

Population health in Whitehorse

**Cardiovascular disease risk factors
(including select social
determinants) and related health
inequalities in the City of
Whitehorse**

**Summary results from the
Whitehorse Population Health
Survey, 2004**



*Department for
Victorian Communities*

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The data in this report were commissioned by the Whitehorse Community Health Service and collected by the Social Research Centre (www.srcentre.com.au).



Questions were taken from the Department of Human Services Victorian Population Health Survey Questionnaire (2003), Melbourne, Victoria.

Population weights were calculated by the Social Research Centre and analysis of the data was performed by the Department for Victorian Communities in consultation with the Whitehorse Community Health Service.

Acronyms

ABS	Australian Bureau of Statistics
DHA	Department of Health and Aging
DHS	Department of Human Services
DVC	Department for Victorian Communities
LGA	Local Government Area
VPHS	Victorian Population Health Survey
WCHS	Whitehorse Community Health Service

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Foreword


This report is based on a comprehensive survey of health and determinants of health commissioned by the Whitehorse Community Health Service (WCHS). The survey was the first of its kind in Victoria, and demonstrates the value of data on public health issues in community settings. It was modelled on the Victorian Population Health Survey (VPHS), which is run annually by the Public Health Group in the Department of Human Services.

The report gives a comprehensive snapshot of the health and wellbeing of the local community within the City of Whitehorse. The data are now being used by a partnership of local government and community sector agencies in Whitehorse. The partnership includes Local Government, the Primary Care Partnership, the Division of General Practice, local non-government organisations (including from the Chinese community), Eastern Health, the Collective of Neighbourhood and Community Houses, and the Department of Human Services.

The Department for Victorian Communities (DVC) has helped the WCHS write this report as part of that partnership. We believe that the robustness and outlook of local institutions — and how they choose to organise — is a key determinant of community strength and therefore health and wellbeing.

This project fits into DVC's objective to increase the confidence and capacity of Victorians to have greater choice and control over their wellbeing and prosperity. A part of DVC's research agenda is therefore to support the creation of information that helps us to understand the drivers of community strength at the local level. The project is also consistent with the approach of the Department of Human Services in delivering stronger place-based public health services.

The value of this research will be to inform local agencies and networks, like the WCHS partnership in Whitehorse, on how to better allocate scarce resources and how to better organise the planning and delivery of services.

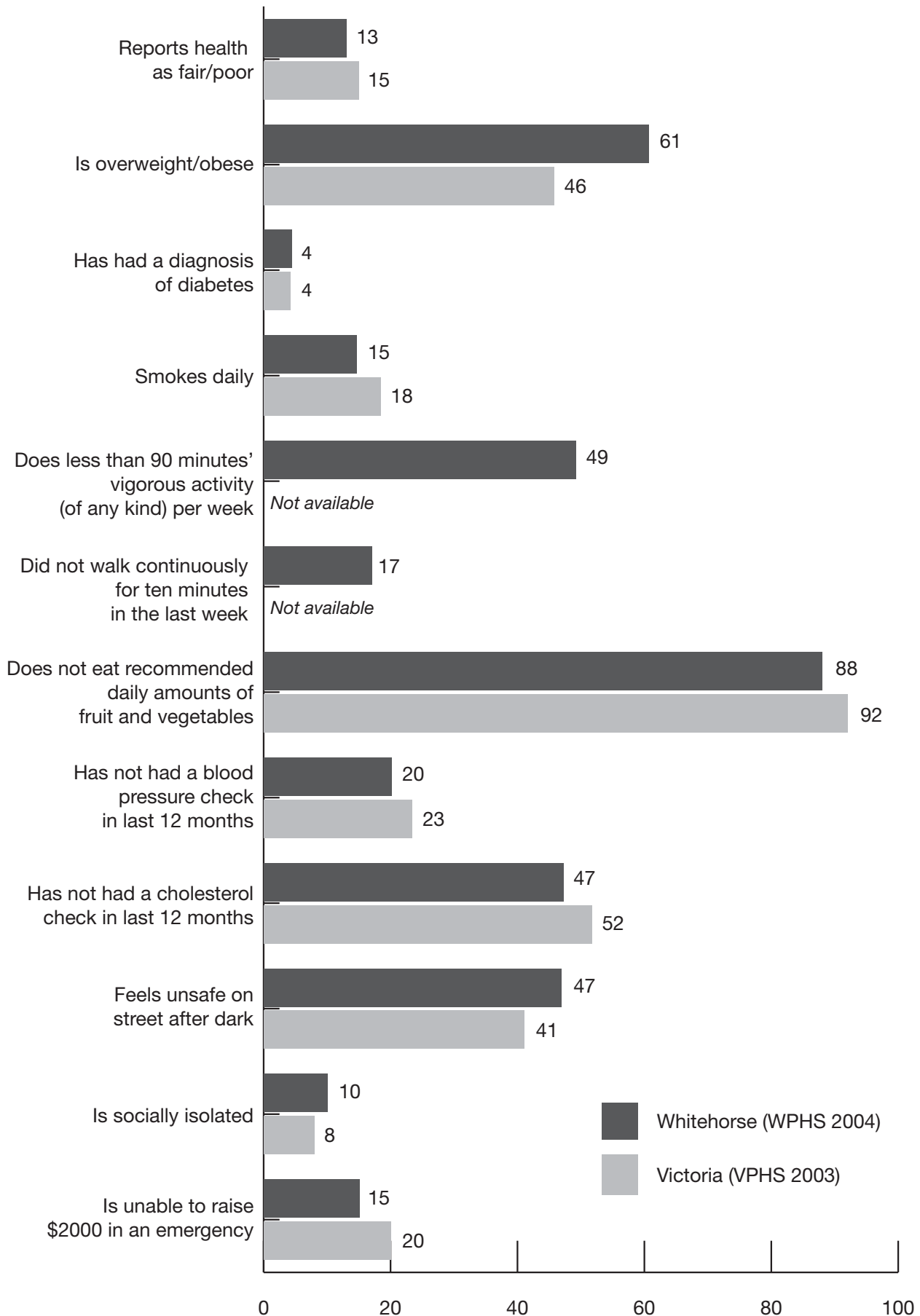


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Indicators of cardiovascular disease risk and community connectedness: Whitehorse and Victoria



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Introduction

In 2004 the Whitehorse Community Health Service ran a population health survey to collect information about cardiovascular disease risk factors, including community connectedness, in the City of Whitehorse. The survey was a telephone survey of a general population sample, a sample of Chinese residents and a sample from a socio-economically disadvantaged area.

This report provides a summary of the health status and preventable risk factors for cardiovascular disease (including aspects of community connectedness) for population groups in Whitehorse.

Monitoring health in Victoria: the Victorian Population Health Survey

All States and Territories in Australia monitor their population's health using a health survey. In Victoria this is a telephone survey called the Victorian Population Health Survey run by the Department of Human Services (DHS 2002-2004). The VPHS collects information from 7500 Victorian adults every year and includes questions on the major preventable risk factors for cardiovascular disease (tobacco smoking, high blood cholesterol, high blood pressure, diabetes, being overweight and physical inactivity (Tonkin 2005) and community connectedness (see "Social Networks" DHS 2002). Aspects of community connectedness are increasingly being reported as risk factors for cardiovascular disease (Bunker et al. 2003).

While the VPHS produces useful State-wide estimates, its utility to local health planners is limited. In evaluations of State-wide health surveys, policy makers have consistently voiced a desire for small-area data that would allow for more precise planning and evaluation of local interventions (Glover et al. 1999; Figgs et al. 2000; Bloom et al. 2000; Banks &

Eyeson-Annan 2001; Pope & Gruszyn 2002).

The importance of small-area data was recently demonstrated by a Department for Victorian Communities' survey that posed fifteen questions from the VPHS on community strength at the Local Government Area (LGA) level. The survey found considerable variation across areas for all indicators (DVC 2005). For example, the percentage of the adult population that felt safe on their street alone after dark varied from 40% to 90% across LGAs (DVC 2005). These results demonstrate that planning based on State averages could wrongly attribute problems in smaller areas.

Monitoring health in the City of Whitehorse: the Whitehorse Population Health Survey

In 2004 the Whitehorse Community Health Service, in partnership with the City of Whitehorse, Eastern Health and the Whitehorse Division of General Practice, commissioned a reduced version of the VPHS in their area to generate information to support more effective intervention planning. Eight hundred and thirty adult residents were surveyed, 630 from the general population and 100 each from Chinese and socio-economically disadvantaged populations. A description of the survey methods can be found in Appendix B.

The Whitehorse Population Health Survey (WPHS) was designed to provide information primarily on modifiable cardiovascular risk factors and community connectedness and to describe health inequalities in Whitehorse. The topics covered in the Whitehorse survey can be seen in Table 1, and each of these can be analysed by sex, age, ethnicity, income, employment status, highest level of education achieved, housing type and household type.

Table 1. Indicators for cardiovascular disease risk factors and community connectedness described in this report

Overall health status

- Self-reported health
-

Cardiovascular disease risk factors

- Obesity
 - Diagnosis of diabetes
 - Smoking
 - Physical activity
 - Blood pressure check
 - Cholesterol check
 - Fruit and vegetable consumption
-

Community connectedness

- Feeling safe on your street alone at night
 - Social isolation (ability to get help from friends, family or neighbours)
 - Ability to raise \$2000 in two days in an emergency
-

Reading this report: the community prevention planning model

The first section of this report provides a summary of cardiovascular risk factors and related health inequalities in the City of Whitehorse (Table 2). Only select data from the Whitehorse Population Health Survey have been used and more detailed statistical analyses will be done at a later date.

Detail on each of the indicators, including population groups most affected and relationships between the indicators, can be found in Appendix A. The graphs show estimates for all the significant population groups in Whitehorse and can be used to examine the relative position of population groups on an issue.

This type of graph highlights the relative importance of factors across population groups and forms part of a public health planning tool called community prevention planning. It allows public health authorities to select interventions that will have the biggest benefit for the populations affected. Community prevention planning was pioneered in the US by the Social Development Research Group (SDRG) at the University of Washington (www.sdrg.org).

Background to the City of Whitehorse

Whitehorse is a commercial and residential metropolitan municipality in Melbourne's east and has a population of approximately 145 500 people (ABS 2001).

It is a relatively high socio-economic status area (ranked ninth out of 79 LGAs in Victoria), but has a significant minority of socio-economically disadvantaged residents (ABS 2001). This Whitehorse population health survey found that women, older people (over 55), public housing tenants, the retired, the unemployed, people living alone and those who were born overseas or are non-English-speaking at home were over-represented among Whitehorse's low socio-economic status residents.

Whitehorse has few Indigenous residents compared to other LGAs (ranked 72nd out of 79 LGAs), but a high percentage of people not born in Australia (ranked 18th out of 79 LGAs) (ABS 2001). The largest ethnic group in the area are Chinese, who make up 2.5% of the population — a higher percentage than that for the rest of Melbourne (City of Whitehorse 2005).

Whitehorse has two major educational institutions (Box Hill TAFE and Deakin University) and 15% of its residents are full-time students (DHS unpublished data).

The health of Whitehorse residents

The findings from the WPHS are summarised here under two headings: (1) overall health and (2) cardiovascular disease risk (including aspects of community connectedness). The results are also summarised at the end of this section in Table 2. Graphs of population groups affected by each indicator, and the socio-economic health gradients reported, can be found in Appendix A.

The general population, the Chinese population and socio-economically disadvantaged groups in Whitehorse have different risk profiles for cardiovascular disease.

Overall health status

Overall health status is estimated in population health surveys using a question on 'self-reported health'. Research studies have shown individuals' rating of their health is related to levels of actual illness. The WCHS survey confirmed the life expectancy figures for Whitehorse, which suggest that people are generally healthier than in the rest of the State (ranked fourth of 79 LGAs for life expectancy in Victoria) (DHS 1999). In 2003 fewer people reported their health as fair or poor (13%) than for Victoria as a whole (15%) (DHS 2004).

Nonetheless, there were two population groups that had significantly higher levels of poor self-reported health than the 13% average. These were older retired residents (25%) and low socio-economic status residents (those from low-income households (26%), public housing tenants (19%), the unemployed (22%), those unable to work (57%), and single parents (27%)) (Table 2). There was a socio-economic health gradient in overall health status: as income levels decrease, more people report their health as fair or poor.

