been presented. A double asterisk (**) has been included in tables and graphs where the percentage would otherwise appear, indicating the relevant RSE was greater than 50 per cent.

Relative standard error (%) = standard error / point estimate × 100

Odds ratios

We used multivariable logistic regression to compute odds ratios. An odds ratio is a relative measure of effect that enables a comparison to be made between two groups. If there is no difference between two groups the odds ratio will be 1.0. However, if a prevalence estimate is higher in group A compared with group B, the odds ratio will be greater than 1.0. Conversely if a prevalence estimate is lower in group A compared with group B, the odds ratio will be less than 1.0. Whether this is statistically significant, however, will depend on the confidence interval. If the confidence interval includes 1.0

then the difference between the two groups is not significant; for example, odds ratio (OR) = 1.2, 95% confidence interval (CI) = 0.8 to 1.4. If the confidence interval does not contain 1.0 then the two groups are statistically significantly different; for example OR = 4.0, 95% CI = 2.0 to 6.0 and is interpreted as meaning that the prevalence of the parameter being investigated in group A is four times more likely to occur in group A than group B.

Statistically detectable difference between two estimates

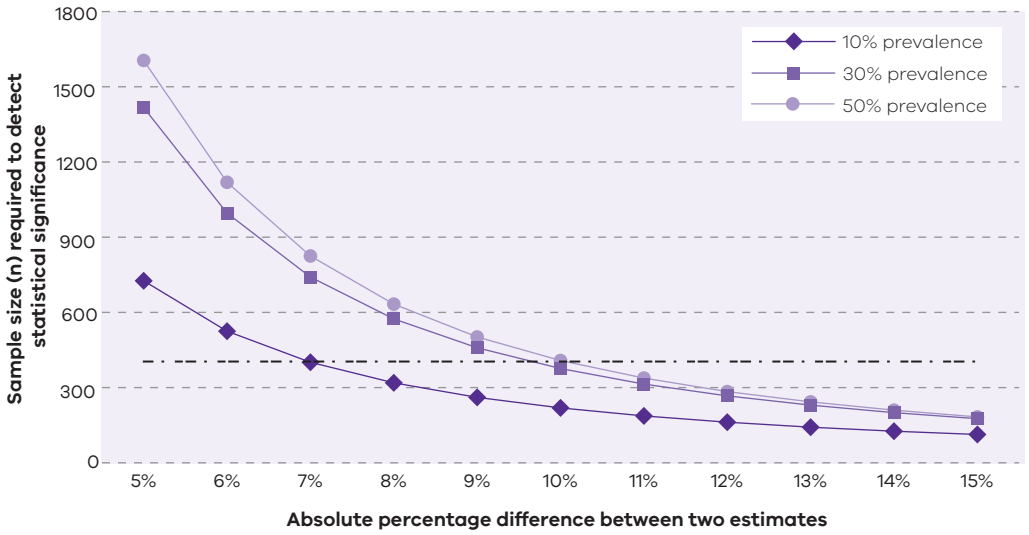
While a sample size of *n* = 426 in each local government area permitted the detection of a variable of interest with a population prevalence of 7.5 (95% CI: 5.0, 10.0) per cent and a statistical power of 80 per cent, the sample size required to determine a difference between two estimates is considerably higher. Figure A1-1 shows the estimated sample size required to detect a statistically significant difference of five to 15 per cent between two estimates. The two estimates could be, for example, two different geographic areas or the same estimate across two different points in time. Figure A1-1 also shows that the sample size required for any given absolute difference between two estimates varies according to the prevalence of the estimate. In general, larger sample sizes are needed to detect differences between estimates with a prevalence of 50 per cent compared with estimates that have a prevalence that is higher (such as 70 per cent) or lower (such as 10 per cent) than 50 per cent.

The figure shows that to be able to detect a five per cent difference across time or between two local government areas in a variable with a prevalence of approximately 50 per cent (for example, the proportion of Victorian adults who met the recommended guidelines for daily fruit intake), a sample size of 1,600 people per local government area would be required.

The local government areas-level Victorian Population Health Survey with an local government area sample size of 426 is only able to statistically detect true differences of 10 per cent or more where the prevalence of the estimate of interest is in the range of 10 to 50 per cent. Therefore, in response to a frequently asked question about whether the 2011–12 local government area-level Victorian Population Health Survey can be directly compared with the 2014 local government areas-level Victorian Population Health Survey in order to be able to track changes over time, the answer is 'yes' but only if any observed difference in the variable of interest **exceeds** the range of **7–10** per cent, depending on its prevalence. However, a difference in the range of 7–10 per cent is a very large difference in public health terms and few health outcomes or risk factors have been observed to change by such large amounts, particularly over short periods of time.

