

**Health Promoting Behaviours
of
Residents of Government Housing**

Prepared by:

Assoc Prof Valerie Clarke
Dr Sally Savage
Dr Barbara Hanna
Mr Peter Neilson
Prof Helen Cox

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Executive Summary

Aim

The aim was to provide a description of the self-reported health beliefs and behaviours of a sample of Victorian public housing tenants, and to identify how gender, age and geographic location relate to these beliefs and behaviours.

Sample

The sample of 360 participants was obtained by phoning persons listed in the Department of Human Services (DHS) database of government housing tenants in one region of the state of Victoria. It was planned to have a stratified random sample of 400 participants, stratified on age (50% younger aged 20-40 years, and 50% older aged 50-70 years), sex (50% male and 50% female) and geographical location (65% metropolitan and 35% rural).

Response Rate

The percentage of potential participants willing to be interviewed was 53% but, due to unavailability of interviewers at times nominated by the interviewees, the obtained response rates for different strata of the sample varied from 24% to 52%.

Data Collection

Data were collected using a structured telephone interview. The interview schedule contained 53 questions. Most questions used an open-ended format, but had pre-coded responses. Interviews were conducted in December 1999 and February 2000. Each interview took approximately 15 minutes.

Findings

- Most respondents were unemployed (80%) suggesting that low income may be a factor impacting on their health and lifestyle.
- 70% of participants had only reached Year 10 schooling.

Health Behaviours: Unprompted Responses to Open-Ended Questions

- Respondents primarily define health in the positive sense of being able to do what they want to do. The majority of the sample (56%) described their health as “excellent” or “good”.
- The participants considered that the most common health problems for women were breast cancer, cervical cancer, unspecified cancer, and heart disease, while the most common health problems for men were prostate cancer, heart disease and alcoholism and unspecified cancer.
- With the exception of heart disease, there was no relationship between the health problems experienced by respondents and those seen as most common for women or men. The most common personal problems were arthritis, asthma, blood pressure, back problems and heart disease.
- The major thing that people say they do to keep healthy are exercise regularly and eat a healthy diet, although it is unclear whether either the exercise or diet is adequate in terms of public health recommendations.
- The major factors against keeping healthy are existing health problems, lack of time, lack of motivation, family responsibilities, and dietary issues.

Health Behaviours – Responses to Targeted Questions

- 51% of participants smoke, which is more than twice the national rate.
- The incidence of drinking is below the national incidence, with 38% never drinking and 11% drinking daily.
- The only exercise for the majority of participants is walking.
- Nearly a quarter of the sample (23%) see themselves as highly stressed.
- Reasons for feeling highly stressed were: family (42%), money problems (26%), health (21%), and everyday living or life in general (12%).

Biomedical Factors

- 34% usually have an annual flu injection.
- 30% of the sample do not have any screening tests and 64% do not consider there are tests they should have but do not have.
- Responses to an open-ended question about screening tests yielded fewer responses for blood pressure, diabetes, cholesterol, bowel cancer, bone density, and skin checks

than were obtained in targeted questions, suggesting that people do not think of these tests as screening tests.

- Tests had in the last 2 years include: blood pressure (88% of the sample), cholesterol (50%), diabetes (48%), skin check (19%), and bowel cancer test (17%).
- 68% of women have had a Pap test in the last 2 years.
- Of the 95 women aged 50-79, 77% reported having a mammogram in the last 2 years.
- 23% of men reported having a screening test for prostate cancer.

Use of Health Professionals

- Most (87%) have a usual doctor.
- Most (90%) have visited a doctor in the last year and 25% have seen a doctor more than 12 times in the last year.
- Only 24% reported having a regular dentist.
- 86% had their eyes tested, but for 14% it was more than 5 years ago.

Health Services

- There was limited knowledge of the available health services.
- Health services were primarily seen in terms of GP, and to a lesser extent dentist and medical specialists.
- 52% do not know what kinds of services a Community Health Centre offers.

Evaluation of Health Services

- 72% consider that the available health services are adequate.
- 82% do not experience difficulty in using the health services.
- 41% cannot suggest any ways in which the health services can be improved.

Physical Environment

- 38% did not have worries about their physical environment.
- Concerns were: air pollution (38%), drugs or youth problems (19%), safety or vandalism (18%), noise (12%), poor housing quality (9%), water quality (8%) and neighbours (8%).

Implications for Health Promotion

- Beliefs about the major health problems in the community are inconsistent with beliefs about personal health problems, suggesting that many health education messages may not be seen as personally relevant.
- Given the discrepancies between responses to open-ended questions about screening and responses to targeted questions, the concept of screening may not be well understood.
- There is a general knowledge that diet and exercise are important for health, but the specifics of what needs to be done were not accurately assessed.
- There is limited knowledge of the available health services, indicating that some form of health education program might lead to a greater use of relevant services and improve the general health of this sample.
- The greatest single health problem in this group is that 51% smoke cigarettes.

Group Differences

Gender

- Men are more likely than women to define their own health in terms of the absence of minor health problems and to report heart disease as a personal problem.
- Men are less likely than women to eat a healthy diet and more likely to drink alcohol.
- Fewer men than women have a regular GP, visit the dentist, use alternative therapies, or see themselves as responsible for the health of another person.
- There are no gender differences in terms of the assessment of health services.

Age

- Younger interviewees placed greater emphasis on diet, exercise and weight than did older interviewees, but were more likely to smoke cigarettes, drink alcohol and eat takeaway food.
- Younger persons had more family responsibilities and used health services less frequently.

Geographical Location

- There were no substantive differences in the responses of those in the metropolitan and rural areas.

Health Promoting Behaviours of Residents of Government Housing

When planning health promotion activities it is important to understand people's own beliefs about health in general, what they presently do to maintain their health, and what makes it difficult for them to maintain their health. There is evidence that socio-economic status (SES), gender, age, and geographic location affect an individual's health status, their beliefs, and health promoting behaviours. Studies of health behaviours often reflect the views of the more educated section of the community, a section whose views may differ from those of persons with access to fewer resources. The current study was designed to redress the lack of information of the views of lower SES groups by documenting the health beliefs, behaviours and concerns of a low income group and to assess differences which occurred in relation to gender, age, and geographical location.

Health Determinants

The major determinants of health have been identified by the Australian government (Australian Institute of Health and Welfare (AIHW), 2000) as consisting of environmental factors, genetic factors, attitudes and beliefs, lifestyle and behaviour factors, and biomedical factors. Environmental factors include the social and political environment as well as factors in the physical environment, such as noise and air pollution. Genetic issues are concerned with identifying genes that predispose some persons to particular diseases or disabilities. Beliefs and attitudes include people's knowledge of health issues, knowledge of ways to promote good health and detect ill-health, and personal evaluations of the importance of these behaviours. These beliefs and attitudes generally underlie the adoption or non-adoption of health promoting lifestyles, health promoting behaviours and the choice to have relevant biomedical tests. Lifestyle and behavioural factors are seen as amenable to change, and include diet, consumption of alcohol and other drugs, smoking, sleep patterns and exercise patterns. Biomedical factors are also subject to change, and include regular check-ups with doctors and dentists, and participation in recommended vaccination and screening programs.

From the perspective of a social scientist working in health related fields, genetic and environmental factors are of limited concern. Beliefs and attitudes are important as they underlie both health-related lifestyle factors and the awareness of and need to consider a range of biomedical factors. Therefore, the primary focus of this report will be on beliefs and attitudes, lifestyle and behavioural factors, and selected biomedical factors.

Socio-Economic Factors

The association between socio-economic status (SES) and health in Western countries is well established, with those from lower SES groups experiencing increased morbidity and earlier mortality (Carroll, Davey Smith, & Bennett, 1996). In their comprehensive analysis of Australian health data, Turrell and Mathers (2000) document SES differences in mortality and morbidity favouring the higher SES groups, irrespective of the way in which SES is measured. Comparisons of mortality rates for both children (age 0 – 14 years) and adults (age 25 – 64 years) indicate that there are marked SES differences in mortality from those in the highest quintile to those in the lowest quintile. In relation to morbidity, those from lower SES are more likely to experience a greater number of chronic health problems, reduced activity, and higher stress than persons from higher SES levels. Other researchers make similar claims. Taking cancer as an example, Burnley (1997) shows that cancer of the esophagus, oral cavity, pancreas, bladder, kidney, liver and trachea, bronchus and lung are more common in men from manual occupations, while only cancer of the colon and melanoma are associated with higher SES.