Young people, the Chinese and students had the lowest levels of reported poor health.

The survey also included the K10 measure of psychological distress (DHS 2004) and found that 11% of Whitehorse residents had experienced high levels of psychological distress (anxiety, depression and worry) over the previous four weeks (scores over 30). This compared to only 3% reported for Victoria as a whole in 2003 (DHS 2004). Those unable to work (48%), those with incomes less than \$20 000 per annum (44%), the unemployed (41%), and those over the age of 65 years (35%), had the highest rates of psychological distress.

Cardiovascular disease risk (including aspects of community connectedness)

All cardiovascular risk factors in Whitehorse were lower than for the whole of Victoria, except for overweight/obese, feeling safe on the street after dark and being socially isolated (Table 2). Sixty-one per cent of the Whitehorse population were overweight/obese compared to 46% of all Victorians in 2003 (DHS 2004). Slightly more Whitehorse (45%) than Victorian (41%) residents reported they did not feel safe on their street alone after dark (DHS 2003), and Whitehorse had almost double the number of people who were socially isolated (could not get help from friends, family or neighbours when needed) (14%) than the State as a whole (8%) (DHS 2003).

Risks in the general population

The general population had relatively high levels of the cardiovascular risk factors overweight/obesity (61%), low physical activity (49%), and low fruit and vegetable intake (88%) (Table 2).

Risks in low socio-economic status groups

Socio-economically disadvantaged groups (as measured by low income) had high levels of all cardiovascular risk factors except smoking and lack of blood pressure testing. Some specific low socio-economic status groups, however, had low rates of blood pressure testing and had very high rates of smoking. Groups that had low rates of blood pressure testing included single parents (41%) and the unemployed (26%), while groups with high levels of smoking included the unemployed (40%), those who are unable to work (38%) and public housing tenants (24%).

Socio-economically disadvantaged groups reported lower levels of community connectedness. More felt unsafe on their streets alone after dark (those from low-income households (70%), public housing tenants (73%), those unable to work (72%), and single parents (73%)). The groups with the highest rates of social isolation were those from low-income households (31%), the unemployed (29%), public housing tenants (29%), and those who were unable to work (28%).

Those unable to work (58%), public housing tenants (47%), and the unemployed (29%) also showed high rates of people who could not raise \$2000 in an emergency. People who cannot access \$2000 in two days in an emergency (from any source) are at risk of the negative impacts from life events becoming catastrophic (DVC 2004). For example, this type of person could lose their job if a car they were relying on to get to work broke down, or they could lose teeth due to an inability to pay dental bills after an accident (DVC 2004).

There were clear socio-economic gradients by income in six of the ten cardiovascular

risk factors (including community connectedness):

- Diagnoses of diabetes — as income decreases, diagnoses increase (Figure 5);
- Physical activity and fruit and vegetable intake — as income decreases, activity and fruit and vegetable intakes decrease (Figures 10 and 13);
- Blood pressure and cholesterol testing — as income decreases, testing increases (Figures 15 and 17);
- Feeling safe on your street alone after dark — as income decreases, more people feel unsafe (Figure 19);
- Social isolation — as income decreases, more people are socially isolated (Figure 21); and
- Ability to raise \$2000 in an emergency — as income decreases, more people could not raise \$2000 in an emergency (Figure 24).

Risks in Chinese residents

Chinese residents had high rates of all cardiovascular risk factors except overweight/obesity (31%) and diagnoses of diabetes (2%) (Table 2). Low levels of diagnoses of diabetes may indicate a lack of testing. Chinese residents' levels of health screening were low (34% had not had a blood pressure test and 70% had not had a cholesterol test), as were their levels of physical activity (69% did not meet guidelines) (Table 2). No Chinese resident reported eating the recommended daily serves of fruit and vegetables and their smoking rate was high (25%) (Table 2).

A high proportion of Chinese residents (51%) reported feeling unsafe on their street alone after dark.

Risks in non-English-speaking residents

Relative to other groups, non-English-speaking residents did not have high levels of cardiovascular risk factors, except that 20% smoked daily (compared to 15% of the general population), 56% did not undertake 90 minutes of vigorous exercise each week (compared to 49% of the general population), and 33% had not had a blood pressure check (compared to 20% of the general population).

Higher proportions of this group reported feeling unsafe on their street alone after dark (56% compared to 45% of the general population), socially isolated (17% compared to 14% of the general population) and unable to raise \$2000 in an emergency (31% compared to 15% of the general population).

Risks in young people and seniors

Young people aged 18-24 had high rates of smoking (33%: approximately 45% of males and 20% of females) and low fruit and vegetable intake (100%).

People over the age of 65 had high levels of overweight/obesity (73%) and diagnoses of diabetes (13%), and low levels of physical activity (61% were not meeting guidelines). They were also more likely, along with the mid-aged (45-54), to be socially isolated (17% each).

Conclusion

The general population in Whitehorse enjoys relatively good health but has high levels of three risk factors for cardiovascular disease: being overweight/obese, not undertaking recommended levels of physical activity, and not consuming recommended daily amounts of fruit and vegetables. Obesity is particularly notable in older, retired residents. Whitehorse has a high proportion of residents who do not feel safe on their streets alone after dark, which may have implications when considering opportunities for physical activity.

Socio-economically disadvantaged groups in Whitehorse have worse health and have high levels of most, and in some cases all, cardiovascular disease risk factors. Extremely high rates of risk factors were found in the unemployed, public housing tenants and those who are unable to work. These risk factors included a lack of community connectedness (as measured by not feeling safe on their streets after dark) and social isolation. Those who are unable to work were also the least likely to be able to raise money in an emergency, which could be significant if their inability to work is related to a disability or illness for which emergencies are likely to arise.

Chinese residents enjoy better health than the general population but have some significant risk factors. Like the general population they are not undertaking recommended levels of physical activity and are not consuming recommended daily amounts of fruit and vegetables. They do, however, have low levels of overweight/obesity. Compared to the general population they are screened less for blood pressure and cholesterol and a greater proportion are smokers. The lack of screening may indicate a more general lack of access to health care, or decreased health care seeking behaviour, and this may explain low levels of diagnoses of

diabetes in this group. This was supported by the finding that this group also has low levels of dental screening (38% compared to 72% from the Whitehorse population and 72% for Victoria as a whole in 2003 (DHS 2004)). Dental screening is considered an indicator of a more general lack of access to health care in this population group (Chinese Health Foundation of Australia unpublished report). Chinese residents were also more likely than the general population to feel unsafe on their street alone after dark.

Future work

The Whitehorse Community Health Service has now established a reference group to consider these results. The group includes the local council, Division of General Practice, Primary Care Partnership, non-government organisations, two State Government departments and the higher education sector. The reference group will develop collaborative approaches and interventions to address the needs and health inequalities highlighted by this survey.

Further analysis of this survey's data, and repeating the survey at a later date, will enable the reference group to evaluate the impact of their interventions to reduce cardiovascular disease risk factors and related health inequalities.

Table 2. Summary of results: general health and the ten leading indicators of cardiovascular risk and community connectedness; 🌟 signifies relatively high rates

	State average (VPHS)	White-horse average	Low income	Chinese	Other risk group 🌟
Overall health status					
Poor self-rated health	15%	13%	26% 🌟	8%	57% unable to work 25% retired 22% unemployed
Cardiovascular risk factors					
Overweight/obese	46%	61% 🌟	69% 🌟	31%	75% retired
Diagnosis of diabetes	4%	5%	14% 🌟	2%	11% retired
Daily smokers	18%	15%	14%	25% 🌟	40% unemployed 38% unable to work 33% young people (18–24)
Low physical activity: vigorous exercise	n/a	49% 🌟	60% 🌟	69% 🌟	76% unable to work 70% unemployed 61% older, retired
Low physical activity: did not walk continuously for ten minutes in the last week	n/a	17% 🌟	21% 🌟	0%	38% unable to work 33% self-employed
Low fruit and vegetable intake	92%	88% 🌟	94% 🌟	100% 🌟	100% self-employed 100% unable to work 100% young people (18–24)
No blood pressure screening	23%	20%	13%	34% 🌟	44% students 41% single parents
No cholesterol screening	52%	47%	19% 🌟	70% 🌟	85% students 67% single parents
Community connectedness					
Feel unsafe on the street at night	41%	45%	70% 🌟	51% 🌟	73% home duties 73% single parents 73% public housing tenants 72% unable to work 65% retired
Could not raise \$2000 in an emergency	20%	15%	24% 🌟	16%	58% unable to work 47% public housing tenants
Are socially isolated	8%	14%	31% 🌟	0%	28% unable to work 29% public housing tenants 17% non-English-speaking at home 29% unemployed 28% unable to work

Appendix A. Indicator details and graphs

General health

This Appendix contains detail on each of the indicators, including population groups most affected and relationships between the indicators. The graphs show estimates for all the significant population groups in Whitehorse and can be used to examine the relative position of population groups on an issue.

All associations in the following categories were determined by Chi squared cross-tabulation using SPSS:

- Sex
- Age
- Chinese/“other”
- Employment status
- Household income
- Household structure
- Public housing tenant/home owner/private renter.

All differences reported in the above categories were statistically significant ($p < 0.05$).

Figure 1. The income gradient for fair or poor self-reported health

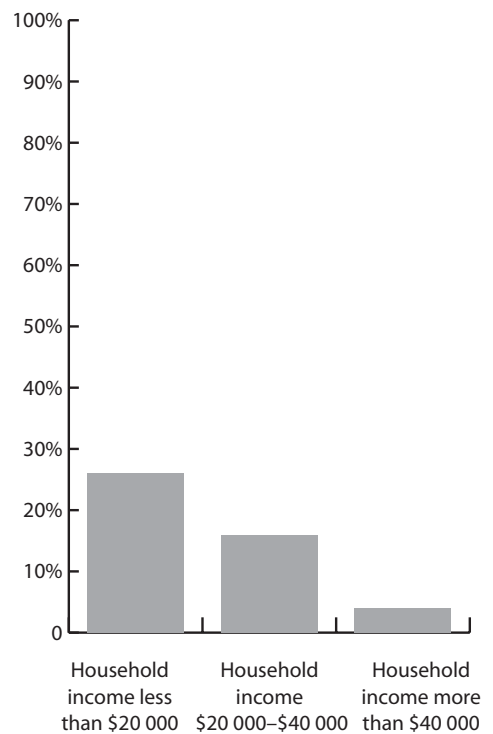
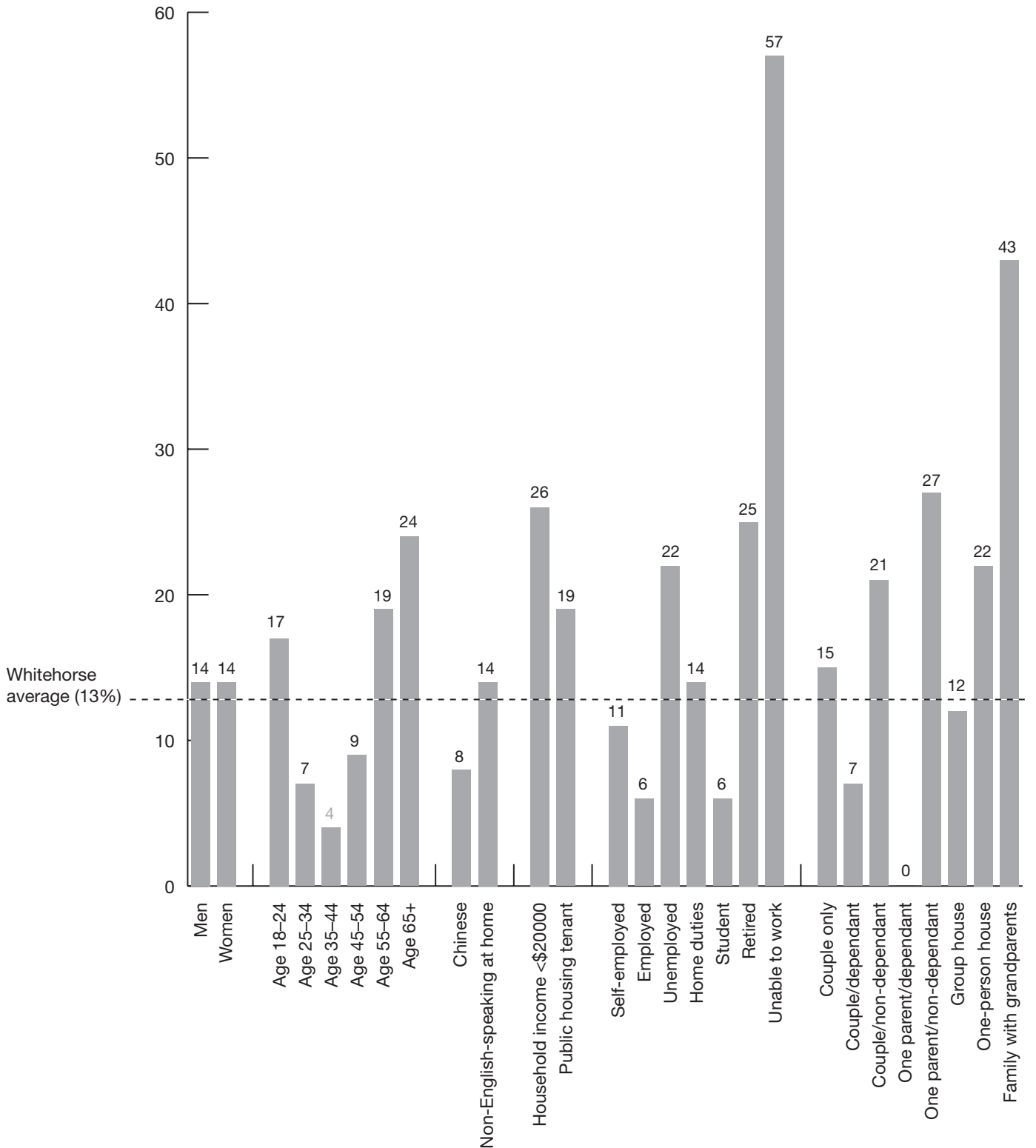


