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Director: Professor J. Bacon-Shone (PhD Birmingham)

Behavioural Risk Factor Survey (April 2011)

Main Report

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Executive Summary

Introduction

The Social Sciences Research Centre of the University of Hong Kong (SSRC) was commissioned by the Department of Health in April 2011 to conduct a survey on behavioural risk factors. This survey aimed to detect changes in health risk and behaviour as well as to collect further information on the health related behavioural issues among the Hong Kong population. This will provide information to facilitate the planning, implementation and evaluation of health promotion programmes on the prevention of diseases related to lifestyle and behaviour.

The scope of this survey covered the following 15 areas:

- 1. Weight status and control
- 2. Doctor-diagnosed chronic diseases
- 3. Smoking habits
- 4. Pattern of alcohol consumption
- 5. Leisure-time activities
- 6. Sleep habits
- 7. Social support
- 8. General health
- 9. Level of psychological stress
- 10. Impacts of psychological distress or stress
- 11. Physiological response to stress
- 12. Sources of psychological distress or stress
- 13. Stress management
- 14. Organ donation
- 15. Demographic information: gender, age, education, marital status, occupation, monthly personal income, monthly household income, number of dependants, religion, type of living quarters and household size.

Research Methodology

This survey was conducted by using Computer Assisted Telephone Interview (CATI). The sample was drawn randomly from a list of telephone numbers, which included unlisted and new numbers. The target respondents were Cantonese, Putonghua or English speaking residents in Hong Kong (excluding domestic helpers) aged 18-64. A bilingual (Chinese and English) questionnaire with 91 questions was used to collect data. Fieldwork took place between the 13th April and 25th May 2011. A sample size of 2 123 successful interviews was achieved. The contact rate was 38.9% and the overall

response rate was 62.5%. The width of a 95% confidence interval was at most +/- 2.1%. Weighting was applied based on age and gender in order to make our findings more representative, using the Hong Kong population data compiled by the Census and Statistics Department for end-2010 as reference.

Statistical tests were applied to investigate if there is any significant association between selected demographics and the response variables. Only the statistically significant findings at the 5% level (2-tailed) are presented in the report.

Key Findings of the Survey

Weight status and control

Using the World Health Organization (WHO)'s standard Asian classification of weight status, about half (49.6%) of the respondents were classified as "normal", 18.9% of the respondents were regarded as "overweight" and 22.2% were classified as "obese", while the remaining 9.3% were classified as "underweight".

Regarding respondents' self-perceived current weight status, close to half (47.5%) of the respondents perceived themselves as "just right". In addition, 43.9% considered themselves as "overweight" while 8.6% considered themselves as "underweight". A relatively higher proportion of females, respondents aged 35-54, married or divorced/ separated/ widowed respondents and those with primary education or below and those with 3 or more dependants considered themselves as "overweight". Overall, 66.9% of the respondents perceived their weight status in a way consistent with the WHO's weight status classification for Asians, while 18.4% of the respondents overestimated and 14.7% underestimated their weight status.

Doctor-diagnosed chronic diseases

Regarding doctor-diagnosed chronic diseases that require long-term follow up, the three leading chronic conditions were hypertension (9.8%), arthritis or rheumatism (7.1%) and diabetes (3.1%). For the selected doctor-diagnosed mental illnesses, 2.8% of respondents reported that they have depression and 2.2% had anxiety disorder. A relatively higher proportion of divorced/ separated/ widowed respondents, those with primary education or below and non-working respondents reported that they had at least two doctor-diagnosed chronic diseases which require long-term follow up. Also the older, the lower monthly household income of the respondents and the fewer dependants the respondents had, the more likely that they had at least two doctor-diagnosed chronic diseases.

Smoking habits

About one-eighth (12.7%) of the respondents were current smokers at the time of this survey. Among the current smokers, the vast majority (97.0%) were daily smokers. In addition, about half (49.3%) of the current smokers reported that they smoked 1-10 cigarettes per day and nearly half (47.7%) of the current smokers reported that they smoked at least 11 cigarettes a day. A relatively higher proportion of current smokers who reported smoking more than 20 cigarettes a day were found amongst male respondents, older respondents and those who had not completed secondary education or below.

Pattern of alcohol consumption

Nearly one-third (31.7%) of the respondents were drinkers who had drunk at least one alcoholic drink during the thirty days prior to the survey. Nearly half (49.6%) of these drinkers drank less than one day per week while only 6.5% drank daily. The majority (64.6%) of these drinkers consumed less than 3 standard drinks on each drinking day. On average, they consumed 2.9 standard drinks per day during the thirty days prior to the survey.