However, at the statewide level, the Victorian Population Health Survey with a sample size of approximately 7,500 (statewide surveys) or 34,000 (local government area-level surveys) is powered to be able to detect very small differences of 2 per cent or more from year to year. This has enabled the time-series analyses that can be found throughout the report.

Figure A1-1: Estimated sample size to detect statistically significant differences for prevalence estimates of 10, 30 and 50 per cent



Dotted black line indicates the sample size per LGA employed in the 2008, 2011-12, and 2014 surveys.

Data variables

Table A1-1 summarises the key information for key data variables. However, it does not include the social capital indicators because these are described in each relevant chapter.

Table A1-1: Description of key data variables of survey questionnaire and derived variables

Data variable	Description and/or question	Response options and/or other
Intolerance of diversity*	'Do you think that multiculturalism makes life in your area better?'	No, not at all = 1 Not often = 2 Sometimes = 3 Yes, definitely = 4 Don't know = 9
Total annual household income	Total value of pre-tax household income from all sources including wages, investments, tax benefits and pensions.	Categorical ranges from $0 to $200,000 or more
Self-reported health status	In general, would you say that your health is...	Excellent, very good, good, fair, poor or don't know
Psychological distress	Respondents were asked 10 questions from the Kessler 10 Psychological Distress Scale about their feelings in the four weeks preceding the survey.	None of the time = 1 Little of the time = 2 Some of the time = 3 Most of the time = 4 All of the time = 5 Scores for each item are summed to give a final score of between 10 and 50. The level of psychological distress was categorised as follows: Low < 16 Moderate 16–21 High or very high >21
Trust – derived composite indicator of social and civic trust	Respondents were asked four questions: Do you agree that most people can be trusted? Do you feel safe walking alone down your street after dark? Do you feel valued by society? Do you feel there are opportunities to have a real say on issues that are important to you?	'No, not at all', 'not often', 'sometimes', 'yes, definitely' or 'don't know' – no and not often were pooled. The composite indicator was based on the on the sum of the responses to the four questions where 0 = no or not often, 1 = sometimes, and 2 = yes. The level of trust was categorised as follows: 7–8 = High 5–6 = Moderate 3–4 = Low 0–2 = Very low/none.
Perceived social support – derived composite indicator of social support	Respondents were asked three questions: Can you get help from family members when you need it? Can you get help from friends when you need it? Can you get help from neighbours when you need it?	'No, not at all', 'not often', 'sometimes', 'yes, definitely', or 'don't know' – no and not often were pooled. The composite indicator was based on the on the sum of the responses to the three questions where 0 = no or not often, 1 = sometimes, and 2 = yes. The level of social support was categorised as follows: 5–6 = High 4 = Moderate 2–3 = Low 0–1 = Very low/none.
Social isolation – derived composite indicator of trust and social support	Included responses to three trust and three social support questions. The question about whether a respondent felt safe walking down their street alone after dark was not included because the majority of local government areas in rural Victoria reported that this question was not relevant to their area.	The composite indicator was based on the sum of the responses to the seven questions where 0 = no or not often, 1 = sometimes, and 2 = yes. The level of social isolation was categorised as follows: 0–6 = High or very high 7–9 = Low 10–12 = Very low.

* There is no single measure of tolerance of diversity and no consensus on the best survey question to use to measure tolerance of diversity. The Victorian Population Health Survey has used the question about attitude to multiculturalism as a measure of tolerance of diversity annually since 2003. An example of another question is that used by the University of New South Wales and Macquarie University in 2001 (the UNSW / MQU Racism Survey) is 'Do you agree that it is a good thing for a society to be made up of people from different cultures?' (Dunn, Forrest et al. 2004). It can be argued that the interpretation of the question is nuanced by the social circumstances of the respondent and that a single question is unlikely to capture all the dimensions of tolerance of diversity. Moreover, the response options provided to the respondent can influence the outcome. For a further discussion see chapter 5.