Figure 2. The percentage of people in identified population groups who rate their health as fair or poor (rather than excellent, very good or good)



Obesity

Overall levels of obesity

Levels of obesity are higher in Whitehorse (61%) than were reported for Victoria as a whole in 2003 in the VPHS (46%) (DHS 2004). The last national estimate in 1995 put the level at 53%, an increase from 29% in 1980 (DHA 2005). Epidemics of obesity that have recently been reported in affluent areas around the globe have not yet manifested as epidemics of cardiovascular disease, but it is expected that they will. This may be why Whitehorse still has relatively low mortality from cardiovascular diseases compared to other areas in the State (DHS 1999).

People in Whitehorse who are overweight/obese are significantly more likely to report their health as fair or poor (20% of those who are overweight compared to 11% in others).

Population groups most affected

All population groups in Whitehorse have obesity rates over 20% (Figure 4). Students, young people aged 18–24 and the Chinese have the lowest rates.

Population groups that are more likely to be overweight/obese are:

- men
- older age groups
- those who are Australian-born and English-speaking at home
- households with incomes less than \$20 000
- the retired, self-employed and unemployed
- those whose highest level of education was TAFE
- couple or single-person households with non-dependant children and people in one-person households
- home owners.

Obesity shows no socio-economic gradient by household income (Figure 3).

Relationship to other cardiovascular indicators

People who are overweight/obese are more likely to have had a blood pressure or cholesterol check in the last two years, to be non-smokers and to fall short of the guidelines for vigorous exercise and fruit and vegetable intake. There is no difference between those of normal weight and the overweight in having had a diagnosis of diabetes.

People who are overweight/obese are more likely to be able to raise \$2000 in an emergency and to feel safe on the street at night and less likely to be socially isolated.

Figure 3. The income gradient for overweight/obesity

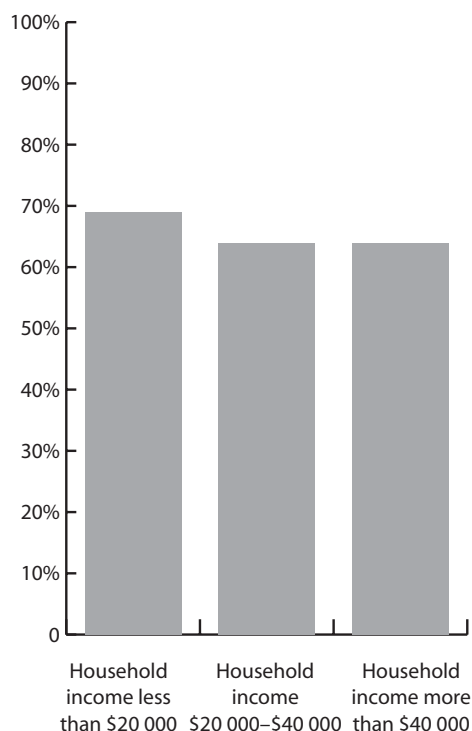
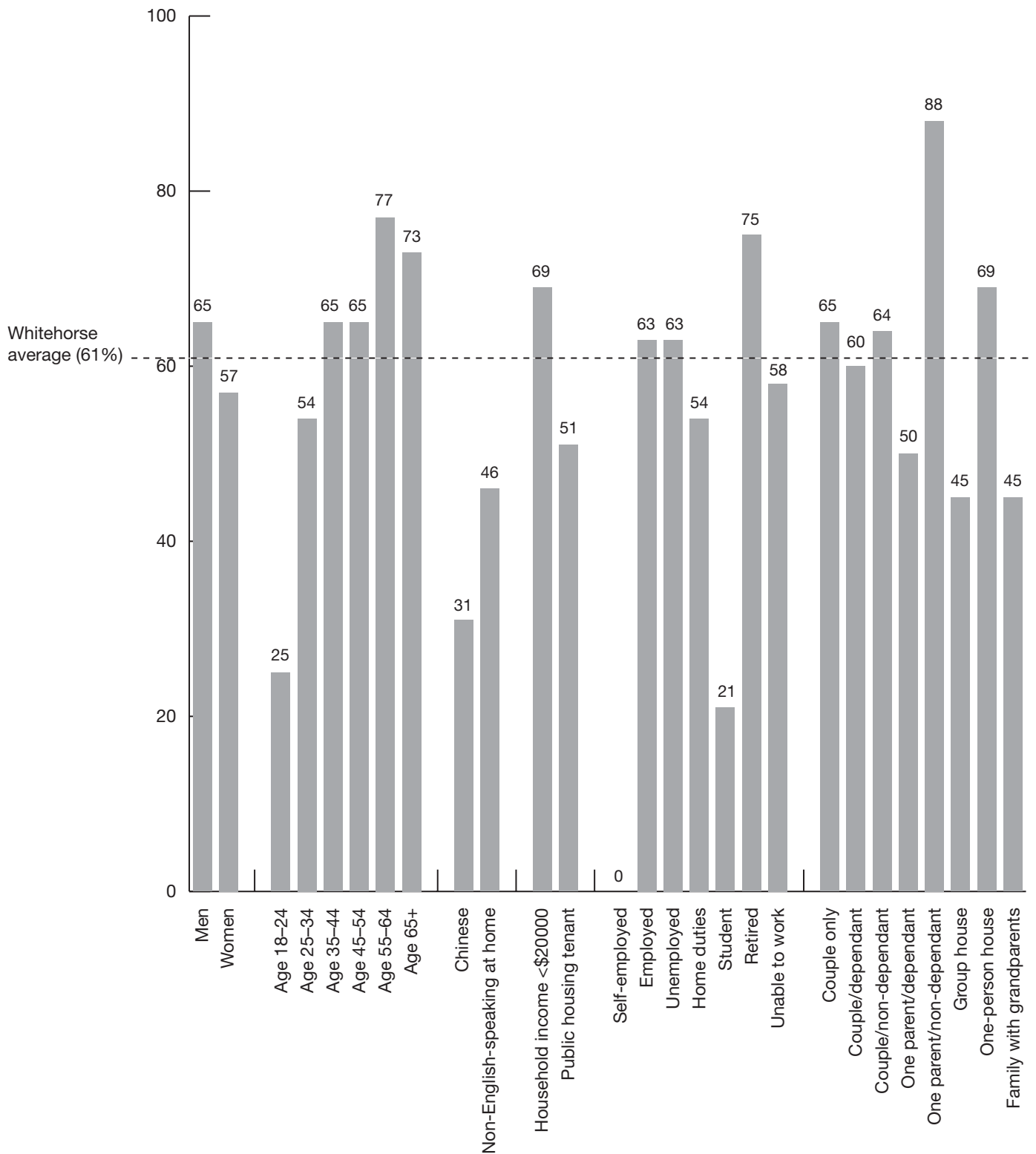


Figure 4. The percentage of people in identified population groups who are overweight /obese



Diagnoses of diabetes

Overall levels of diabetes

Levels of diagnosed diabetes in Whitehorse are the same as those for the whole Victorian population (4%) (DHS 2004). If diagnosed gestational diabetes is included the figure for Whitehorse is 5.1%.

The most common type of diabetes reported in Whitehorse is Type 2 non-insulin-dependant (51%), followed by gestational (21%), hypoglycaemia (15%), and Type 1 insulin-dependant and “other” (13%).

People who have had a diagnosis of diabetes from a doctor are more likely to report their health as fair (32% of those diagnosed compared to 8% of those without).

Population groups most affected

Figure 6 shows the diagnoses of diabetes across different population groups in Whitehorse.

Those more likely to have had a diagnosis of diabetes are:

- men
- older age groups (the proportion increases with age)
- those who are overseas-born and non-English-speaking at home
- those in households with incomes under \$20 000
- the retired
- those who left school at or before high school
- couple or single-person households with non-dependant children, one-person households or households with grandparents
- home owners and public housing tenants.

Diagnosed diabetes shows a socio-economic gradient by household income — the higher the income, the lower the rate of diagnosis (Figure 5).

Relationship to other cardiovascular indicators

People with diagnosed diabetes were more likely to have had a blood pressure or cholesterol check in the last two years, to eat the recommended daily serves of fruit and vegetables, and to be non-smokers, but less likely to be meeting recommended guidelines for exercise. There is no difference in weight between those who have had a diagnosis and those who have not.

They are also less likely to be able to raise \$2000 in an emergency, feel safe on the street or be socially isolated.