Regarding the type of alcoholic drink they most frequently consumed during the thirty days prior to the survey, nearly three-fifths (57.2%) drank beer, one-third (33.6%) drank wine, while other drank spirits (4.2%), Chinese rice wine (1.7%), fruit liqueur (1.1%) and cocktail (1.1%). The majority of these drinkers most frequently drank at home (43.0%) or in restaurants (34.4%) during the thirty days prior to the survey. They most frequently drank with friends (44.2%) and with family members or relatives (30.0%), while 15.6% reported that they drank alone.

On the whole, drinking during the thirty days prior to the survey was more prevalent among males, those aged 25-34, never married respondents, those with tertiary educational attainment or above, managerial/ professional workers or service workers, those living in private housing and those with higher monthly household income.

Among the drinkers who had drunk alcohol during the thirty days prior to the survey, nearly one quarter (23.4%) of them reported that they had engaged in binge drinking (drinking 5 or more glasses/ cans of alcohol on one occasion) at least once during the thirty days prior to the survey. Binge drinking with 3 times or more per month was more common among males, those aged 35-44, those with primary education or below, service workers and blue collar workers, and those living in public rental flats.

Among those respondents who ever had at least one alcoholic drink but excluding those who had drunk during the thirty days prior to the survey, less than one-sixth (15.5%) had ever engaged in binge drinking. Binge drinking at least once a year excluding the past thirty days was more common among males and those aged 25-34.

Leisure-time exercises

About two-fifths (39.5%) of the respondents reported that they exercised less than once a month in their leisure-time, while 17.9% exercised 4 times or more a week and 31.9% exercised one to three times a week in their leisure-time. Females, those age 35-44, those who had not completed secondary education or below, blue collar workers, those with at least one dependants, those living in the public rental flats and those with lower monthly household income were more likely to exercise less than once a month in leisure-time than their respective counterparts.

Sleeping habits

On average, the respondents slept for seven hours per day during the thirty days prior to the survey. The majority (91.4%) of the respondents claimed that they slept for at least six hours on average per day.

During the thirty days prior to the survey, slightly over one-tenth (11.8%) of the respondents frequently (three or more times a week) had 'difficulty in falling asleep', 12.2% frequently had 'intermittent awakenings or difficulty in maintaining sleep' during the night and 9.4% frequently had 'early morning awakening and unable to sleep again'. In contrast, more than one third (35.2%) of the respondents did not experience any of the three sleeping problems during the thirty days prior to the survey.

Nearly one-third (31.6%) of the respondents did not get enough sleep for at least 10 days during the thirty days prior to the survey. In addition, 43.3% of the respondents considered that they slept "well" or "very well", while 13.8% of respondents considered their sleeping quality "poor" or "very poor".

Social support

Over three-fifths (62.5%) of the respondents reported that they had three or more close relatives or friends who could provide support for their private, emotional or financial needs. At the same time, about one-tenth (10.3%) of the respondents did not have any close relatives or friends who can provide help for such needs.

General health status

Regarding respondents' self-rated health status, nearly half (46.9%) of the respondents rated their general health status as "good", "very good" or "excellent", while 5.2% considered their general health status "poor".

Level of psychological distress

Based on the Kessler 6-items Psychological Distress Scale (K6), 11.7% of the respondents felt nervous, 7.0% felt restless or fidgety, 5.4% felt that everything was an effort, 4.0% felt so sad that nothing could cheer them up, 3.8% felt worthless and 2.4% felt hopeless "most" or "all of the time" during the thirty days prior to the survey. About one-sixth (15.8%) of the respondents did not experience any psychological distress symptom during the thirty days prior to the survey.

Overall, 5.3% of respondents were classified as having severe psychological distress (measured by K6 score of 13 or above) during the thirty days prior to the survey. Severe psychological distress was more prevalent among respondents with low monthly household income (below \$8,000) and in divorced, separated or widowed respondents. In addition, respondents with more chronic diseases, poorer self-rated health status, were more likely to have severe psychological distress. Respondents with less frequent exercise in their leisure-time and fewer close relatives or friends who could offer help for their emotional or financial needs were also more likely to have severe psychological distress.

Impacts of psychological distress or stress

The effects of psychological distress to work or carry out normal activities are significant. More than a quarter (28.4%) of respondents with severe psychological distress had been totally unable to work or carry out normal activities for more than five days during the thirty days prior to the survey, as compared to only 3.1% for respondents with any psychological distress symptoms. On the other hand, 18.9% of respondents with severe psychological distress had consulted a doctor or other health professional because of their emotional problems and 25.3% of respondents with severe psychological distress (25.3%) of the main cause of their psychological distress (25.5%) and 4.2% for respondents with any psychological distress symptoms respectively.