There is also a clear relationship between SES and health behaviours. Turrell and Mathews (2000) document SES differences showing that Australians from lower SES engage in more behaviours that are detrimental to their health, with a greater proportion of persons smoking, eating less nutritional food, consuming more alcohol, and gaining less exercise. Health services utilisation differences between those of high and low SES are also apparent, with those from lower SES making greater use of health services. Similar findings have been reported for the UK. For example, higher rates of consultation with doctors, attendance at outpatient or accident / emergency departments, and hospitalisation in men have been reported among local authority tenants compared with owner-occupiers (Balarajan, Yuen, & Machin, 1987). Similarly, higher rates of consultation with doctors, attendance at outpatient or accident / emergency departments, and hospitalisation were found in men who were manual workers compared with non-manual workers (Balarajan et al., 1987). Turrell and Mathers (2000) suggest that the higher health service utilisation of people from lower SES levels is merely a reflection of their greater need for these services due to their generally poorer health.

Although there is a consistency in the data derived from national statistics indicating that there are SES differences in mortality, morbidity and health behaviours which favour higher

SES levels, there is little data explaining why these differences occur. Turrell and Mathers (2000) provide a model, reminiscent of the PRECEDE-PROCEED model of Green and Kreuter (1991) showing relationships between environmental factors indicative of opportunity, but the model is essentially speculative, based on the commonly accepted medical model. The current study seeks to further our knowledge in this area by finding out what lower SES people believe to be important about their health, what they believe they should do to promote good health, and the factors they see as limiting their capacity to engage in relevant health-promoting behaviours.

Gender

There are clear gender differences in morbidity and mortality rates. Greater life expectancy for women relative to men is reported in many countries, including Australia, New Zealand, UK, USA, Europe, Malaysia and the Philippines, with the greatest gender differences occurring in Russia, and Poland. At birth, an Australian woman can expect to live an average of 81 years while an Australian man can expect to live an average of 75 years, a whole six years less than the female life expectancy (AIHW, 2000). About two years of this male disadvantage can be explained by biological factors, while the remaining difference is believed to be the product of lifestyle differences (Verbrugge, 1989).

Although men are dying younger than women, women experience higher rates of morbidity and different patterns of morbidity from men. Australian and US data are consistent in showing that women experience more acute illnesses, such as colds, and chronic illnesses, like arthritis, while men experience higher rates of a number of leading fatal diseases, including coronary heart disease, stroke and lung cancer (Australian Bureau of Statistics (ABS), 1999; Verbrugge, 1989). Many of the leading male diseases have been linked to lifestyle practices, such as smoking and excessive alcohol consumption. Therefore, earlier mortality in men may be partly due to gender differences in lifestyle practices, specifically the greater tendency for men to smoke cigarettes, drink excessive quantities of alcohol, engage in limited exercise, and be overweight.

There are gender differences in the use of health care services, with women making a greater use of these services than do men. For example, more women (26.1%) than men (20.4%) report having consulted a medical practitioner within any two-week period (ABS, 1999). Therefore, the patterns emerging in relation to gender are different from those emerging in relation to SES. The SES data reported above indicated that those from lower SES

experience earlier mortality and greater morbidity than those from higher SES, making it logical to argue that poorer all-round health leads to a greater utilisation of health services, as well as to higher morbidity and earlier mortality. However, for gender, there is a paradox, in that women have a greater utilisation of health services and higher morbidity, but later mortality than men, making it more difficult to argue that poorer all-round health underlies the differences in health care usage, morbidity and mortality.

There are differences in the health seeking behaviours and beliefs of women and men. In overseas research there is some evidence that women and men have different approaches to health (Saltonstall, 1993), and there are differences in their health experiences (Wyke, Hunt, & Ford 1998). For example, women cut down their usual activities due to ill health more often than do men (Kandrack, Grant, & Segall, 1991), choosing to act on early symptoms, rather than waiting for the medical condition to become more serious.

Age

There are also differences in the health experiences of different age groups (Wyke et al., 1998). As certain health problems are of more concern to particular age groups, and some health seeking behaviours are more relevant to some age groups, age is another factor of interest in investigating current health behaviours and views of health. For example, women in Australia aged 50 to 70 years are recommended to have a free screening mammogram every two years while screening mammograms are not recommended for women under the age of 40 years.

Geographic Location

There are differences in the health status of Australians, depending on their geographic location. Australians living in rural and remote areas, for example, experience greater death rates from all causes compared with those from metropolitan areas. They also experience higher rates of coronary heart disease and injury than people living in metropolitan cities (AIHW, 1998, 2000). Health promoting behaviours also differ. In 1995-96 Australians from rural areas had lower rates of consultations with general practitioners than metropolitan dwellers, and there was a disproportionately small number of general practitioners working in rural and remote areas (AIHW, 1998). People from rural areas wait longer to use the formal health system (Horner et al., 1994; Weinert & Burman, 1994).

Aims

The general aims of this project were to provide an overview of health beliefs and health promoting behaviours of a sample of Victorian public housing tenants and to identify how gender, age, and geographic location impact on these beliefs and behaviours. Given the economic criteria that need to be met in order to be eligible for public housing, it was considered that the residents of public housing represented a lower SES group in terms of income level, which is the most commonly accepted single criterion of SES.

The specific aims of this project are:

1. To identify the participants' views of what constitutes good health.
2. To document their self-reported health-related behaviours.
3. To identify factors which facilitate or inhibit the adoption of health-promoting behaviours.
4. To identify any differences in relation to gender, age, and/or urban/rural location.

METHOD

Sample Design and Selection Procedure

The sample was drawn from the DHS database of government housing tenants in one region of the state of Victoria. It was planned to have a stratified random sample of 400 participants, stratified on age (50% younger aged 20-40 years, and 50% older aged 50-70 years), sex (50% male and 50% female) and geographical location (65% metropolitan and 35% rural). To allow for incorrect phone numbers, people moving, people not meeting the sample criteria, and people not wanting to be interviewed, a potential sample of 1000 names was selected. The individuals on the database were coded according to sex, age and location. Within each stratum the number of required participants was computed and a file sample selected by taking every nth name on the list. The selected names were printed on a sub-list, each with a code to indicate the strata to which the name belonged. To preserve anonymity, only codes, first names and phone numbers were printed. Each potential participant was sent a letter from DHS advising him/her of the study and that s/he may receive a phone call in the next few weeks. Potential participants were advised that they could decline to be interviewed, complete the interview when contacted, or request that they be interviewed at another time. Potential participants were offered a payment of \$10 for partial compensation of the time required. Part way through the interviewing it was evident that there would not be sufficient responses completed in the

required time, so another sample was drawn and letters mailed, following the same procedure as for the initial sample and mailing.

Interview Schedule

The interview schedule consisted of 53 questions. Most questions were asked as open-ended questions, but the interviewers were provided with a set of response categories into which to code the answers. To develop these categories a sample of 20 persons was interviewed, and their responses used to identify the most frequently occurring responses. However, there was space on the interview schedule for the interviewers to record additional responses. These were later coded by the researchers and are included in this report. Responses given by less than 5% of the sample ($n = 20$) are not reported in most sections of this report as they were considered to have limited information value.

The issues addressed were:

- what it means to be healthy
- perceptions of the major health problems for men and women
- what the participant does to keep healthy
- what makes it difficult to keep healthy
- responsibility for the health of others
- specific health problems of the participant
- tests that the participant has had or thinks s/he should have
- use of health services
- use of medications
- whether there is a usual GP, dentist or optician and frequency of consultation
- sources of health information
- adequacy of food and type of diet
- use of alcohol and cigarettes
- amount and type of exercise
- regularity of sleep
- engagement in risk taking behaviours
- rating of subjective stress level
- adequacy and use of public transport
- concerns about balancing the budget
- demographic characteristics

The issues are presented here in the order in which they were presented in the interviews. The information has been re-ordered for presentation in the report.

Procedure

Four female and two male graduate students were trained to conduct the telephone interviews. Interviews were conducted from the DHS offices. Most interviewing occurred during December 1999, but there were some potential respondents who were willing to be interviewed but were unavailable at times that the interviewers were available. These persons were contacted in February 2000. All interviewing occurred between 9 am and 9 pm on week days. Interviews took 10-45 minutes to complete, with the majority of interviews taking about 15 minutes.

Response Rate

Of 1,362 letters mailed, 282 (21%) resulted in calls where the person selected was no longer at the address or it was an old or incorrect number. This left an effective total of 1080 potential participants from which 308 completed interviews. Due to the necessity to complete the interviewing during weekdays and before the Christmas break, there was a large number of people who could not be contacted at their preferred time, with a call back being requested either by the potential participant or a member of the household. The percentage of potential participants willing to be interviewed was 53% which is similar to, or slightly lower than, the response rates we have obtained in telephone interviews using numbers randomly selected from the telephone directory. However, the actual response rate of those who could be contacted during the relevant time periods was 36%, varying from a low of 24% for younger, Geelong males to a high of 52% for younger Geelong females. See Table 1 for details of those willing to be interviewed and those actually interviewed by strata.