Profile of survey respondents

Known *pbmarks* for selected data items may be used to assess the representativeness of the sample. Table A1-2 shows the profile of respondents in the Victorian Population Health Survey 2014 and indicates the following:

- Women were more likely than men to participate in the survey.
- Adults 18–34 years of age were less likely to participate in the survey.
- Adults 55 years of age or older were more likely to participate in the survey.

Table A1-2: Profile of respondents in the Victorian Population Health Survey, 2014

	Benchmark data[a] (%)	Unweighted survey sample (%)	Weighted survey sample (%)
Sex			
Males	49	39	49
Females	51	61	51
Age group (years			
18–24	13.0	2.4	12.6
25–34	18.9	3.9	19.3
35–44	18.4	10.8	18.1
45–54	17.3	16.6	16.9
55–64	14.5	22.4	14.3
65+	18.0	43.8	18.7

a Service Planning, Department of Health, 2011, State Government of Victoria

Map key

Each map designates each local government area with a number. The following keys (Figure A1-2 and Figure A1-3) identify the local government areas. Tables A1-3 and A1-4 list the locations.

Figure A1-2: Map of local government areas in metropolitan Victoria

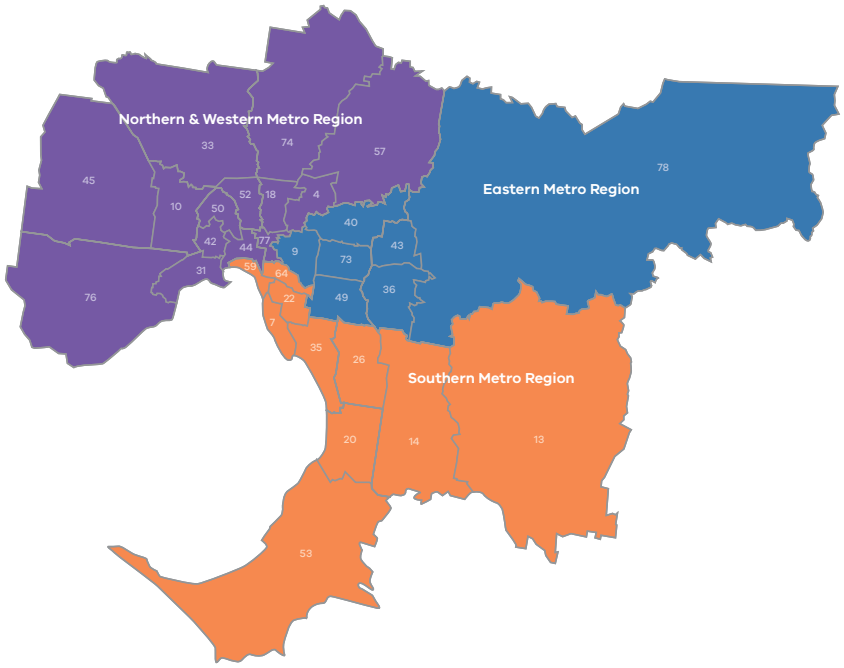


Table A1-3: Map key for local government areas in metropolitan Victoria

Metropolitan region	Local government area name	Local government area identification number
Eastern Metropolitan region	Boroondara (C)	9
	Knox (C)	36
	Manningham (C)	40
	Maroondah (C)	43
	Monash (C)	49
	Whitehorse (C)	73
	Yarra Ranges (S)	78
North & West Metropolitan region	Banyule (C)	4
	Brimbank (C)	10
	Darebin (C)	18
	Hobsons Bay (C)	31
	Hume (C)	33
	Maribyrnong (C)	42
	Melbourne (C)	44
	Melton (S)	45
	Moonee Valley (C)	50
	Moreland (C)	52
	Nillumbik (S)	57
	Whittlesea (C)	74
	Wyndham (C)	76
	Yarra (C)	77
Southern Metropolitan region	Bayside (C)	7
	Cardinia (S)	13
	Casey (C)	14
	Frankston (C)	20
	Glen Eira (C)	22
	Greater Dandenong (C)	26
	Kingston (C)	35
	Mornington Peninsula (S)	53
	Port Phillip (C)	59
	Stonnington (C)	64