Figure 5. The income gradient for diagnoses of diabetes

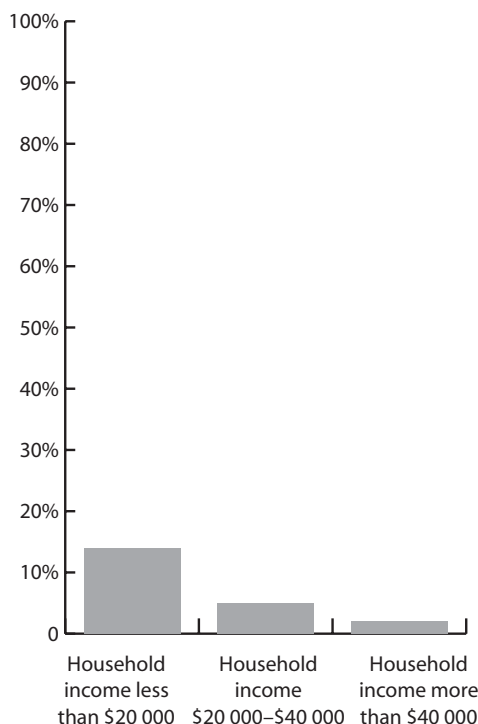
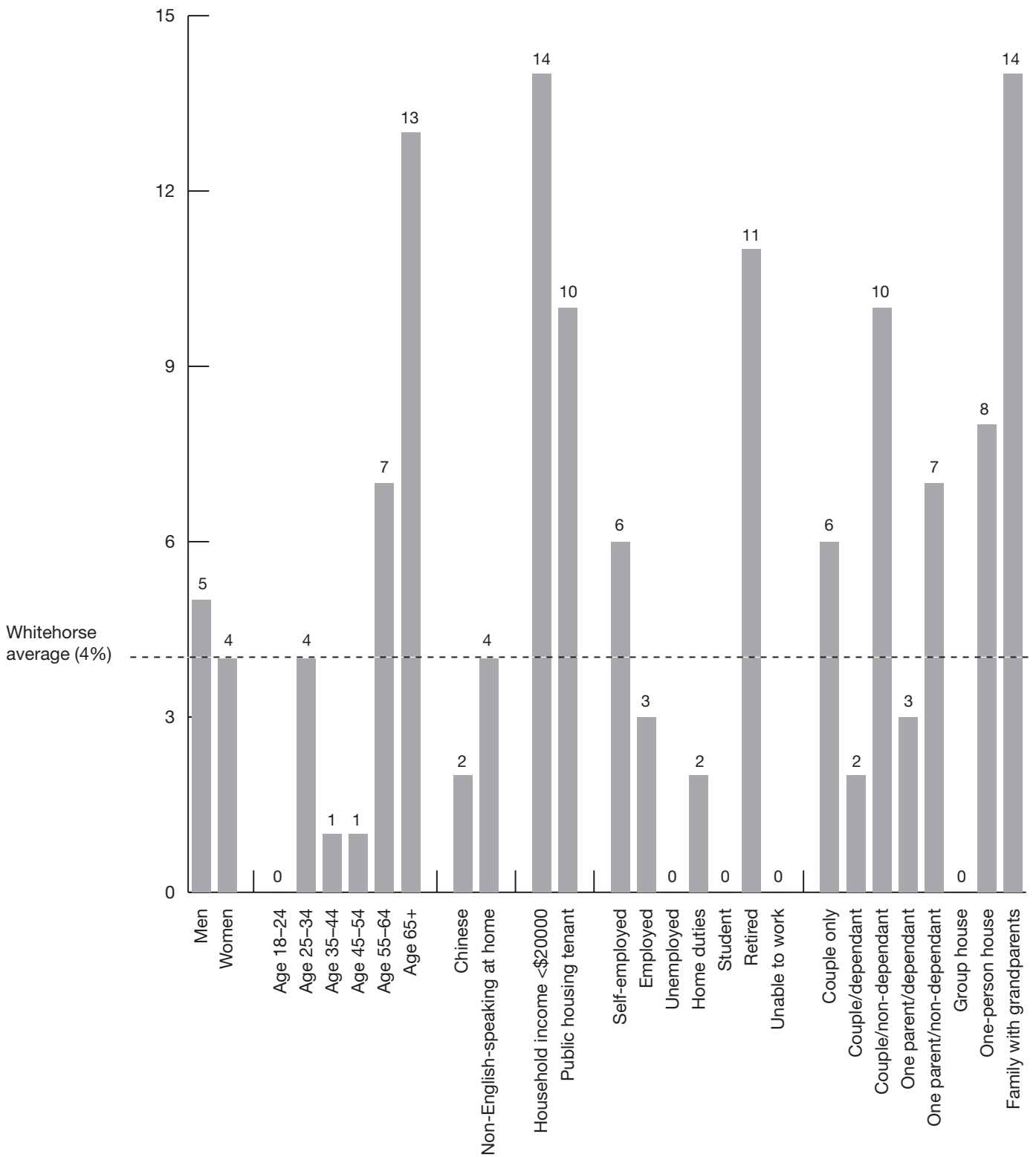


Figure 6. The percentage of people in identified population groups who have had a diagnosis of diabetes



Smoking

Overall levels of daily smoking

Levels of people who smoke daily are lower in Whitehorse (15%) than reported for Victoria as a whole in 2003 in the VPHS (18%) (DHS 2004).

Smokers are significantly more likely to report their health as fair or poor (27% of daily smokers compared to 11% of those who have never smoked).

Population groups most affected

Figure 8 shows the percentage of people in different population groups in Whitehorse that smoke daily.

Regular smokers are more likely to be:

- men
- aged 18 to 34
- overseas-born and non-English-speaking at home
- in households with incomes over \$40 000
- self-employed, unemployed, engaged in home duties, students or unable to work
- those who have completed TAFE or less education
- living in single-parent households, group houses or households with grandparents
- public housing tenants and private renters.

There is no socio-economic income gradient by household income with smoking (Figure 7).

Relationship to other cardiovascular indicators

Smokers are less likely to be overweight/obese, but also less likely to have had a diagnosis of diabetes, to have

had a blood pressure or cholesterol check in the last two years, or to be meeting guidelines for fruit and vegetable intake and vigorous physical activity.

There is no difference in their ability to raise \$2000 in an emergency or in being socially isolated, but they are more likely to feel safe on their street at night.

Figure 7. The income gradient for daily smokers

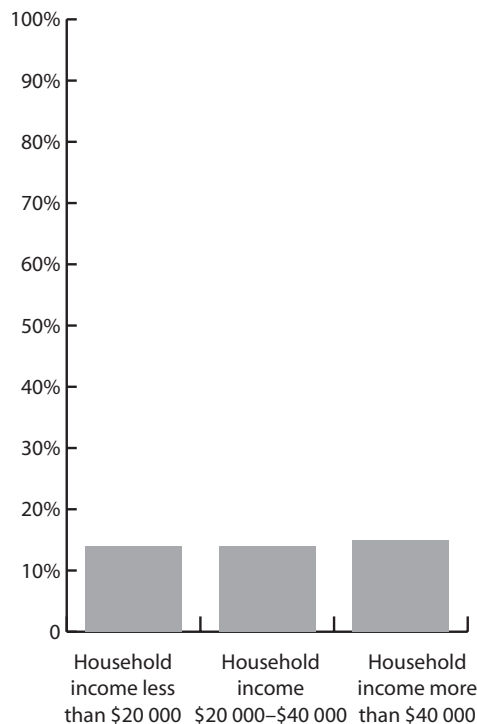
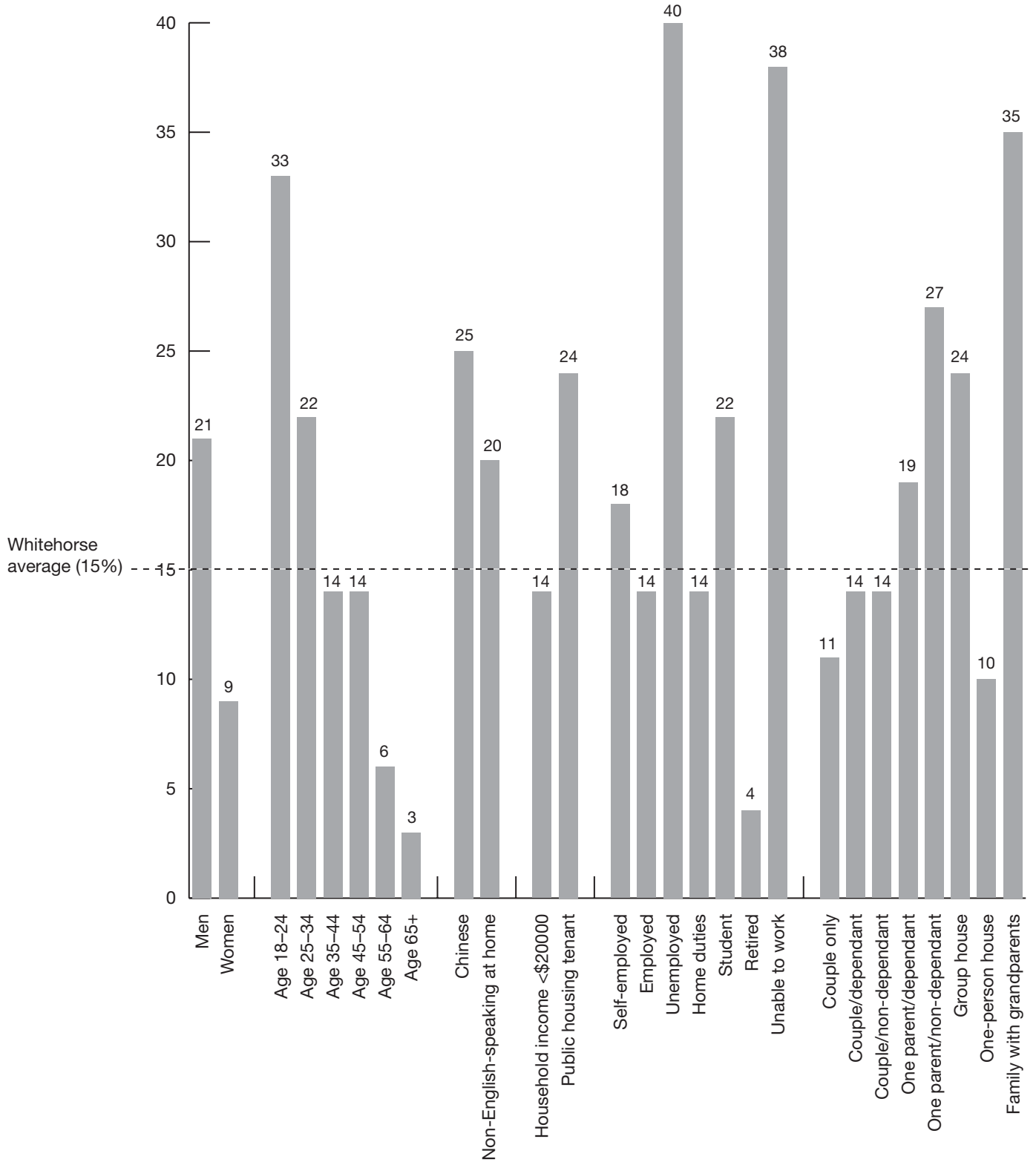


Figure 8. The percentage of people in identified population groups who smoke daily



Physical activity: vigorous exercise

Unfortunately, the VPHS questions used in this survey are not based on the national recommendation that people undertake thirty minutes of moderate-intensity physical activity on most, if not all, days of the week (DHA 2004). As the VPHS questions focus on walking and vigorous activities, 30 minutes of vigorous activity of any type three times a week (90 minutes) has been deemed to be an approximate measure for meeting the guidelines.

Overall levels of vigorous physical activity

Half of the Whitehorse population (49%) do not undertake over 90 minutes of vigorous activity per week. Comparisons have not been made with the VPHS because it has not published its method for calculating adequate physical activity.

People who undertake more than 90 minutes of vigorous activity per week are more likely to report their health as very good or excellent (55% over 90 minutes compared to 45% of those under).

Population groups most affected

Figure 9 shows the percentage of people in the different population groups in Whitehorse that do not undertake 90 minutes of vigorous activity each week.

People who do not undertake recommended amounts of activity are more likely to be:

- women
- aged 25 to 34 or over 65
- overseas-born and non-English-speaking at home
- in households with incomes under \$40 000

- unemployed, students, retired or unable to work
- those who have completed high school or university
- living in couple-only households or households with grandparents
- public housing tenants.

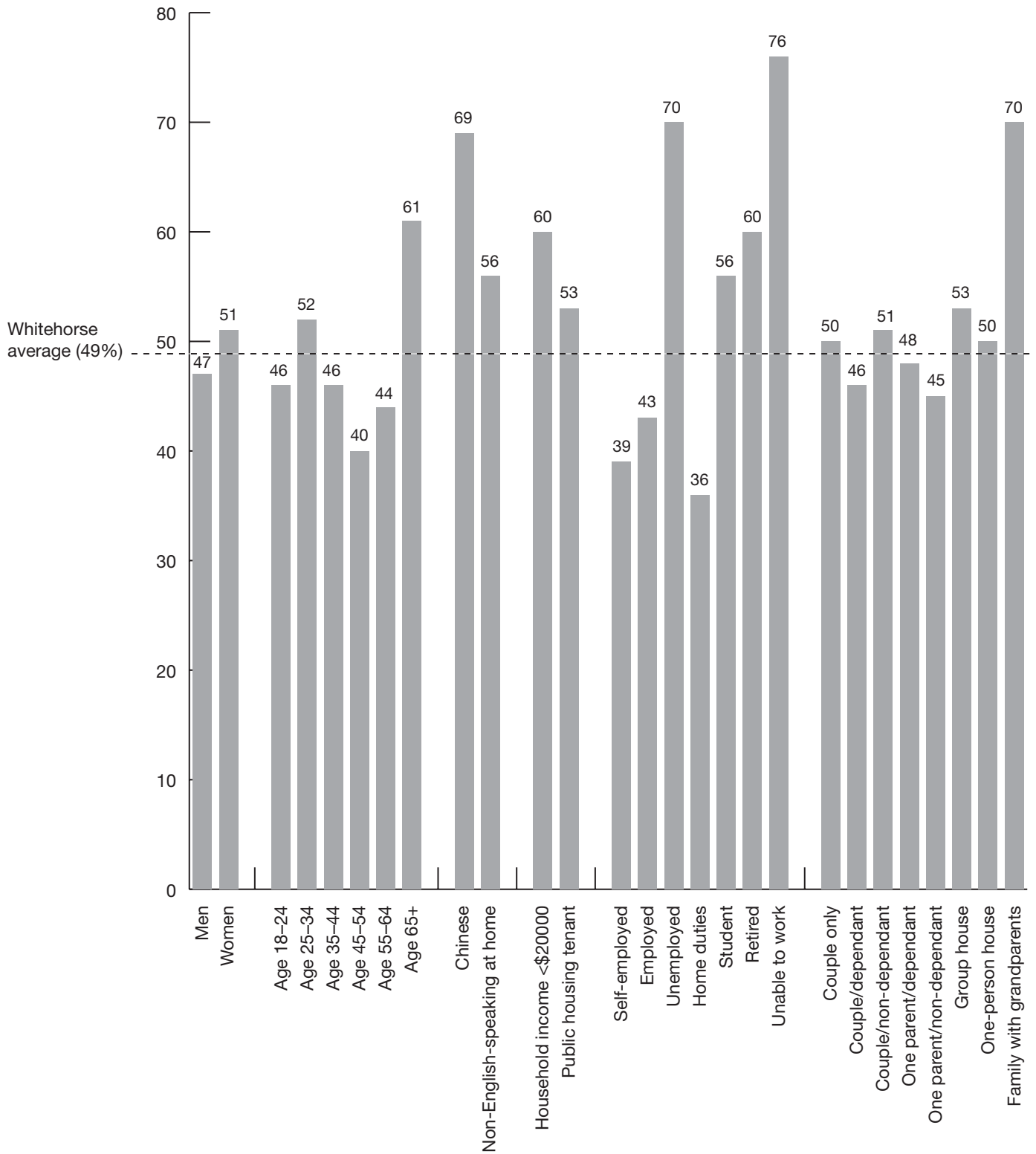
There is a socio-economic gradient in physical activity by household income — the higher the income, the greater the proportion of the population doing vigorous physical activity (Figure 10).