Comment. The nature of the sample is important, as the higher the percentage of persons who are interviewed, the greater the representativeness of the sample. With less than half of the persons contacted actually completing an interview, the question remains as to how the persons willing to be interviewed differed from those who were not willing to be interviewed. However, due to the time of the year at which the majority of interviews were conducted, there was a difference between the percentage of the potential participants who were willing to be interviewed (53%) and the percentage that were actually interviewed (36%). The proportion willing to be interviewed is consistent with, or slightly

lower than, the proportion of persons actually interviewed for general population studies. In this study, the interview rates were slightly higher among females (41%) than males, and slightly higher for the younger (41%) than older (33%) persons, while there was little differences between the metropolitan (36%) and rural (38%) samples.

Table 1: Response Rates

	Female Older Metro	Female Young Metro	Female Older Rural	Female Young Rural	Male Older Metro	Male Young Metro	Male Older Rural	Male Young Rural	Total
Obtained	57	51	46	26	54	61	41	24	360
Refused	67	36	47	24	106	87	59	34	460
Wrong No.	27	47	23	32	43	106	30	41	349
Call Back [#]	25	11	32	15	62	11	0	13	169
TOTAL	176	145	148	97	265	265	130	112	1339
Effect Total*	149	98	125	65	222	159	100	71	990
Acceptance**	38%	52%	37%	40%	24%	38%	41%	34%	36%
Willing***	55%	63%	62%	63%	52%	45%	41%	52%	53%

Persons willing to be interviewed if the interviewer phoned at a time that suited the interviewee, but many of these times were outside DHS operating hours.

* Total – Wrong Numbers

** Interviewed/Effective Total

*** Interviewed + Call Back/Effective Total

Data Analysis

The Statistical Package for the Social Sciences (SPSS) Version 8 was used for data analysis. Due to rounding some percentages may sum to 99 or 101. Many of the open-ended questions allowed for multiple responses so the sum of the percentages will be considerably in excess of 100.

RESULTS

Demographic Characteristics of Participants

A total sample of 360 participants was obtained. Consistent with the sample design, of the 360 participants 50% (n = 180) were men and 50% (n = 180) were women, while 59% (n = 211) lived in Geelong and the surrounding area, and 41% (n = 149) lived in rural areas of the Barwon South-Western region. Table 2 provides demographic information for this sample. As the table shows, only a small minority (8%) had any tertiary qualifications, and 79% were not employed.

Table 2: Demographic Characteristics of the Sample

Demographic characteristic	Frequency (Percentage)
<i>Age</i>	
20 – 29 yrs	50 (14%)
30 – 39 yrs	100 (28%)
40 – 49 yrs	24 (7%)
50 – 59 yrs	83 (23%)
60 – 69 yrs	95 (26%)
70 – 79 yrs	8 (2%)
<i>Education</i>	
Primary only	31 (9%)
Yrs 7 – 8	92 (25%)
Yrs 9 – 10	128 (36%)
Yr 11	47 (13%)
Yr 12	33 (9%)
TAFE	22 (6%)
University	7 (2%)
<i>Marital status</i>	
Never married	65 (18%)
Separated, not divorced	34 (9%)
Divorced	71 (20%)
Widowed	28 (8%)
De facto	35 (10%)
Married	127 (35%)
<i>Employment</i>	
Employed full time	38 (10.5%)
Employed part time / casual	38 (10.5%)
Not employed	284 (79%)

Comment. The sample closely approximates the sample design in terms of the numbers of persons in each of the strata (male/female, older/younger, metropolitan/rural). The fact that only 10.5% of the sample were in full-time employment and only 2% had a university education support the contention that this is a low SES sample.

The information provided in Table 2 is derived from the participants' responses during the interviews, while that in Table 1 is derived from the DHS database. There are discrepancies between the two tables that might reflect changes that have occurred between the information being provided to DHS and its provision to the interviewers.

Meaning of Health

Health means different things to different people, and is not always defined by the general public in the same way as by health professionals. To find out what participants meant by the term “health”, they were asked what it meant to them to be healthy, how they rated

their own health, and why they rated it that way. These questions were deliberately placed at the beginning of the interview. Although a rating scale was provided to assess subjective health, the meaning of “health” and reasons for the subjective health rating were asked as open-ended questions to gain an understanding of the respondents’ views before being prompted by more focussed questions later in the interview.

Being healthy had a variety of meanings, with many respondents giving several suggestions. Responses included: being physically well (39%), being able or fit to do what I want to do (45%), being well enough to do what I need to do (18%), not having any major illnesses (16%), being happy or having a positive attitude (14%), and eating well (13%). Six per cent or fewer replied being active, health means everything, being independent, having a long life, exercising, and not needing medical attention.

Most participants rated their present health as good (45%) or excellent (11%), with 26% rating it as fair, and 18% as poor. They were asked why they rated their health as excellent, good, fair or poor. The positive responses were: having no major illnesses or health problems (25%), feeling healthy or fit (25%), feeling okay or pretty good (20%), having a healthy diet (13%), exercising regularly (11%), having only minor problems (10%), not needing much medical attention (8%), having the freedom to do what I want (7%), keeping active (2%), and do not drink or smoke (2%). Less positive responses included: having chronic health problems (23%), always having some health problem (9%), being overweight (7%), not feeling really well (5%), a lack of exercise (4%), and smoking (4%).

Comment. Health is varyingly defined, with some people defining it in the more negative sense of the absence of disease (that is, not needing the services of health care professionals), others focussing on their ability to carry out daily activities. These respondents primarily defined health in the more positive terms of being able to do the things they wanted to do. For many participants their personal health was seen as less than optimum when they were asked to subjectively evaluate it. However, inconsistent with the claim that “working class adults of low SES are more likely to report their health as ‘fair to poor’ ” (Turrell & Mathews, 2000, p. 435), less than half (44%) of the sample selected these descriptions. Consistent with the participants’ general view of the meaning of health, the reasons provided for their subjective health evaluations tended to reflect feelings of health and well-being (54%) and engaging in healthy behaviours (28%) to a greater extent than they reflected an absence of illness (25%).

Beliefs About Health Problems

People's beliefs about common health problems may vary in accuracy. In order to find out what the respondents considered to be the major health problems, they were asked two open-ended questions: What are the three major health problems for women? What are the three major health problems for men? A third question asked about personal health problems. Again, these questions were deliberately asked early in the survey and were asked as open-ended questions to elicit the interviewees' unprompted responses. Table 3 presents the responses. Breast cancer was most frequently mentioned as a health problem for women (61%), followed by cervical cancer (23%), unspecified cancer (20%), and heart disease (15%). Prostate cancer was the most frequently mentioned health problem for men (42%), followed by heart disease (38%), alcoholism (24%), and unspecified cancer (23%). When asked if they had any health problems, 249 participants (69%) indicated that they did. For these participants, the main health problem mentioned was arthritis (21%), followed by asthma (16%), back problems (16%), blood pressure (16%), and heart problems (13%).

Comment. These responses to the questions asking about the major health problems for women and for men are interesting, especially when they are compared with Australian national data (AIHW, 2000). The leading causes of death for Australian women, listed in order of frequency, are ischaemic heart disease, cerebrovascular disease, dementia and related disorders, breast cancer, colorectal cancer and lung cancer (p. 40). For men, the leading causes of death are ischaemic heart disease, lung cancer, cerebrovascular disease, chronic obstructive pulmonary disease, colorectal cancer and prostate cancer (p. 40). The most prevalent health conditions are dental caries, hearing loss, edentulism, asthma, periodontal disease and iron-deficiency anaemia (p 46), while the most common new health conditions are upper respiratory tract infections, dental caries, chronic back pain, diarrhoeal diseases, lower respiratory tract infections and otitis media (p. 47). The leading causes of disease burden are ischaemic heart disease, stroke, chronic obstructive pulmonary disease, depression and lung cancer (p. 54). Irrespective of whether the general question about "health problems" is interpreted as referring to the causes of death, new health problems or the burden of disease, there are marked differences between health beliefs and reported health problems in Australia.

Table 3: Major Health Problems for Women and Men

Major health problems for women (N = 360)	Major health problems for men (N = 360)	Health problems participants have (N = 249)			
Breast cancer	61%	Prostate cancer	42%	Arthritis	21%
Cervical cancer	23%	Heart disease	38%	Asthma	16%
Cancer (unspecified)	20%	Alcoholism	24%	Blood pressure	16%
Heart disease	15%	Cancer (unspecified)	23%	Back problems	16%
Obesity / overweight	14%	Smoking	19%	Heart disease	13%
Stress	14%	Obesity / overweight	17%	Mental illness	8%
Mental illness	13%	Lung cancer	11%	Depression / Anxiety	7%
Osteoporosis	12%	Stress	11%	Diabetes	7%
Menopause	10%	Mental illness	7%	Respiratory probs	6%
Gynaecol. problems	9%	Arthritis	6%	Allergies	5%
Smoking	9%	Poor exercise / diet	6%	Cholest / Obesity	5%
Diabetes	6%	Stroke	5%	Cancer (Any)	4%
Alcohol and drugs	5%	Bowel cancer	5%	Digestive probs	4%
Social issues	4%	Blood pressure	4%	Epilepsy	4%
Lung cancer	3%	Diabetes	4%	Rheumatism	4%
Tiredness	3%	Cholesterol	4%	Osteoporosis	3%
Arthritis	3%	Respiratory problems	3%	Headache / Migraine	3%
Stroke	1%	Back problems	3%	Chronic fatigue	2%
Other	17%	Drugs	2%	Other	31%
		Skin cancer	1%		
		Other	15%		

The responses provided acknowledge the importance of heart disease as a health problem for both men and women. However, apart from heart disease, the respondents place an undue emphasis on breast cancer, cervical cancer and obesity for women, and on prostate cancer for men. It may be that the “problems” that are being most frequently mentioned are the ones which are being most heavily promoted in the media. If this is the case, it indicates the power of the mass media to provide information to people of lower SES.