Physiological response to stress

When feeling distress or stressed out, 16.5% of respondents reported that they often had "neck, shoulder or back pain", followed by "sleep disturbance" (9.7%), "headache" (7.1%) and "loss of/ increase in appetite" (6.4%). Female respondents were more likely to report that they often or sometimes had neck/ shoulder/ back pain, sleep disturbance, headache, loss of/ increase in appetite, stomach ache, chest pain and felt dizzy when distressed or feeling stressed out.

Sources of psychological distress or stress

While 20.3% of the working respondents considered that their distress or stress was related to their work "all of the time" or "most of the time", 13.3% of the respondents who engaged in studying reported that study / school work was a source of psychological distress or stress "all of the time" or "most of the time". Furthermore, 11.0%, 5.9%, 4.2% and 4.1% of respondents cited family matters, financial difficulties, physical condition and interpersonal relationship as a source of distress or stress "all of the time" or "most of the time" or stress "all of the time".

Stress Management

Among the respondents (94.1%) who reported having experienced stress, 19.5% of them took exercises, talked to somebody (12.2%), listened to music (8.6%) and took more rest / sleep (8.3%) to cope with stress. In addition, 6.6% of these respondents reported that they had not used any method to cope with stress.

Attitude towards organ donation

The vast majority (96.1%) of the respondents reported that they would not object their family members to donate organs after death. Respondents who had primary education or below, those with monthly household income below \$8,000, and those who were living in public rental flats were more likely to object their family members to donate organs after death.

About two-thirds of the respondents (65.7%) were willing to donate their organs after death. Notably, about a quarter (25.6%) reported that they had not made the decision yet. Only 8.8% of them reported that they were not willing to donate their organs after death.

Among respondents willing to donate their organs after death, about four-fifths (80.5%) of them reported that they would like to help other people and over one third (36.1%) of them thought organs were useless after death. Furthermore, 49.5% of them expressed the wish to their family members, more than one third (35.7%) of them signed on the organ donation card and only 12.8% of those expressed their wish to donate their organs had registered at the Centralised Organ Donation Register. However, more than one third (37.3%) of them had done nothing to express their wish to donate organs.

Among respondents not willing to donate their organs after death, more than a quarter (27.9%) reported that the decision was their personal preference and one-fifth (20.5%) thought organ donation was against their personal belief.

Recommendations

Some recommendations based on the survey findings are suggested below:

- Regular physical activity is critically important for the health and well being of people of all ages as it helps prevent or minimize many chronic illnesses. However, about two-fifths (39.5%) of the respondents reported that they exercised less than once a month in their leisure-time in the thirty days prior to the survey. Thus, the importance of engaging in regular physical activity needs to be further emphasized. Some groups of people (include females, people aged between 35 and 44, those with lower education level, blue collar workers, those with dependants, those living in the public rental flats and those with lower monthly household income) are less likely to engage in regular activity. These are the potential targets for the promotion of regular physical activity
- 2. The survey results showed that 12.7% of the respondents were current smokers and almost all (97.0%) of them were daily smokers. 23.4% of the drinkers who had drunk alcohol during the thirty days prior to the survey reported that they had engaged in binge drinking (drinking 5 or more glasses/ cans of alcohol on one occasion). Promotion of the health benefits of stopping smoking and of sensible drinking should be also carried out at these high-risk groups.
- 3. About 10% of the respondents reported that they did not have any close relatives or friends who can provide help for their private, emotional or financial issues. Social support in general is important in coping stress and can provide emotional help during stressful times. It is likely to improve physical health and increase longevity. Promotion of the importance of helping others and social support networks should be encouraged.
- 4. The survey finds that 5.3% of people aged 18-64 were classified as having severe psychological distress. More promotions or campaigns should be introduced to educate the public about how to cope better with stress, and to dispel the misconceptions that smoking, drinking, gambling or using drugs would relieve stress.
- 5. The vast majority (96.1%) of respondents did not object their family members to donate organs after death and about two-thirds of respondents (65.7%) were willing to donate their organs. It is important to note that more than one third (37.3%) of those who were willing to donate their organs had done nothing to express their wish. Promotion is still needed to encourage people to express their wish to donate organs by telling their family members, signing the organ donation card and registering at the Centralised Organ Donation Register.