Relationship to other cardiovascular indicators

People who are less physically active are more likely to be overweight/obese, to have had a diagnosis of diabetes, and to smoke. They are less likely to have had a cholesterol check in the last two years or to be meeting guidelines for eating fruit and vegetables.

People who do less than 90 minutes of vigorous exercise per week are less likely to feel safe on the street at night, less able to raise \$2000 in an emergency, and more likely to be socially isolated.

Figure 9. The percentage of people in the identified population groups who do not undertake recommended amounts of physical activity



Physical activity: did not walk continuously for ten minutes in the last week

Figure 10. The income gradient for those who do less than 90 minutes of physical activity each week

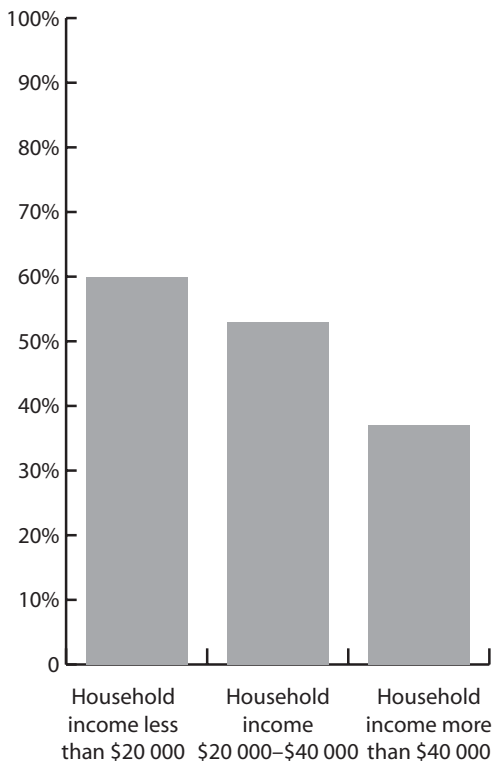


Figure 11. The income gradient for those who did not walk continuously for ten minutes in the last week

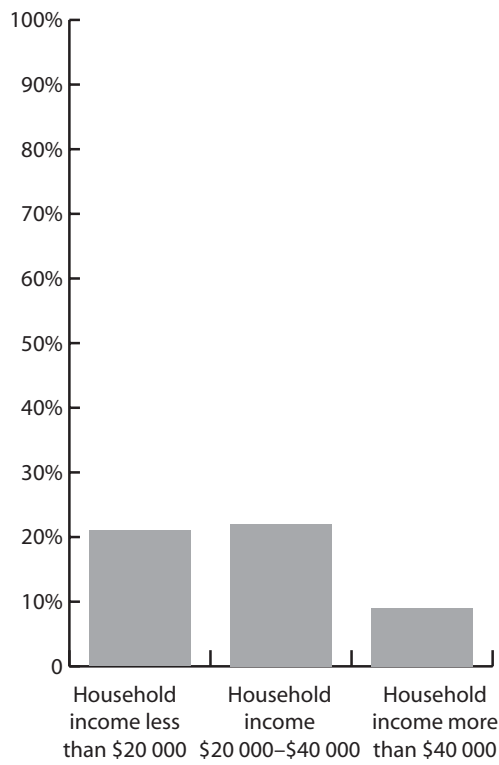
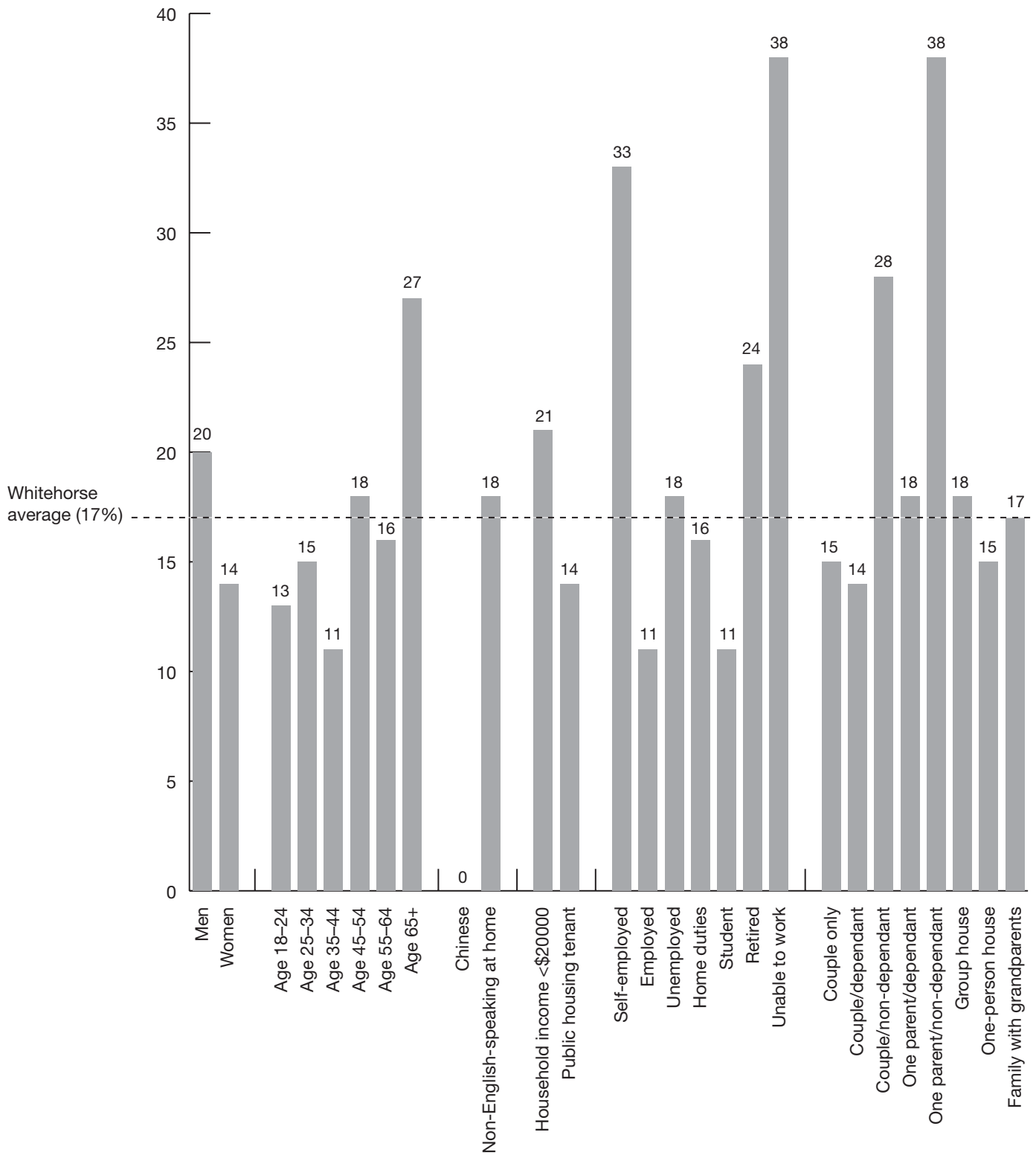


Figure 12. The percentage of people in identified population groups who did not walk continuously for ten minutes in the last week



Fruit and vegetable consumption

The current dietary recommendation is to eat two serves of fruit and five of vegetables per day.

Overall levels of adequate food and vegetable consumption

Eighty per cent of the Whitehorse population are not consuming the recommended serves of fruit and vegetables per day, compared to 92% for Victorians as a whole in 2003 (DHS unpublished data).

The 12% of people who are consuming the recommended amount of fruit and vegetables are more likely to report their health as excellent (24% of those who meet guidelines compared to 17% of others).

Population groups most affected

Figure 14 shows the percentage of the different population groups in Whitehorse that do not consume the recommended amounts of fruit and vegetables.

People who do not eat recommended amounts of fruit and vegetables are more likely to be:

- men
- aged under 45 or 55 to 64
- overseas-born and non-English-speaking at home
- in households with incomes over \$40 000
- self-employed, unemployed, engaged in home duties, students or unable to work
- educated to TAFE level or above
- living as a couple or alone with non-dependant children, or in group houses
- public housing tenants and private renters.

There is a reverse socio-economic gradient in people meeting dietary guidelines for fruit and vegetables — the higher the income, the smaller the proportion eating to the guidelines (Figure 13).

Relationship to other cardiovascular indicators

People who do not eat the recommended daily amounts of fruit and vegetables are more likely to be overweight/obese, to have had a diagnosis of diabetes, to smoke, not to meet physical activity guidelines, and to have had a blood pressure and cholesterol check.

They were more likely to be able to raise \$2000 in an emergency, but also more likely to be socially isolated and less likely to feel safe on the street at night.

Figure 13. The income gradient for people not meeting dietary recommendations for fruit and vegetable intake