Interestingly, there is no correspondence between the problems mentioned in response to the question about personal health problems and the problems mentioned as the major health problems for women and the major health problems for men. In general, the

problems mentioned for women and men tend to reflect the onset of disease while those seen as personal health problems are chronic ailments. The discrepancy in the general-self responses may indicate a categorisation in people's thinking which differentiates between their general knowledge about the health of the community, possibly gained from the media, and their personal experience of their own health derived from their personal experience. Such differentiation has implications for health education and health promotion.

Health Related Behaviours

A series of open questions asked participants: what they do to keep healthy; what makes it difficult to keep healthy; and what kinds of things they do that might be bad for their health. The results of these three items are presented in Table 4. Exercising regularly was most often cited as what is done to keep healthy (58%), followed by a healthy diet (42%), and exercising sometimes (18%). An existing health problem was mentioned most frequently (34%) as what makes it difficult to keep healthy. The things participants mentioned which might be bad for their health included smoking (47%), dietary issues such as eating junk food (30%), and drinking alcohol (20%). When asked how hard they work at keeping healthy, 13% responded very hard, 38% fairly hard, 38% not very hard, 11% not at all, and less than 1% did not answer this question.

Table 4: Health-Related Behaviours (N = 360)

Things done to keep healthy		Things that make it difficult to keep healthy		Things done that might be bad for health	
Exercise regularly	58%	Health problems	34%	Smoking	47%
Healthy diet	42%	Lack of time	13%	Dietary issues	30%
Exercise sometimes	18%	Lack of motivation	11%	Drink alcohol	20%
Keep active	11%	Family responsib.	11%	Lack of exercise	9%
Moderate eating	9%	Dietary issues	11%	Stress / worry	8%
Not smoking	7%	Stress / worry	8%	Over-eating	7%
Don't drink (much)	7%	Cost	8%	Lack of sleep	3%
Drinking water	5%	Long work hours	6%	Long work hours	3%
Go to doctor reg.	3%	Smoking	4%	Other	15%
Gardening / hobby	3%	Ageing	4%		
Relax / meditation	2%	Unhealthy environ.	4%		
Adequate sleep	2%	Lack of sleep	4%		
Other	14%	The weather	2%		
		Other	12%		

Comment. The open-ended question asking people what they did to keep healthy was clearly interpreted by the respondents as asking about daily lifestyle behaviours only (exercise, diet), and not including biomedical behaviours (vaccinations, tests for high blood pressure or cholesterol, or screening tests). In terms of keeping healthy the primary focus was on exercise and activity which was mentioned by 87% of the sample (exercise regularly, exercise sometimes, keep active), while varying aspects of diet were also mentioned by most persons (56%) (healthy diet, moderate eating, drinking water). The factors identified as making it difficult to keep healthy may be realistic (health problems – if serious; lack of time – if part of the 10.5% that is employed) or may be interpreted as excuses for the low priority given to keeping healthy (lack of time, lack of motivation, family responsibilities). Despite this being a low SES sample, cost was mentioned by only 8% as a factor making it difficult to keep healthy, and other resources issues were not volunteered. Not surprisingly, the major things that are reported as bad for one's health are smoking (47%), dietary issues (30%) and drinking alcohol (20%).

Health Behaviours (prompted)

After completing the open-ended questions about health behaviours, participants were asked specific questions addressing the major lifestyle issues of smoking, alcohol consumption, diet, exercise, sleep, risk taking, perceived level of stress, and responsibility for the health of other persons. These self-reported behaviours can be related to the unprompted suggestions of things people do that might be bad for their health.

Smoking. Just over half of the sample (n = 183, 51%) reported that they smoke cigarettes. Of these, 11% reported smoking 1 to 5 cigarettes a day, 18% 6 to 10 a day, 40% 11 to 20 a day, 19% 21 to 30 a day, and 12% smoke 31 cigarettes or more a day.

Of the 183 respondents who smoke, 87% reported that smoking is something that might be bad for their health, while only 19% of smokers reported smoking too much as a risk they take. When asked about the major health problems for women and men, among the respondents who smoke, smoking was mentioned by 10% for women and was mentioned by 21% for men. The smoking related disease of lung cancer was volunteered as a health problem for women by 2% and for men by 9%. Only 4% of smokers have health insurance.

Comment. The self-reported smoking rate of 51% is markedly in excess of the population smoking rate which data collected in 1995 (AIHW, 2000) documented as being 27% of men and 20% of women aged over 18 years. More recent data (presentation at the Psycho-Oncology Congress, 2000) put the national smoking rate at 21%. Thus smoking in this sample is at least twice as prevalent as in the national population. Although the smokers see smoking as bad for their health, relatively few of them (19%) include smoking as a “risk” or see lung cancer as a major health problem. It appears that many smokers acknowledge that smoking is bad for their health, but do not make the obvious links to risk-taking or lung cancer.

Alcohol. When asked how often they drink alcohol, 38% replied never, 22% less than once a month, 7% once a month, 5% once every couple of weeks, 9% once a week, 8% two or three times a week, and 11% every day. The 222 participants who did drink alcohol were asked how many drinks they would usually have on days when they do drink alcohol. A drink was defined as a shot of hard liquor, a can of beer, or a glass of wine. Of these 222 participants, 12% replied 1 drink, 47% 2 to 3 drinks, 23% 4 to 6 drinks, 7% 7 to 10 drinks, and 11% replied more than 10 drinks.

Of the 101 participants who reported drinking alcohol once a week or more often, 53 (52%) mentioned drinking alcohol as something that might be bad for their health. Of the 90 participants who have 4 or more drinks when they do drink alcohol, 41 (46%) mentioned drinking alcohol as something that might be bad for their health.

Comment. The incidence of self-reported drinking is lower than that of the national population (AIHW, 2000), where 50% reported drinking regularly or at least once a week (28% of this sample), 30% as drinking occasionally (34% of this sample) and 20% as never drinking (38% of this sample). This may be a reflection of their relatively low levels of income and hence less ready access to alcohol. Over half of the small proportion of heavy drinkers did not spontaneously suggest that drinking is something which might be bad for their health.

Alcohol and smoking. Participants were classified as non-drinkers ($n = 138$, 38%), light drinkers (1 to 3 drinks when they drink)($n = 132$, 37%), and heavy drinkers (4 or more drinks) ($n = 90$, 25%). Among the 183 participants who smoke cigarettes, 33% were non-

drinkers, 35% light drinkers, and 32% heavy drinkers. Among the non-drinkers, 44% smoke cigarettes, compared with 48% of light drinkers and 65% of heavy drinkers. Of the 73 participants who mentioned drinking alcohol as something that might be bad for their health, 44 (60%) smoke cigarettes.

Diet. Participants were asked if they ever go on diets and 104 (29%) reported that they did. They were also asked if they are careful about what they eat and 243 (67%) indicated that they were, with a further 60 (17%) saying they were “fairly” careful. The 303 participants who indicated that they were careful, or fairly careful, about what they eat were asked in what ways they are careful. The two most common responses were eat plenty of fresh fruit and vegetables (54%) and avoiding too much fat (52%). Other responses included eating a balanced diet (35%), not eating too much sugar or sweet foods (22%), avoiding too much junk food (21%), avoiding high-cholesterol foods (20%), eating enough fibre (18%), drinking plenty of water (8%), not eating too much meat (8%), and avoiding too much salt (7%). When asked how often they usually eat takeaway food, 17% replied never, 23% less than once a month, 12% once a month, 16% once every couple of weeks, 22% once a week, and 10% two or three times a week or more.

Comment. The responses given suggest that the participants have a reasonable knowledge of the issues to consider in relation to nutrition. However, it is difficult to be certain as to the degree of accuracy of that knowledge, or the nutritional quality of their self-reported eating behaviour due to the heavy reliance on non-specific statements such as “too much”.