Chapter 1 Introduction

The Social Sciences Research Centre of the University of Hong Kong (SSRC) was commissioned by the Department of Health to conduct a survey in April 2011 to detect changes in health risk and behaviour as well as to collect further information on the health related behavioural issues among the Hong Kong population. This will provide information to facilitate the planning, implementation and evaluation of health promotion programmes on the prevention of diseases related to lifestyle and behaviour.

The scope of this survey encompasses the following areas:

- Weight status and control
- Doctor-diagnosed chronic diseases
- Smoking habits
- Pattern of alcohol consumption
- Leisure-time activities
- Sleep habits
- Social support
- General health
- Level of psychological stress
- Impacts of psychological distress or stress
- Physiological response to stress
- Sources of psychological distress or stress
- Stress management
- Organ donation
- Demographic information: gender, age, education, marital status, occupation, monthly personal income, monthly household income, number of dependants, religion, type of living quarters and household size.

Chapter 2 Research Methodology

2.1 Sampling method

Telephone interview by using Computer Assisted Telephone Interview (CATI) was adopted. A random sample was drawn from 25 000 telephone numbers. These numbers were generated from the 2007 English residential telephone directory¹ by dropping the last digit, removing duplicates, adding all 10 possible final digits, randomizing order, and selecting as needed. This method provides an equal probability sample that covers unlisted and new numbers but excludes large businesses that used blocks of at least 10 numbers².

Where more than one eligible person resided in a household and more than one was present at the time of the telephone contact, the "Next Birthday" rule was applied to each successful contacted residential unit, i.e., the household member who had his/her birthday the soonest was selected. This reduces the over-representation of housewives in the sample.

2.2 Target respondents

Eligible respondents were residents in different districts of Hong Kong aged between 18 and 64 who spoke Cantonese, Putonghua or English. Foreign domestic helpers were excluded.

2.3 Questionnaire design

A bilingual (Chinese and English) questionnaire with 77 pre-coded questions and 14 open-ended questions (with 12 demographic questions) was designed to cover all the areas outlined in Chapter 1.

A copy of the questionnaire is enclosed in Annex A.

2.4 Pilot study

A pilot study comprising 54 successfully completed interviews was conducted from 16th and 17th March 2011 to test the length, logic, wording and format of the questionnaire. The data collected from these pilot interviews were not counted as part of the survey report.

¹ The Chinese residential telephone directory was not used because the total number of telephone contacts is less than the English residential telephone directory.

² This selection process includes unlisted numbers, new numbers, some business and fax numbers so that the contact rate is lower than a pure directory sample.

2.5 Fieldwork

Fieldwork took place between 13th April and 25th May 2011. Because of the briefing, telephone calls were made between 7:30 p.m. and 10:30 p.m. on 13th April. From 14th April to 15th April, 18th April to 21st April, 26th April to 29th April, 3rd May to 6th May, 9th May, 11th May to 13th May, 16th May to 20th May and 23rd May to 25th May, telephone calls were made between 4:00 p.m. and 10:30 p.m. For 30th April and 7th May, telephone calls were made between 12:00 p.m. and 6:00 p.m.

2.6 Response rate

A total of 24 868 telephone numbers were attempted. The number of successful interviews was 2 123. Refusal and dropout cases amounted to 1 273. All "not available" (4 379), and "no answer" (4 411) cases were attempted five times before being classified as non-contact cases. The contact rate was $38.9\%^3$ and the overall response rate was $62.5\%^4$. Table 2.6 details the breakdown of telephone contact status.

Туре	Final status of contacts ⁵	Number of cases
1	Success	2 123
2	Drop-out	231
3	Refusal	1 042
4	Language problems	47
5	Not eligible	523
6	Business lines	1 341
7	Not available	4 379
8	Busy tone	255
9	No answer	4 411
10	Fax/ Answering machine	806
11	Invalid	9 710
ТОТ	AL	24 868

Table 2.6: Final status of telephone numbers attempted

³ Contact rate = the number of answered telephone calls divided by the total number of calls attempted, i.e. from Table 2.6, Sum of (types 1 to 7) / Total = $(2\ 123 + 231 + 1\ 042 + 47 + 523 + 1\ 341 + 4\ 379)$ / 24 868 = 38.9%.

⁴ Response rate = the number of successful interviews divided by the sum of the numbers of successful interviews, drop-out cases and refusal cases, i.e. from Table 2.6, (type 1) / (type 1 + type 2 + type 3) = $2 \ 123 / (2 \ 123 + 231 + 1042) = 62.5\%$.

⁵ "Drop-out": eligible respondents who initially accepted the interview but failed to complete the interview due to some reasons. "Refusal": eligible respondents who refused the interview. "Language problems": eligible respondents who were not able to speak clearly in any of the three languages. "Not available": eligible respondents who were busy at the time of telephone contact. "Invalid": not a valid telephone line (because we used a random method to generate telephone numbers, see section 2.1).