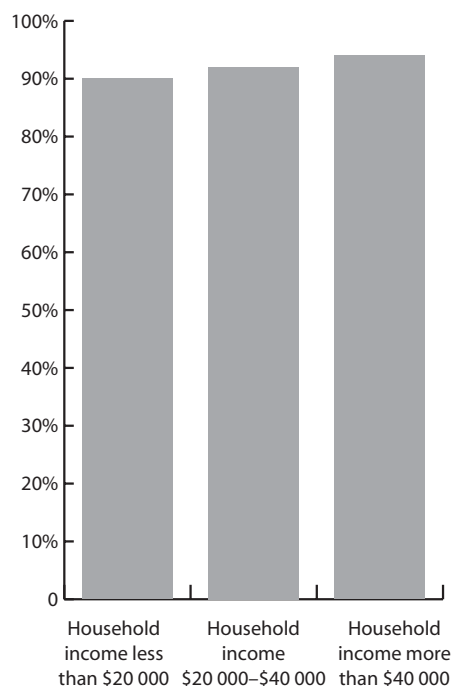
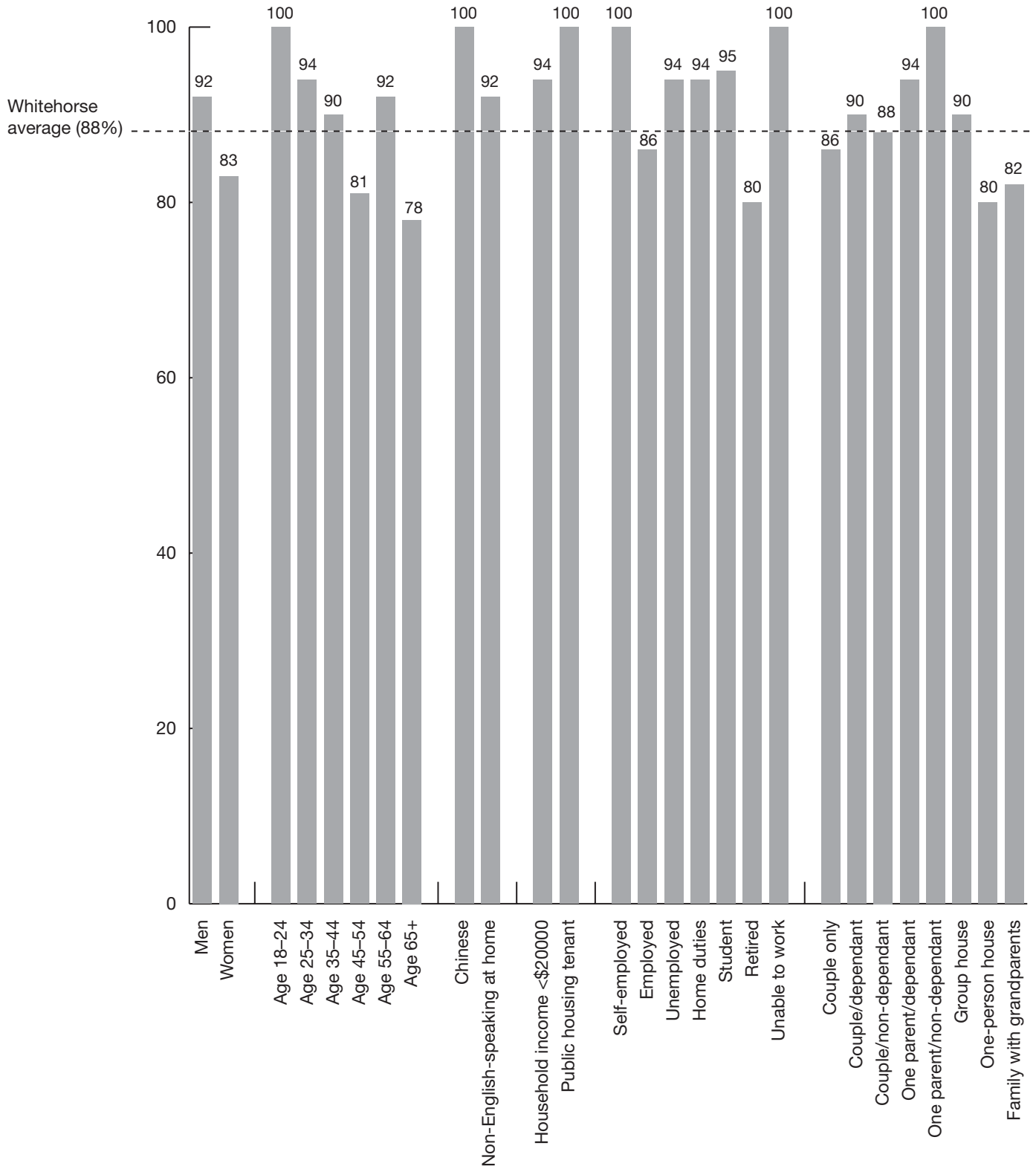


Figure 14. The percentage of people in identified population groups not meeting dietary recommendations for fruit and vegetable intake



Blood pressure screening

Overall levels of blood pressure screening

Eighty per cent of the Whitehorse population has had a blood pressure check in the last two years compared to 77% of the Victorian population measured by the VPHS in 2003 (DHS 2004).

People who had a blood pressure check are more likely to report their health as good or fair (28% of those who had a check compared to 20% of others for “good”; 12% of those who had a check compared to 8% of others for “fair”).

Population groups most affected

Figure 16 shows the percentage of the different population groups in Whitehorse that have not had a blood pressure check in the last two years.

People who have not had blood pressure checks are more likely to be:

- women
- over 45
- Australia-born and English-speaking at home
- in households with incomes under \$20 000
- engaged in home duties, retired or unable to work
- those who have not completed high school or have completed university
- living in a household as a couple with or without dependant children, living alone or living in households with grandparents
- home owners and public housing tenants.

There is a reverse socio-economic gradient in blood pressure screening by household income — the higher the income, the less likely people are to be screened (Figure 15).

Relationship to other cardiovascular indicators

Those who have not had a blood pressure check in the last two years are more likely to be normal weight and non-smokers but less likely to have had a diagnosis of diabetes, to have had a cholesterol check, or to be eating recommended amounts of fruit and vegetables. There is no difference in the amount of vigorous activity undertaken by those that had or had not undertaken a check.

People who have not had a blood pressure check are less likely to feel safe on their street at night or to be able to raise \$2000 in an emergency and more likely to be socially isolated.

Figure 15. The income gradient for people who have not had a blood pressure check in the last two years

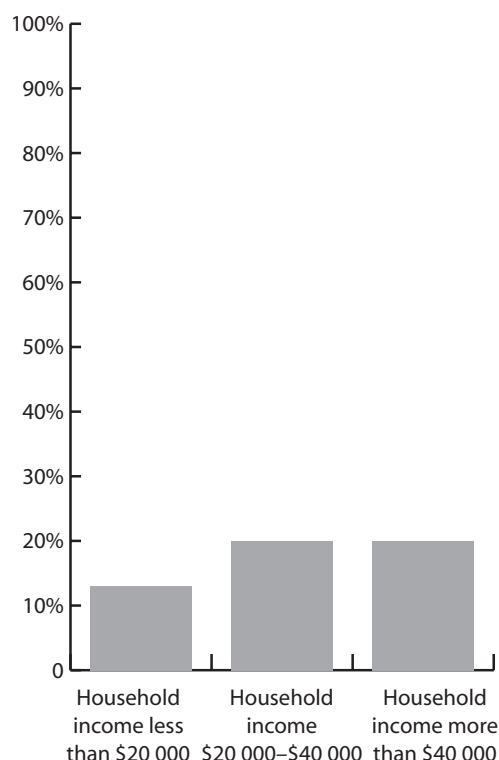
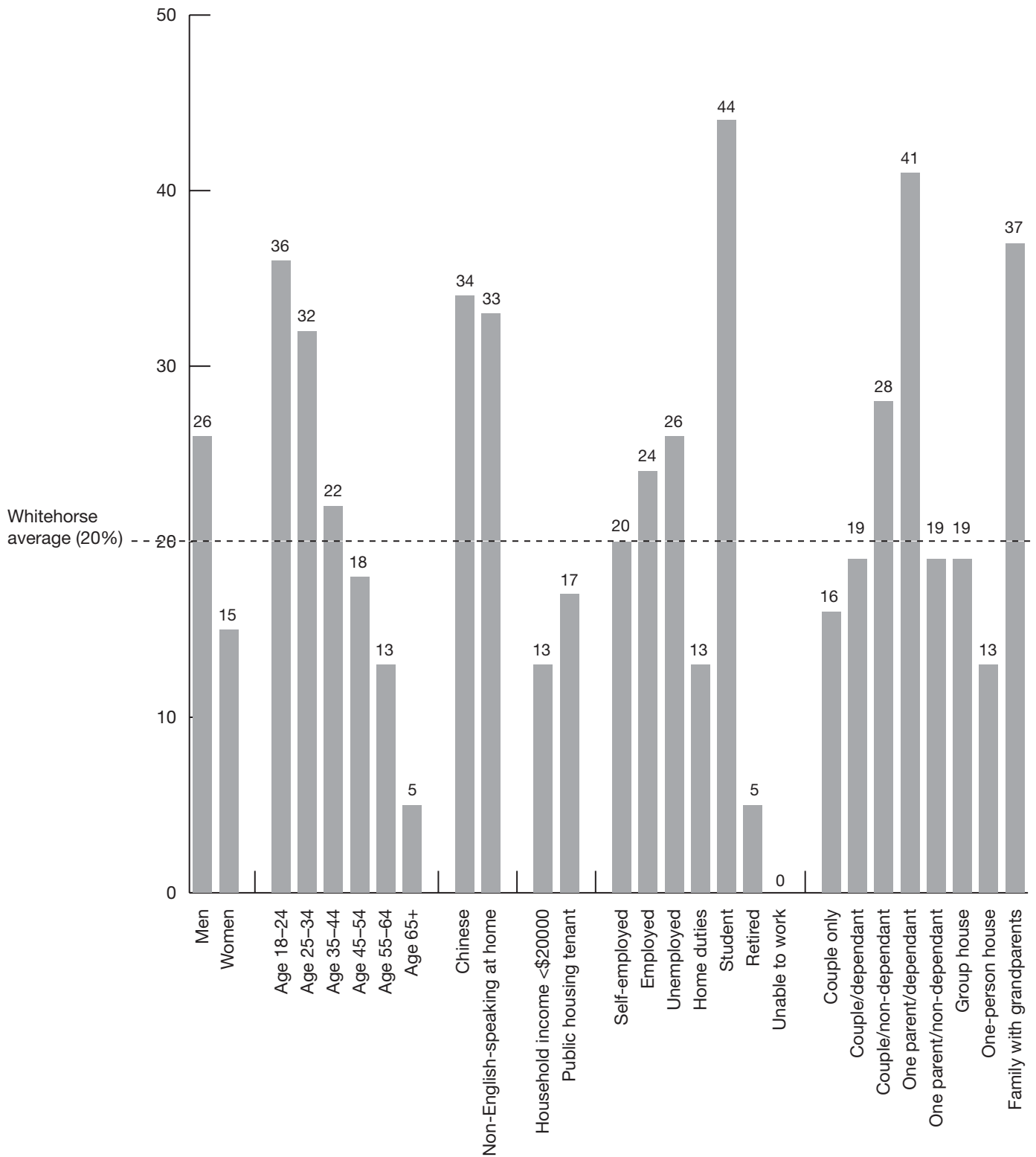


Figure 16. The percentage of people in identified population groups who have not had a blood pressure check in the last two years



Cholesterol screening

Overall levels of cholesterol screening

Forty-seven per cent of the Whitehorse population has not had a cholesterol check in the last two years compared to 52% of the Victorian population as measured by the VPHS in 2003 (DHS 2004).

People who had a cholesterol check were more likely to report their health as good, fair or poor than those who had not (30% of those who had a check compared to 22% of others for “good”, 14% of those who had a check compared to 8% of others for “fair”, 2% of those who had a check compared to 1% of others for “poor”).

Population groups most affected

Figure 18 shows the percentage of people in the different population groups in Whitehorse who have not had a cholesterol check in the last two years.

People who have not had a cholesterol check are more likely to be:

- women
- aged over 45
- Australian-born
- in households with incomes under \$40 000
- unemployed, retired or unable to work
- those who have completed a maximum of high school
- living as a couple or alone with non-dependant children, or living alone
- home owners and public housing tenants.

There is a reverse socio-economic gradient by household income for cholesterol screening — the higher the income, the fewer the people screened (Figure 17).

Relationship to other cardiovascular indicators

Those who have not had a cholesterol check in the last two years are more likely to be normal weight and smokers, but less likely to have had a diagnosis of diabetes, to have had a blood pressure check, or to be meeting guidelines for fruit and vegetable intake or exercise.

They are more likely to be able to raise \$2000 in an emergency, feel safe on the street at night and be socially isolated.