Exercising. The majority of participants (n = 289, 80%) reported exercising regularly. Seventy-one participants (20%) indicated that they do no regular exercise. Of the 289 claiming that they exercise, most (84%) reported walking. For 36% walking is the only form of exercise, while 44% (159) indicated that they do some other form of exercise. Forms of exercise volunteered included: riding a bike (12%), gym work (12%), playing sport, (10%), gardening (9%), swimming (7%), and work, housework or running after children (6%). Of the participants reporting that they exercise regularly, most (61%) indicated exercising every day, with others exercising 3 to 4 times in an average week (27%).

Thirty-two participants mentioned lack of exercise as something that might be bad for their health. Of these, 20 (63%) indicated that they exercise regularly. The most

frequently mentioned type of exercise reported by this group was walking (95%), followed by gardening (20%), riding a bike (15%) and gently exercises (15%). Of the 20 reporting some exercise, 55% exercise every day in an average week, 25% 3 or 4 times, and 20% twice a week or not regularly every week.

Comment. Walking is the most commonly and often only reported form of exercise. As with diet, it is difficult to gauge the adequacy of this behaviour as walking means different things to different people, varying from a short, casual stroll to serious power walking.

Sleeping. When asked how many hours they usually sleep each 24 hour day in total, 34% reported sleeping 6 hours or less, 45% 7 to 8 hours, 16% 9 to 10 hours, 4% 11 hours or more, and 1% could not say. Of the 13 participants who reported lack of sleep as something that makes it difficult to keep healthy, 1 (8%) reported sleeping less than 5 hours, 6 (46%) slept 5 to 6 hours, 3 (23%) 7 to 8 hours, and 3 (23%) reported usually sleeping 9 or more hours each 24 hour day.

Taking risks. Participants were asked if they take any risks, or do anything that might be harmful or dangerous. One hundred (28%) reported that they did take risks. The most common risks reported by these participants were smoking too much (34%), work related (14%), driving a car (12%), driving too fast (11%), crossing busy roads (8%), taking drugs (5%) and drinking too much (4%).

Of the 76 participants who indicated that they are employed, 20 (26%) reported that long or shift working hours make it difficult to keep healthy. Nine (12%) mentioned taking risks that are work-related. (As a total of 14 participants reported work-related risks, 5 of these did not indicate that they are employed.)

Feeling stressed. Each participant was asked how stressed they feel most of the time, using a scale from 1 to 10, with 1 meaning not at all stressed and 10 meaning really stressed. The mean level of stress reported was 4.7 (S.D. 2.4). Almost one quarter (22%) placed their stress levels at 1 or 2 indicating low levels of stress, 26% indicated 3 or 4 on the scale, 29% 5 or 6, 15% 7 or 8, and 8% 9 or 10 which indicates extremely high levels of stress. Therefore, nearly a quarter of the sample (23%) see themselves as highly stressed (score of 7 – 10). The main reasons for feeling stressed given by participants who

rated their stress level at 5 or above ($n = 188$) were: family (42%), money problems (26%), health (21%), and everyday living or life in general (12%).

Thirty participants mentioned stress as something that makes it difficult to keep healthy. For this group, the mean score when asked how stressed they feel most of the time was 5.37 (SD 2.47).

Comment. Of the lifestyle factors targeted in this study, smoking is the one of greatest concern. It is possible that the sample has a less than ideal nutrient intake, and less than the recommended level of exercise, but at least some consideration is being given to these areas. Although recognised as the major factor leading to ill-health, the fact remains that the proportion of smokers is more than twice that occurring in the national population.

Responsibility for other person's health. Participants were asked if they were responsible for any other person's health, to which 181 (50%) replied that they were. Of these, the majority (75%) were responsible for a child or children, 32% for a spouse, 7% for a parent or parent-in-law, 3% for a relative, and 4% for another person. The main reason given for being responsible for these people was parental responsibilities (73%), followed by they are too ill to care for themselves (14%), and they don't bother or are not interested in caring for themselves (12%).

Biomedical Factors

Height and weight. All participants were asked to state their height and weight. The range of heights reported was 127 centimeters to 196 centimeters, with a mean height of 169 centimeters (S.D. 10.5). The range of weights reported was 38 kilograms to 145 kilograms, with a mean of 77 kilograms (S.D. 17.9). The body mass index (BMI) was calculated for each participant (weight divided by square of the height in metres). Participants' BMI scores were then used to classify their body weight as normal or overweight (Garrow, 1993). Table 5 shows that only 35% of the sample are in the normal weight range, with 6% being underweight and 51% overweight, with 3% being severely obese.

Table 5: Weight classifications

BMI	Classification	Freq. (%)
1 – 19.9	- Underweight	21 (6%)
20 – 24.9	Grade 0 Normal	128 (35%)
25 – 29.9	Grade I Overweight (plump)	94 (26%)
30 – 40	Grade II Moderate obesity	78 (22%)
Over 40.1	Grade III Severe obesity	11 (3%)
Missing data		28 (8%)

Comment. The proportion of this sample that is overweight (51%) is slightly lower than the proportion of the Australian population aged 18 years and over classified as being overweight (56%) (AIHW, 2000).

Flu injections. Only a third of participants ($n = 121$, 34%) reported that they usually have a flu injection every year.

Use of screening or screening tests. Participants were asked firstly an open-ended question about any screening or early detection tests they regularly have. As Table 6 shows, when not asked about any tests in particular, GP check-ups were the most frequently reported test had regularly by the total sample (58%), followed by tests for blood pressure (16%), diabetes (12%) and cholesterol (11%). More than half of the female participants reported having regular Pap tests, and almost three-quarters of women aged 50 to 69 reported having regular screening mammograms.

The second column in Table 6 presents the results for an item which asked participants if there were any tests or behaviours which they think they *should* have, but do not. The majority (64%) indicated that there were no such tests or behaviours. An interviewer noted that many men responded to this question that they assumed their doctor would advise them of any tests they should have, and were not aware of any that they should be having. Participants who did indicate that there was a test which they thought they should have, but did not, were asked the reason why they did not. “Doctor says I don’t need” was reported by 18%, followed by a lack of time (11%), laziness (8%), or can’t afford it (7%).

As the last column in Table 6 indicates, participants were more likely to report having a particular screening test when asked about specific tests. Eighty-eight per cent reported having a blood pressure test in the last 2 years, 50% a cholesterol test, and 48% a diabetes test. Among the female participants, 68% reported having a Pap test, and 74% examined their own breasts. Of the 95 women aged 50-79, 77% (n = 73) reported having a screening mammogram in the last two years, while 15% (n = 14) indicated that a mammogram was a test they should have, but do not have. Among the male participants, 23% reported being tested for prostate cancer. Participants were not asked in this question about blood tests or bone density tests – two tests volunteered by participants in a previous question as screening tests they regularly have.

Table 6: Screening Tests (N = 360)

Test	Have (Not prompted)	Should Have	Had in last 2 years (Prompted)
GP check-ups	21%	4%	N/A
Blood pressure	16%	3%	88%
Diabetes test	12%	4%	48%
Cholesterol	11%	6%	50%
Blood tests (not specified)	5%	1%	N/A
Bowel cancer check	5%	3%	17%
Bone density test	3%	2%	N/A
Skin checked	3%	1%	19%
<i>Women only (n = 180)</i>			
Pap test	58%	9%	68%
Breasts checked by doctor	5%	2%	56%
Examine own breasts	3%	2%	74%
<i>Women aged 50-79 (n = 95)</i>			
Screening Mammogram	75%	15%	77%
<i>Men only (n = 180)</i>			
Prostate test	7%	6%	23%
Other	10%	7%	N/A
Have no tests / No tests I should have but don't	30%	64%	N/A

Comment. The mismatch between the proportion of people volunteering that they have screening tests and the numbers who respond that they have had tests in the last two years when asked targeted questions is noteworthy. It may be that the reported tests were diagnostic tests rather than screening tests, or it may be that people have had these tests but do not think of them when asked about screening tests. Given the large numbers of persons in Australia who have a skin cancer at some time during their lives, the relatively small percentage (19%) who have had a skin check in the last two years is a matter of some concern. In relation to Pap tests for cervical cancer and mammograms for breast cancer, the high level of concordance between the percentages of women indicating that they have these tests in response to both the open-ended and prompted questions indicates that the media campaigns are being successful. These campaigns are creating an awareness of the need for testing, and a high behavioural compliance. These respondents may not immediately think of blood pressure tests, diabetes tests, cholesterol tests, bowel cancer checks and skin checks as screening tests, or these tests may have been provided as diagnostic tests prompted by the reporting of symptoms to the health care provider. The large proportion of men (23%) who have had a prostate cancer test in the last two years is surprising given that there are no national recommendations for prostate cancer screening.

Alternative therapies. With the increased availability of alternative or complementary therapies, non-prescription medications and vitamin and mineral supplements, it was decided to explore the extent to which these formed part of the health promoting behaviours of this sample. These three issues were each addressed using an open-ended question so as not to prompt the respondents.