Figure A1-3: Map of local government areas in rural Victoria

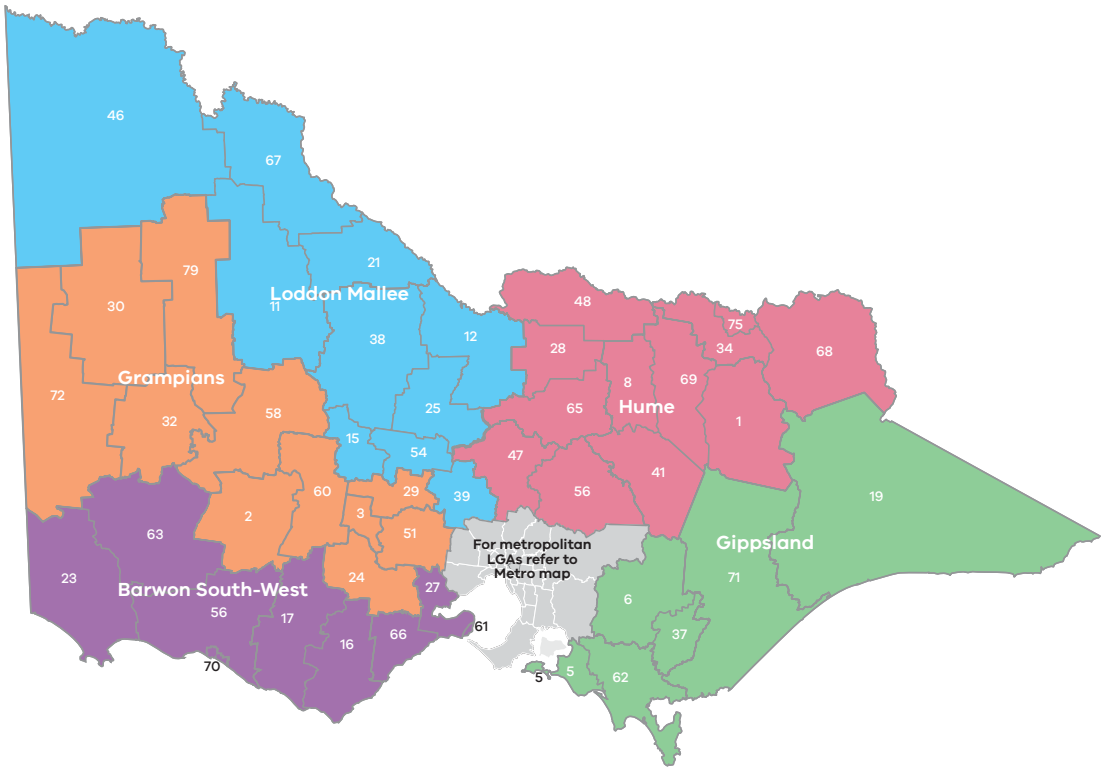


Table A1-4: Map key for local government areas in rural Victoria

Region	Local government area name	Local government area identification number
Barwon-South Western	Colac-Otway (S)	16
	Corangamite (S)	17
	Glenelg (S)	23
	Greater Geelong (C)	27
	Moyne (S)	55
	Queenscliffe (B)	61
	Southern Grampians (S)	63
	Surf Coast (S)	66
	Warrnambool (C)	70
Gippsland	Bass Coast (S)	5
	Baw Baw (S)	6
	East Gippsland (S)	19
	Latrobe (C)	37
	South Gippsland (S)	62
	Wellington (S)	71
Grampians	Ararat (RC)	2
	Ballarat (C)	3
	Golden Plains (S)	24
	Hepburn (S)	29
	Hindmarsh (S)	30
	Horsham (RC)	32
	Moorabool (S)	51
	Northern Grampians (S)	58
	Pyrenees (S)	60
	West Wimmera (S)	72
	Yarriambiack (S)	79
Hume	Alpine (S)	1
	Benalla (RC)	8
	Greater Shepparton (C)	28
	Indigo (S)	34
	Mansfield (S)	41
	Mitchell (S)	47
	Moira (S)	48
	Murrindindi (S)	56
	Strathbogie (S)	65
	Towong (S)	68
	Wangaratta (RC)	69
	Wodonga (RC)	75
Loddon Mallee	Buloke (S)	11
	Campaspe (S)	12
	Central Goldfields (S)	15
	Gannawarra (S)	21
	Greater Bendigo (C)	25
	Loddon (S)	38
	Macedon Ranges (S)	39
	Mildura (RC)	46
	Mount Alexander (S)	54
	Swan Hill (RC)	67

Appendix 2: Ranking of social capital indicators

Tables A2-1 and A2-2 rank the social capital indicators and lifestyle risk factors by strength of their relationship to mental and physical health.