Figure 17. The income gradient for people who have not had a cholesterol check in the last two years

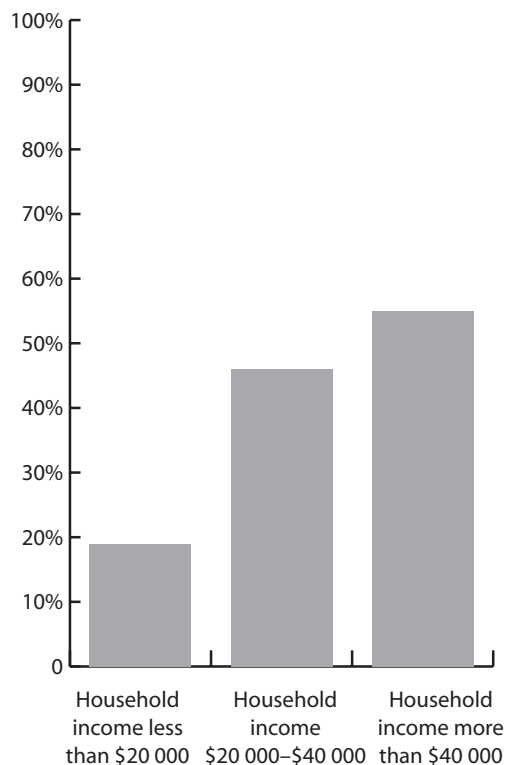
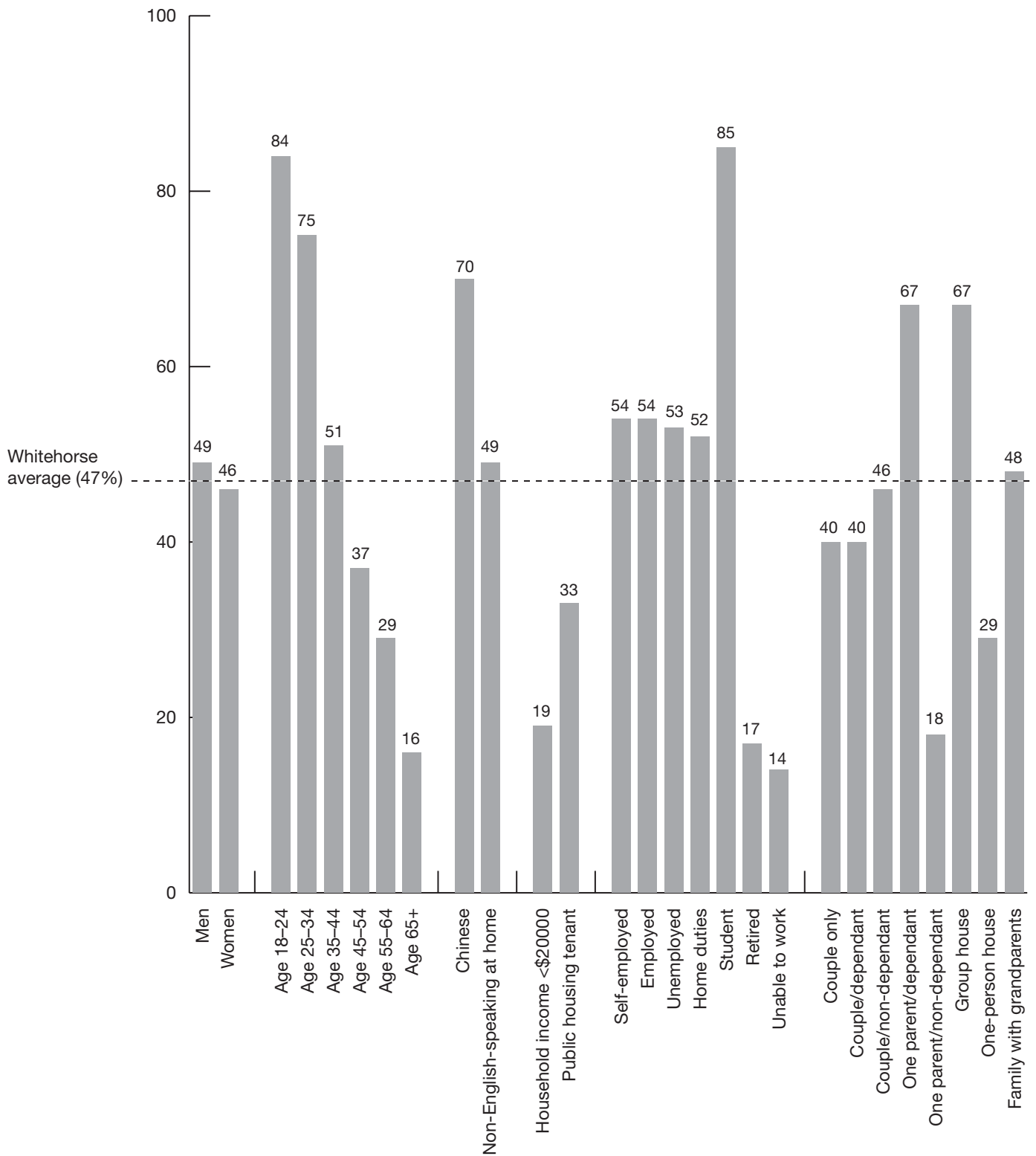


Figure 18. The percentage of people in identified population groups who have not had a cholesterol check in the last two years



Feeling safe on the street alone at night

Overall levels of feeling safe on the street at night

Forty-five per cent of the Whitehorse population do not feel safe on their street alone after dark compared to 41% of Victorians overall (DHS 2004).

People who do not feel safe on the street at night are more likely to report their health as good, fair or poor (37% of those who do compared to 21% of others for “good”, 20% of those who do compared to 11% of others for “fair”, 3% of those who do compared to 0.5% of others for “poor”).

Population groups most affected

Figure 20 shows the percentage of people in the different population groups in Whitehorse who do not feel safe on the street alone after dark.

People who do not feel safe on the street alone at night are more likely to be:

- women
- aged over 65
- overseas-born and non-English-speaking at home
- in households with incomes under \$20 000
- engaged in home duties or retired
- less than a tertiary educated
- one person living alone or with children, or in households with grandparents
- home owners or public housing tenants.

There is a socio-economic gradient by household income of people who do not feel safe on the street alone after dark — the higher the income, the smaller the proportion who do not feel safe (Figure 19).

Relationship to other cardiovascular indicators

People who don't feel safe on the street alone after dark are more likely to be normal weight, to have had a diagnosis of diabetes, to be non-smokers, to be less physically active, and not to eat the recommended daily fruit and vegetable intake. They are less likely to have had a blood pressure check.

They are less likely to be able to raise \$2000 in two days in an emergency and more likely to be socially isolated.

Figure 19. The income gradient for people who do not feel safe on the street alone at night

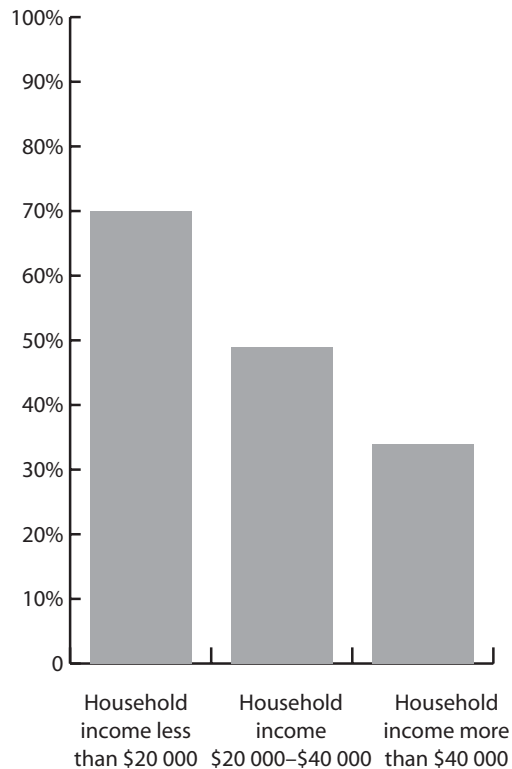
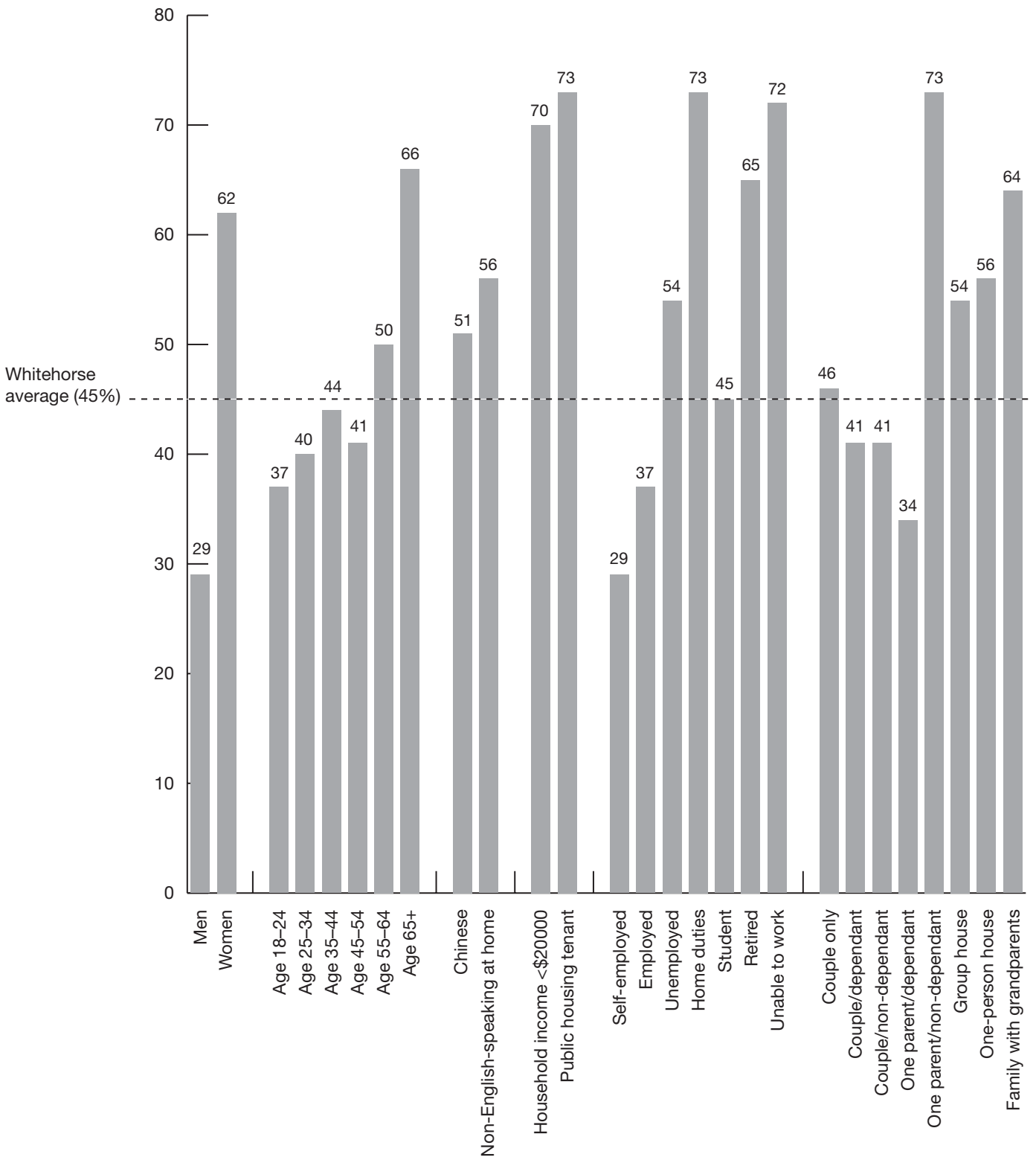


Figure 20. The percentage of people in identified population groups who do not feel safe on the street alone at night



Social isolation

The inability to get help from friends, family and neighbours when needed is being used in this report as an indicator of social isolation.

Overall levels of social isolation

Fourteen per cent of the Whitehorse population are potentially socially isolated compared to 8% of all Victorians (DVC 2004).

People who are socially isolated are more likely to report their health as fair or poor (22% of those who do compared to 10% of others for “fair”, 22% of those who do compared to 3% of others for “poor”).

Population groups most affected

Figure 22 shows the percentage of the different population groups in Whitehorse that are socially isolated.

People who are socially isolated are more likely to be:

- men
- aged over 45
- overseas-born and non-English-speaking at home
- in households with incomes under \$40 000
- unemployed or students
- completed some high school or university
- one person living alone or with children or in households with grandparents
- public housing tenants and private renters.

There is a socio-economic gradient in social isolation by household income — the higher the income, the lower the proportion of socially isolated people (Figure 21).

Relationship to other cardiovascular indicators

The socially isolated are more likely to be normal weight but less likely to have had a diagnosis of diabetes, to have had a blood pressure or cholesterol check, or to eat the recommended amount of fruit and vegetables. They are less physically active and there was no difference in smoking.

The socially isolated are more likely to feel unsafe on the street alone after dark. Numbers are too small for comparison on the ability to raise \$2000 in two days in an emergency.