When asked about any alternative therapies they might use, 126 (35%) indicated that they did use one. Among these participants, the most commonly reported things used were massage (36%), meditation (30%), herbal medicines (24%), aromatherapy (16%), and yoga (10%). The purpose of these activities was reported as relaxation (56%), maintaining good health and well-being (38%), pain relief (27%), and related to a particular illness (18%).

When participants were asked if they regularly take any medications that can be bought without a prescription, 142 (39%) indicated that they did. Of these, most took painkillers (84%), followed by cold and flu medication (7%), and antihistamines (6%). The main

reasons given for taking such medications included headaches (62%), cold or flu (11%), back pain (10%), arthritis (9%), and to thin blood (8%).

When asked if they regularly take any vitamin or mineral supplements, 116 (32%) indicated that they did. Among these participants, 33% took multi vitamins, 28% Vitamin C, 21% Vitamin B, 11% Vitamin E, 11% iron, and 8% evening primrose oil. The main reasons given for taking these vitamins or minerals included to supplement diet (53%), to protect against illness (39%), and for extra energy (35%).

Comment. A relatively high proportion of the sample is volunteering that they use a variety of alternative therapies and self-medications. Unfortunately the sources of information and perceived efficacy of these activities were not assessed.

Use of Health Services and Health Professionals

Use of health services. When asked what health services they use, the majority mentioned GPs (76%), followed by a hospital (18%), dental services (14%), specialists (13%), community health centre (7%), and physiotherapist or chiropractor (5%).

Usual doctor. Most participants indicated that they do have a usual doctor ($n = 313$, 87%). These participants reported that their usual doctor was a man (83%), a woman (16%), or that they had both a male and a female usual doctor (1%). When participants with a usual doctor were asked if they care if their doctor is a man or a woman, 77% said they did not care, and 23% did care. Participants who did not have a usual doctor ($n = 47$), were asked if they would prefer a male or female doctor, and if they would prefer a doctor who bulk bills. Just over half (53%) indicated that they would not care if their usual doctor was male or female, 27% would prefer a male, and 20% a female.

Visits to doctor in last 12 months. All participants were asked if they had consulted a doctor in the last 12 months. Almost all (90%) had. Of these, 9% had seen a doctor once in the last 12 months, 16% had seen one twice, 28% had seen one 3 to 6 times, 22% had seen one 6 to 12 times, and 25% had seen a doctor more than 12 times. Almost half of the sample ($n = 176$, 49%) reported that they had consulted another health professional in the last 12 months. For this group, the most frequently mentioned health professional was a medical specialist (43%), followed by an eye specialist (15%), dentist (14%), and

physiotherapist (11%). Seven per cent mentioned a gynaecologist, chiropractor, or psychiatrist.

Regular dentist. Fewer than one quarter of the sample reported having a regular dentist ($n = 87$, 24%). Other respondents were asked why they do not have a regular dentist. The main reason given was false teeth (39%), followed by do not go often enough (18%), cost (17%), use the public system (8%), and do not need to go (6%). All participants were asked how long it is since they last visited a dentist, to which 16% replied less than 6 months, 15% 6 to 12 months, 18% 1 to 2 years, 19% 2 to 5 years, 28% more than 5 years, and 4% could not say.

Eyes tested. When specifically asked if they had ever had their eyes tested, 311 (86%) replied that they had. Of these, 22% had them tested in the last 6 months, 23% 6 to 12 months ago, 23% 1 to 2 years ago, 17% 2 to 5 years ago, 14% more than 5 years ago, and 1% could not say.

Comment. Interviewees appear to see health services primarily in terms of visits to a GP. Although most of the respondents (83%) had visited a GP in the last 12 months, relatively few had visited a dentist.

Evaluation of the Health Services

Public health system service provision. An open question was used to ask participants what they think are the three most important things that the public health system should provide. Participants mentioned: more hospital beds (27%), shorter waiting times (17%), more doctors (16%), cheap medication (13%), dental services (12%), the basic services covered by Medicare (11%), screening or early detection (9%), community based services including community health services (8%) and more 24 hour access (6%). Others (14%) mentioned areas that are not part of the public health care system, such as better housing or public transport. To a second question asking if they know what services Community Health Centres offer, just over half of the participants (52%) indicated that they did know what kind of services a community health centre offers.

Comment. From the responses to the open question about the most important things the public health system should provide, it is apparent that most people responded in terms of what more the public health system could provide. The lack of knowledge of the nature and extent of services provided by the public health care system was evident in the

specific question asking participants if they know what services a Community Health Centre offers.

Adequacy of health services. Participants were asked if they think that the health services in their area are adequate. The majority (72%) indicated that they are adequate, 27% indicated that they are not adequate, and 1% could not say as they do not use the services. Of the 98 participants who found the services inadequate, 46% stated there were not enough services, 30% found it difficult to get appointments, 19% mentioned waiting too long, 15% have to travel too far, 10% stated it costs too much, and 6% stated they were not open when you need them.

Difficulties in using health service. When asked if they have any difficulties in using any health service, the majority (83%) reported that they did not. Of the 61 (17%) participants who did have difficulties, access problems relating to distance (27%), transport (29%) or time (36%) were most often cited. Other problems included staff being unhelpful (14%), waiting (10%), and not knowing what is available (3%).

How to improve health services. Participants were asked how they think the health services in their area could be improved. Some participants gave no suggestions (41%), and 18% commented that they were happy with the services. Reducing waiting times was mentioned by 16% of participants, more or better staff by 14%, more GPs by 13%, more dental services by 6%, more hospitals by 4%, and 24-hour access was mentioned by 4%.

Access to Resources

Health costs. The majority of participants ($n = 332$, 92%) reported that they did not have health insurance, and most (93%) prefer a doctor who bulk bills. Most participants with a usual doctor reported that their doctor did in fact bulk bill (88%).

Sources of Health Information. When asked where, or from whom, they get information about health, 60% of participants mentioned health professionals, 23% television, 21% newspapers, 20% magazines, 17% pamphlets, 15% books, 12% friends, and 9% mentioned family members.

Able to buy food. To assess economic hardship, participants were asked if there were times in the last 12 months when they ran out of food and could not afford to buy more.

This had occurred for 84 participants (23% of the sample). A further 24 participants (7%) reported that this had almost happened to them.

Where to Get Help Balancing your Budget

Almost half of the participants (49%) reported that they knew where they could go to get help balancing their budget, with a further 8% reporting that they knew how to find out where to get help.

Comment. There might be a group of people who could benefit from assistance in organising their finances to ensure that they are able to access adequate food. Thirty-one per cent of the participants who reported that they had run out of food, or almost ran out of food, indicated that they did not know where to get help balancing their budget.

Public Transport

Over half of participants (58%) reported that they have no difficulties in using public transport, with a further 21% reporting that public transport was not an issue. Of the remaining 74 individuals (21%) who indicated that they have a problem, the most common problem was having trouble getting on and off (42%), followed by health problems such as agoraphobia (18%), too far from where I live (14%), having to wait too long (14%) and not running when I need it (12%).

Comment. Although 79% of the sample do not have difficulties with public transport, the fact that over a third of those experiencing difficulties cite the problem of getting on and off, suggests that this is an issue which should be addressed.

Concerns About the Physical Environment

Over a third of participants ($n = 135$, 38%) indicated that they did have worries about their physical environment. Air pollution was the most frequently mentioned concern (38%), followed by drugs or youth problems (19%), safety or vandalism (18%), noise (12%), poor housing quality (9%), water quality (8%) and neighbours (8%).

Differences by Sex, Age and Geographic Location

For each of the independent variables of sex (male/female), age (older/younger) and location (metro/rural) a series of cross-tabulations with associated chi-square values was completed using SPSS. To make the text manageable and readable, only the summary findings are reported here. The interested reader may find a brief introduction to the tables and 10 tables of chi-square values in Appendix A.

Gender

In defining what it means to be healthy men and women both emphasise being able to do what they want to do, but fewer men mention not having any major illness or having a positive attitude. Generally men are more likely to define their own level of health in terms of the absence of minor health problems and are less likely to mention the absence of major illness, or feeling fit. Fewer men than women mention prostate cancer as a major health problem for men, while more men volunteer heart disease as a personal health problem.

In relation to what they see as personal actions that are good or bad for their health, men are less likely to volunteer that they eat a healthy diet and more likely to suggest that they drink alcohol. These differences are reflected in the obtained gender differences in relation to reported everyday behaviours. Fewer men than women eat plenty of fruit and vegetables, avoid eating too much sugar, avoid eating high cholesterol food, or eat sufficient fibre, while more men than women drink alcohol once a week or more. Men are less likely than women to report that family and money are sources of stress.

There are few differences in relation to screening tests. More men reported they had had a blood pressure test, a finding that is consistent with the fact that more of them reported problems with heart disease. More men than women stated that they did not have any screening tests, which is consistent with the fact that there are gender-specific screening tests that are recommended for women and none for men. Fewer men than women have a regular GP, visit the dentist often enough to have a regular dentist, use alternative therapies, or see themselves as responsible for the health of another person.