Table A2-1: Ranking of social capital indicators and lifestyle risk factors by strength of their relationship to high or very high psychological distress

INDICATOR	Odds ratio	95 per cent confidence interval	
Did not volunteer	**1.4**	1.2	1.7
Not a member of a professional group	**1.4**	1.1	1.8
Not a member of a sports group	**1.6**	1.3	2.0
Spoke with 1 to 4 people on previous day	**1.6**	1.3	1.9
Did not attend a local community event in past 6 months	**1.7**	1.4	2.0
Intolerant of diversity	**1.7**	1.3	2.2
Moderate perceived social support [a]	**1.8**	1.4	2.2
Don't feel safe walking down street alone after dark	**2.2**	1.8	2.7
Obesity	**2.2**	**1.8**	**2.8**
Moderate trust [b]	**2.3**	1.6	3.1
Social isolation – low [c]	**2.3**	1.8	3.0
Smoking	**2.4**	**2.0**	**2.9**
Unable to get help from neighbours	**2.4**	2.0	3.0
Unable to get help from family	**2.8**	2.3	3.4
No opportunities to have a real say on important matters	**3.0**	1.1	1.7
Low perceived social support [a]	**3.1**	2.5	3.8
No daily social contact	**3.2**	2.2	4.8
Don't believe most people can be trusted	**3.4**	2.8	4.3
Unable to get help from friends	**4.3**	3.4	5.5
Social isolation – moderate [c]	**4.4**	3.4	5.5
Low trust [b]	**4.9**	3.5	6.9
Very low or no perceived social support [a]	**7.4**	5.4	10.0
Don't feel valued by society	**7.5**	6.0	9.4
Social isolation – high [c]	**8.0**	6.1	10.6
Very low or no trust [b]	**11.4**	8.1	16.0
Social isolation – very high [c]	**16.5**	9.0	30.2
Social isolation – extreme [c]	**23.1**	14.5	36.6

* Odds ratio was adjusted for age, sex, and total annual household income.
Outcome variable was high or very high psychological distress; an indicator of mental ill-health.
a Based on responses to three social support questions.
b Based on responses to four social and civic trust questions.
c Based on responses to four social and civic trust and three perceived social support questions.

Table A2-2: Ranking of social capital indicators and lifestyle risk factors by strength of their relationship to fair or poor self-reported health

INDICATOR	Odds ratio	95 per cent confidence interval	
Not a member of a school group	**1.4**	1.1	1.7
Social isolation – low [a]	**1.6**	1.3	1.8
Did not attend a local community event in past 6 months	**1.6**	1.4	1.7
Did not volunteer	**1.6**	1.4	1.8
Moderate social support [b]	**1.6**	1.4	1.8
Moderate trust [c]	**1.6**	1.4	1.9
Intolerant of diversity	**1.6**	1.4	1.9
Spoke with 1 to 4 people on previous day	**1.6**	1.4	1.9
Unable to get help from family	**1.6**	1.4	1.9
Not a member of a professional group	**1.7**	1.4	2.0
Not a member of a sports group	**1.8**	1.5	2.1
Low social support [b]	**1.8**	1.6	2.1
Unable to get help from neighbours	**1.8**	1.6	2.1
Smoker	**1.9**	**1.7**	**2.3**
No opportunities to have a real say on important matters	**1.9**	1.7	2.2
Don't feel safe walking down street alone after dark	**2.0**	1.7	2.2
No daily social contact	**2.1**	1.5	2.9
Don't believe most people can be trusted	**2.2**	1.9	2.6
Unable to get help from friends	**2.3**	1.9	2.7
Social isolation – moderate [a]	**2.3**	1.9	2.8
Low trust [c]	**2.5**	2.1	3.0
Don't feel valued by society	**2.7**	2.2	3.1
Social isolation – high [a]	**2.9**	2.3	3.8
Very low or no social support [b]	**3.1**	2.4	4.0
Very low or no trust [c]	**4.1**	3.3	5.2
Social isolation – very high [a]	**4.8**	2.9	8.1
Obese	**5.0**	**4.2**	**5.8**
Social isolation – extreme [a]	**6.1**	3.9	9.5

* Odds ratio was adjusted for age, sex, and total annual household income.
Outcome variable was fair or poor self-reported health; an indicator of physical ill-health.
a Based on responses to three of four social and civic trust and three perceived social support questions.
b Based on responses to three social support questions.
c Based on responses to four social and civic trust questions.

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