Figure 21. The income gradient for people who are socially isolated

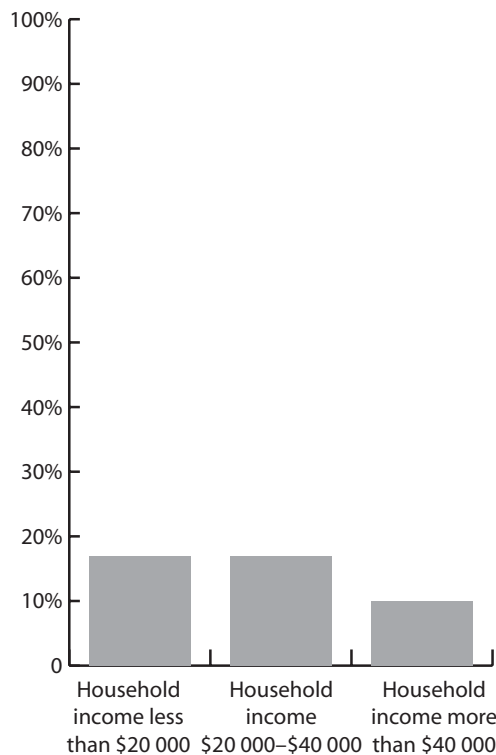
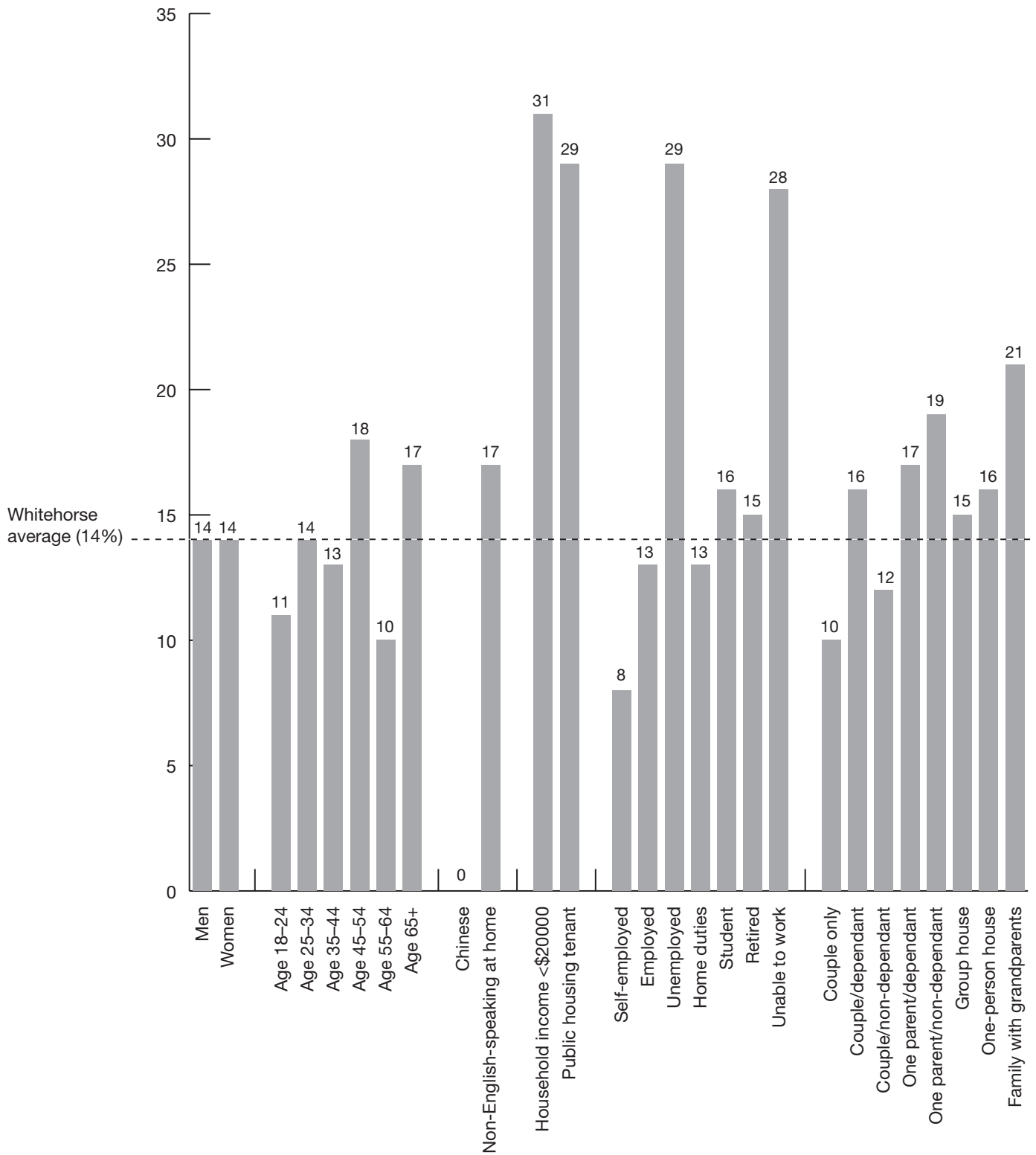


Figure 22. The percentage of people in identified population groups who are potentially socially isolated



Ability to raise \$2000 in two days in an emergency

As mentioned previously, an inability to raise \$2000 in an emergency is an indicator of significant disadvantage. People who cannot access small amounts of finance run the risk of bad events turning catastrophic. For example, losing teeth after minor trauma or losing a job after a car breakdown.

Overall levels of feeling able to raise \$2000 in two days in an emergency

Fifteen per cent of the Whitehorse population feel they could not raise \$2000 in two days in an emergency compared to 20% of Victorians (DHS 2004).

People who could not raise \$2000 in an emergency are more likely to report their health as fair or poor (27% of those who could not compared to 9% of others for “fair”; 10% of those who could not compared to 1% of others for “poor”).

Population groups most affected

Figure 23 shows the percentage of the different population groups in Whitehorse that could not raise \$2000 in two days in an emergency.

People who could not raise \$2000 in two days in an emergency are more likely to be:

- women
- aged under 45
- overseas-born and non-English-speaking at home
- self-employed, unemployed, students or unable to work
- living in households with children or grandparents or group houses
- public housing tenants and private renters.

There is a socio-economic gradient by household income for people who cannot raise \$2000 in an emergency — the higher the income, the smaller the proportion who can not (Figure 24).

Relationship to other cardiovascular indicators

Those who could not raise \$2000 in two days in an emergency are more likely to be overweight/obese and to have had a cholesterol check, and less likely to have had a diagnosis of diabetes, or a blood pressure check, or to be physically active. There was no difference in smoking.

Those that could not raise \$2000 in two days in an emergency are less likely to feel safe on the streets alone at night. Numbers are too small to be compared on social isolation.

Figure 23. The percentage of people in identified population groups who could not raise \$2000 in two days in an emergency

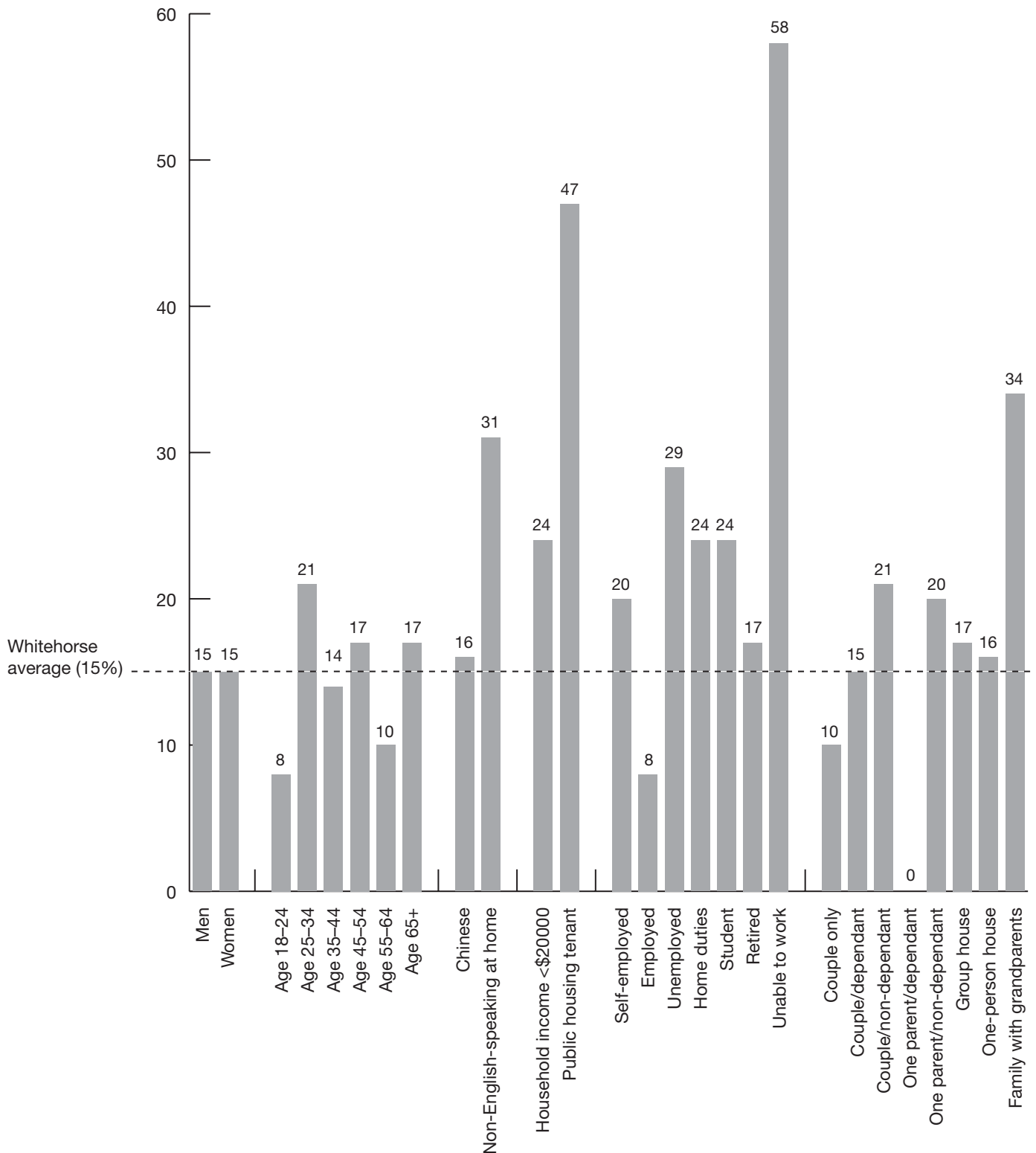
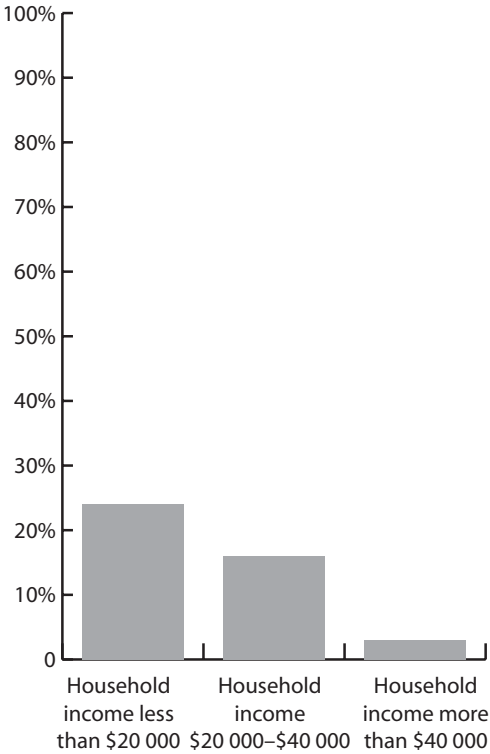


Figure 24. The income gradient for people who could not raise \$2000 in two days in an emergency



Appendix B Survey method

The survey was a Computer-Assisted Telephone Interview (CATI) survey of a representative sample of 830 individuals over the age of 18 in the City of Whitehorse. Two additional samples were collected. One was of 100 adults from an area identified by the Australian Bureau of Statistics Population Census as being significantly disadvantaged. The other was 100 Chinese adults identified using surnames.

The general survey was obtained through random digit dialling. Those whose addresses could then be located using the White Pages were sent an introductory letter from the Whitehorse Community Health Service. The person in the household with the next birthday was interviewed.

As it is difficult to control who is ultimately interviewed in a CATI survey, the data were weighted after collection to the age and sex mix of the Whitehorse population using ABS estimates and to the probability of being selected within the household.

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Notes

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