Age

When comparing the differences between the younger and the older group, it is apparent that these fall into several areas. Younger people had more emphasis on the importance of diet than their general health. They were more likely to stress the importance of eating a balanced diet, having more fruit and vegetables and worrying about their weight. At the same time, they were more likely to eat more takeaway food. On the other hand, the younger group placed greater importance on exercise, specifically attending the gym and partaking in sports. Younger participants were less likely to have a flu vaccination.

Although keeping healthy was important, time, motivation and family commitments restricted these activities. Overall, the younger group had more responsibility for others, such as children. Most of the sample had a GP who bulk billed (87%), but the younger group had fewer visits to the GP in the last 12 months and fewer visits to eye specialists and dentists, believing the latter were too costly. Risks were more likely to be taken by the younger group, they were more likely to smoke and drank more frequently and in higher quantities. When they consumed alcohol, they were more likely to have four or more drinks at one session.

Geographic Location

There were relatively few statistically significant differences in the responses given by the respondents from the metropolitan and rural areas. Interviewees from metropolitan areas were less likely to volunteer heart disease as a possible health problem for men. They were less likely to suggest that they had had a Pap test, a diabetes test, or to have had their eyes tested. On the other hand, those from metropolitan areas were more likely to suggest that they had run out of food in the past 12 months and were more likely to be worried about the physical environment.

Comment. Given the large number of comparisons that were made and the very small number of differences between metropolitan and rural respondents that were found to be significant, it could be argued that these differences occurred by chance, and that there are no substantive differences in the responses of those in the metropolitan and rural areas. This is surprising given the fact that many health services are less accessible in rural than metropolitan areas.

Appendix A

Chi-square and p values associated with the cross-tabulations of sex, age and geographical location with each of the survey variables

For each of the independent variables of sex (male/female), age (older/younger) and location (metro/rural), a series of cross-tabulations with associated chi-square values was completed using SPSS. A chi-square value indicates whether the observed trends in a table of frequencies might be indicative of a meaningful difference or whether it might have occurred by chance. Generally, the higher the value of chi-square, the greater the probability that the difference is a real difference. Chi-square is a non-directional test, so two-tail levels of probability are reported. The confidence in the finding is increased as the probability of the finding occurring by chance is decreased, so that a p value of 0.001 indicates that there is less likelihood of the result occurring by chance than does a p value of 0.01. Probabilities are only reported if they reach 0.01 as 0.05 may be misleading due to the large number of comparisons being made. The tables in Appendix A indicate the variables for which there is a significant difference, state the chi-square value and provide the p value. Only variables mentioned by 10% or more of participants are included in these tables. The “more” and “less” in the table indicate the direction of that difference. For each chi-square $df = 1$ and $N = 360$.

Tables A1 to A10 presents the chi-square and p values associated with the cross-tabulations of sex, age and geographic location by each of the variables assessed in the survey.

Table A1: Meaning of Health

	Sex <i>Males compared to females</i>	Age <i>Older compared to younger</i>	Geographic location <i>Geelong compared to rural</i>
<i>What being healthy means (% mentioned) Q1.</i>			
Being physically well (39%)	-	6.3 More *	-
Able / fit to do what I want (45%)	-	-	-
Well enough to do what need to (18%)	-	-	-
Not having any major illness (16%)	10.2 Less **	-	-
Happiness / positive attitude (14%)	6.6 Less *	-	-
Eating well (13%)	-	21.1 Less **	-
<i>Describe health as good or excellent (56%) Q2.</i>	8.8 *Less	18.7 **Less	-
<i>Why describe health as.... (% mentioned) Q3.</i>			
Have no major illness (25%)	9.2 * Less	-	-
Feel fit / healthy (25%)	5.9 * Less	-	-
Have chronic health problems (23%)	-	33.5 ** More	-
Feel okay / pretty good (20%)	16.5 ** Less	-	-
Eat a healthy diet (13%)	-	17.3 ** Less	-
Exercise regularly (11%)	-	11.9 ** Less	-
Have only minor health problems (10%)	6.8 * More	-	-

* $p < .01$

** $p < .001$

Table A2: Health Problems

	Sex <i>Males compared to females</i>	Age <i>Older compared to younger</i>	Geographic location <i>Geelong compared to rural</i>
<i>Major health problems for women (% mentioned) Q4.</i>			
Breast cancer (61%)	-	-	-
Cervical cancer (23%)	-	6.7 * Less	-
Cancer (unspecified) (20%)	-	5.9 * More	-
Heart disease (15%)	-	7.8 * More	-
Obesity / overweight (15%)	-	7.3 * Less	-
Stress (14%)	-	-	-
Mental illness (13%)	-	7.8 * More	-
Osteoporosis (12%)	-	-	-
Menopause (10%)	-	-	-
<i>Major health problems for men (% mentioned) Q5.</i>			
Prostate cancer (42%)	13.2 ** Less	15.7 ** More	
Heart disease (38%)	-	-	6.0 * Less
Alcoholism (24%)	-	-	-
Cancer (unspecified) (23%)	-	-	-
Smoking (19%)	-	7.3 * Less	-
Obesity / overweight (17%)	-	8.7 * Less	-
Lung cancer (11%)	-	-	-
Stress (11%)	-	-	-
<i>Have any health problems (% yes) Q11</i>	-	48.0 ** More	-
<i>Health problems reported (n = 249) (% mentioned) Q11</i>			
Arthritis (21%)	-	21.0 ** More	-
Asthma (16%)	-	7.2 * Less	-
Blood pressure (16%)	-	6.7 * More	-
Back problems (16%)	-	-	-
Heart disease (13%)	8.0 * More	11.5 ** More	-

* $p < .01$

** $p < .001$

Table A3: Health Related Behaviours

	Sex	Age	Geographic location
	<i>Males compared to females</i>	<i>Older compared to younger</i>	<i>Geelong compared to rural</i>
<i>Things done to keep healthy (% mentioned) Q6.</i>			
Exercise regularly (58%)	-	-	-
Healthy diet (42%)	21.1 ** Less	-	-
Exercise sometimes (18%)	-	-	-
Keep active (11%)	-	-	-
<i>Things that make it difficult to keep healthy (% mentioned) Q7.</i>			
Health problems (34%)	-	23.9 ** More	-
Lack of time (13%)	-	26.0 ** Less	-
Lack of motivation (11%)	-	5.9 * Less	
Family responsib. (11%)	7.5 * Less	10.9 ** Less	
Dietary issues (11%)	-	5.9 * Less	-
<i>Things done that might be bad for health (% mentioned) Q8.</i>			
Smoking (47%)	-	17.5 ** Less	-
Dietary issues (30%)	-	8.7 * Less	-
Drink alcohol (20%)	23.5 ** More	-	-

* $p < .01$

** $p < .001$

Table A4: Use of Screening or Early Detection Tests

	Sex	Age	Geographic location
	<i>Males compared to females</i>	<i>Older compared to younger</i>	<i>Geelong compared to rural</i>
<i>Have any tests regularly - open question (% mentioned) Q12.</i>			
GP check-ups (21%)	-	13.4 ** More	-
Blood pressure (16%)	8.5 * More	16.8 ** More	-
Diabetes test (12%)	-	-	-
Cholesterol (11%)	-	6.4 * More	-
<i>Women only (n = 180)</i>			
Pap test (58%)	N/A	8.1 * Less	6.4 * Less
Screening mammogram (47%)	N/A	63.7 ** More	-
Have no tests (30%)	34.2 ** More	26.2 ** Less	-
<i>Should have screening mammogram, but don't (14% mentioned) Q13.</i>	N/A	-	-
<i>Tests had in the last 2 years – prompted (% mentioned) Q30.</i>			
Blood pressure (88%)	-	12.0 ** More	-
Diabetes test (48%)	-	19.0 ** More	9.3 * Less
Cholesterol (50%)	-	53.0 ** More	-
Skin checked (19%)	-	14.8 ** More	-
Bowel cancer check (17%)	-	19.0 ** More	-
<i>Women only (n = 180)</i>			
Examine own breasts (74%)	N/A	-	-
Pap test (68%)	N/A	18.3 ** Less	-
Breasts checked by doctor (56%)	N/A	-	-
Screening mammogram (47%)	N/A	70.8 ** More	-
<i>Men only (n = 180)</i>	N/A	20.3 ** More	-
Prostate test (23%)			

* p < .01

** p < .001

Table A5: Use of Alternative Therapies, Non-Prescription Medication, Vitamins and Minerals

	Sex	Age	Geographic location
	<i>Males compared to females</i>	<i>Older compared to younger</i>	<i>Geelong compared to rural</i>
<i>Alternative therapies – use any? (35% Yes) Q14.</i>	11.0 ** Less	-	-
<i>Which alternative therapies use and why (% mentioned) Q14. (n = 126)</i>			
Massage (36%)	-	-	-
Meditation (30%)	-	-	-
Herbal medicines (24%)	-	-	-
Aromatherapy (16%)	6.0 * Less	-	-
Yoga (10%)	-	-	-
For relaxation (56%)	-	-	-
To maintain good health (38%)	-	-	-
For pain relief (27%)	-	-	-
Related to particular illness (18%)	-	-	-
<i>Regularly take non-prescription medications (39% Yes) Q21.</i>	-	-	-
<i>What take, and why (% mentioned) (n = 142) Q21.</i>			
Painkillers (84%)	-	-	-
For headaches (62%)	-	9.9* Less	-
For cold or flu (11%)	-	-	-
For back pain (10%)	-	-	-
<i>Regularly take vitamin or mineral supplements (32% Yes) Q22.</i>	-	-	-

* $p < .01$

** $p < .001$

Table A6: Use of Health Professionals

	Sex	Age	Geographic location
	<i>Males compared to females</i>	<i>Older compared to younger</i>	<i>Geelong compared to rural</i>
<i>Have a usual doctor? (87% Yes) Q 23.</i>	10.8 ** Less	6.7 * More	-
<i>How many times consulted a doctor in last 12 months? (43% 6 times or more) Q 25.</i>	-	28.3 ** More	-
<i>Consulted any other health professional in last 12 months? (49% Yes) Q26.</i>	-	-	-
<i>What type of health professional consulted? (% mentioned) (n = 176) Q26</i>			
Medical specialist (43%)	-	-	-
Eye specialist (15%)	-	6.5 * More	-
Dentist (14%)	-	-	-
Physiotherapist (11%)	-	-	-
<i>Have a regular dentist? (24% Yes) Q27.</i>	-	17.4 ** Less	-
<i>Why not have a regular dentist? (% mentioned) (n = 273) Q27.</i>			
Have false teeth (39%)	-	61.9 ** More	-
Don't go often enough (18%)	8.4 * More	-	-
Cost (17%)	21.2 ** Less	18.6 ** Less	-
<i>How long since visited dentist? (49% in last 2 yrs) Q28.</i>	-	21.4 ** Less	-
<i>Ever had eyes tested? (86% Yes) Q29.</i>	-	51.4 ** More	6.7 * Less
<i>How long since had eyes tested? (68% in last 2 yrs) (n = 311) Q29.</i>	-	18.9 ** More	8.1 * Less

* p < .01

** p < .001

Table A 7: Health Services

	Sex <i>Males compared to females</i>	Age <i>Older compared to younger</i>	Geographic location <i>Geelong compared to rural</i>
<i>Most important for public health care system to provide (% mentioned) Q16.</i>			
More hospital beds (27%)	-	8.7 * More	-
Shorter waiting times (17%)	-	-	-
More doctors (16%)	-	-	-
Free / cheap medication (13%)	-	-	-
Dental services (12%)	-	-	-
Medicare / health card (11%)	12.1** More	-	-
More services for elderly (11%)	-	14.5 *** More	-
<i>What health services do you use - open (% mentioned) Q17.</i>			
GP (76%)	-	-	-
Hospital (18%)	-	-	-
Dental (14%)	10.4 ** Less	-	-
Specialists (13%)	-	-	-
<i>Are health services in your area adequate (27% No) Q18.</i>			
<i>Do you have any difficulties in using any health services (17% Yes) Q19.</i>			
<i>How could health services be improved (% mentioned) Q20.</i>			
Happy with them (18%)	10.7 ** More	-	-
Reduce waiting times (16%)	-	-	-
More / better staff (14%)	-	-	-
More GPs (13%)	-	-	-
<i>Usually have a flu injection? (34% Yes) Q31.</i>			
Usually have a flu injection? (34% Yes) Q31.	-	66.4 ** More	-
<i>Do you have health insurance? (8% Yes) Q32.</i>			
Do you have health insurance? (8% Yes) Q32.	-	-	-

* $p < .01$

** $p < .001$

Table A8: Sources of Health Information and Responsible for Others

	Sex	Age	Geographic location
	<i>Males compared to females</i>	<i>Older compared to younger</i>	<i>Geelong compared to rural</i>
<i>Where get health information from (% mentioned) Q24.</i>			
Health professionals (60%)	-	-	-
Television (23%)	-	-	-
Newspapers (21%)	-	-	-
Magazines (20%)	10.0 * Less	-	-
Pamphlets (17%)	-	-	-
Books (15%)	-	-	-
Friends (12%)	-	-	-
<i>Responsible for other person's health (50% yes) Q10.</i>	6.9 * Less	62.6 ** Less	-
<i>Who responsible for / Why responsible (% mentioned) Q10. (n = 181)</i>			
Responsible for child / children (75%)	-	67.5 ** Less	-
Responsible for spouse (32%)	8.4 * More	17.3 ** More	-

* $p < .01$

** $p < .001$

Table A9: Everyday Behaviours – Part 1

	Sex <i>Males compared to females</i>	Age <i>Older compared to younger</i>	Geographic location <i>Geelong compared to rural</i>
<i>Work very hard or fairly hard to keep healthy (51%) Q9.</i>	-	-	-
<i>Run out of food in last 12 months (30% Yes or Almost) Q33.</i>	-	-	6.2 * More
<i>Ever go on diets? (29% Yes) Q34.</i>	-	-	-
<i>Usually careful about what you eat (84% Yes or Fairly) Q35.</i>	-	9.1 * More	-
<i>In what ways are you careful? (% mentioned) (n = 305) Q35.</i>			
<i>Eat plenty of fruit and vegetables (54%)</i>	15.1 ** Less	7.0 * Less	-
<i>Avoid eating too much fat (52%)</i>	-	-	-
<i>Eat a balanced diet (35%)</i>	-	-	-
<i>Avoiding eating too much sugar (22%)</i>	6.3 * Less	-	-
<i>Avoid eating too much junk food (21%)</i>	-	-	-
<i>Avoid eating high cholesterol food (20%)</i>	8.9 * Less	-	-
<i>Eat enough fibre (18%)</i>	24.6 ** Less	-	-
<i>Eat takeaway food once a week or more (32% Yes) Q36.</i>	-	59.1 ** Less	-
<i>Drink alcohol once a week or more (28% Yes) Q37.</i>	33.0 ** More	-	-
<i>Have 4 or more drinks on days when do drink (41% Yes) (n = 222) Q38.</i>	-	13.5 ** Less	-
<i>Do you smoke cigarettes? (51% Yes) Q39.</i>	-	15.3 ** Less	-
<i>Smoke 21 or more cigarettes a day (31% Yes) (n = 183) Q39.</i>	-	-	-

* $p < .01$

** $p < .001$

Table A10: Everyday Behaviours – Part 2

	Sex <i>Males compared to females</i>	Age <i>Older compared to younger</i>	Geographic location <i>Geelong compared to rural</i>
<i>Do you exercise regularly? (80% Yes) Q40.</i>	-	-	-
<i>Type of exercise done. (% mentioned) (n = 289) Q40.</i>			
Walk (84%)	-	6.2 * More	-
Gym work (12%)	-	11.5 ** Less	-
Ride bike / exercise bike (12%)	-	-	-
Play sport (10%)	-	19.5 ** Less	-
<i>How many times exercise in a week (71% 3 times or more) (n = 287) Q40.</i>	-	6.6 * More	-
<i>How many hours sleep usually in 24 hour day. (66% 7 hrs or more) Q41.</i>	-	-	-
<i>Do you take any risks? (28% Yes) Q42.</i>	-	13.6 ** Less	-
<i>Risks taken. (n = 100) Q42.</i>			
Smoke too much (34%)	-	-	-
Work related (14%)	-	-	-
Drive a car (12%)	-	-	-
Drive too fast (11%)	-	-	-
<i>How stressed do you feel most of the time – rated 1 to 10, 10 = really stressed. (53% rated 5 or more) Q43.</i>	-	-	-
<i>What is the main cause of your stress (asked if rated 5 or more) (n = 188) Q43.</i>			
Family (42%)	6.6 * Less	-	-
Money (26%)	8.1 * Less	-	-
Health (21%)	-	6.8 * More	-

* $p < .01$

** $p < .001$

Table A11: Worries About the Physical Environment

	Sex <i>Males compared to females</i>	Age <i>Older compared to younger</i>	Geographic location <i>Geelong compared to rural</i>
<i>Have difficulties using public transport (21% Yes) Q 44.</i>	-	-	-
<i>Know what a community health centre offers (52% Yes) Q45.</i>	-	-	-
<i>Know where to get help with balancing budget (49% Yes) Q46.</i>	-	-	-
<i>Worries about the physical environment (38% Yes) Q15.</i>	-	-	7.4 * More
<i>What worries do you have (n = 135) Q15.</i>			
Air pollution (38%)	-	-	-
Drugs / youth problems (19%)	-	-	-
Safety, vandalism (18%)	-	-	-
Noise (12%)	-	-	-

* $p < .01$

** $p < .001$

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