2.7 Sample size and sample error

A sample size of 2 123 successful interviews was achieved (the target sample size was 2 000). The width of a 95% confidence interval for this sample size is at most $\pm -2.1\%^{6}$. This means that we can have 95% confidence that the true population proportion falls within the sample proportion plus or minus 2.1%. For example, 43.9% of the respondents considered themselves as "overweight", and then the conservative 95% confidence interval for the true percentage of the population considered themselves as "overweight" falls between 43.9% $\pm 2.1\%$, i.e. 41.8% and 46.0%.

2.8 Quality control

All SSRC interviewers were well trained in a standardized approach prior to the commencement of the survey. All interviews were conducted by experienced interviewers fluent in Cantonese, Putonghua and English.

The SSRC engaged in quality checks for each stage of the survey to ensure satisfactory standards of performance. At least 15% of the questionnaires completed by each interviewer were checked by the SSRC independently.

2.9 Statistical analysis and weighting

This survey revealed some differences in gender and age proportions when compared with the Hong Kong population data compiled by the Census and Statistics Department (C&SD) for end-2010. The proportions of respondents among age groups 18-24, 50-64 were much higher than the population while the proportions of respondents aged 25-39 years old were much lower. The sample also contained a higher percentage of females when compared with the population. Table 2.9a shows the differences in terms of age and gender.

In view of the demographic differences between this sample and the population, weighting was applied by gender and age in order to make the results more representative of the general population. The weights are the ratio of the age and gender distribution of the population to that of this sample (Table 2.9b).

$$\pm 1.96 \times \sqrt{\frac{0.5 \times 0.5}{2123}} \times 100\% = 2.1\%$$

⁶ As the population proportion is unknown, 0.5 is put into the formula of the sampling error to produce the most conservative estimate of the sampling error. The confidence interval width is:

Age	This survey			Hong Kong population data – from the C&SD (end 2010)*		
Group	Male	Female	Total	Male	Female	Total
	% of Total	% of Total	% of Total	% of Total	% of Total	% of Total
18-24	7.12%	6.51%	13.63%	6.13%	6.28%	12.41%
25-29	3.37%	3.66%	7.03%	4.53%	6.11%	10.64%
30-34	2.42%	5.13%	7.55%	4.46%	6.42%	10.87%
35-39	2.80%	5.98%	8.78%	4.69%	6.56%	11.25%
40-44	3.47%	7.98%	11.44%	4.91%	6.60%	11.51%
45-49	4.46%	10.59%	15.05%	5.97%	7.09%	13.06%
50-54	3.80%	10.26%	14.06%	6.23%	6.42%	12.65%
55-59	3.80%	6.89%	10.68%	4.91%	4.98%	9.89%
60-64	4.70%	7.08%	11.78%	3.90%	3.82%	7.73%
Total	35.94%	64.06%	100.00%	45.74%	54.26%	100.00%

Table 2.9a: Distribution differences of age and gender between this survey and theHong Kong population data compiled by the C&SD for end-2010

Note: *Provisional figures obtained from the C&SD

Age	Male	Female
18-24	0.861135516	0.964691169
25-29	1.342816951	1.671059744
30-34	1.840889858	1.251050855
35-39	1.675103279	1.095748370
40-44	1.417045472	0.826758967
45-49	1.337013165	0.669442399
50-54	1.640604464	0.625717838
55-59	1.292534486	0.723727592
60-64	0.830372280	0.540287727
Age data missing	1.000000000	1.000000000

Table 2.9b: Weights by age and gender applied in the analyses

Statistical tests were applied to study the significant differences between sub-groups. Associations between selected demographic information and responses of selected questions were examined. Significance testing was conducted at the 5% level (2-tailed). The statistical software, PASW(SPSS) for Windows version 18.0 was used to perform all statistical analyses.

Chapter 3 Findings of the Survey

This chapter presents the findings of this survey after weighting for gender and age. Some percentages in the figures may not add up to the total or 100% because of rounding.

3.1 Demographics

This section briefly describes the characteristics of respondents in this survey (Table 3.1).

3.1.1 Gender and age

As weighting was applied to gender and age in this survey, the distribution of gender and age reported in this report matches the Hong Kong Population aged 18 - 64 compiled by the C&SD for end 2010.

Overall, 54.3% of the respondents were females and 46.7% were aged between 30 and 49.

3.1.2 Marital status

Over three-fifths (63.8%) of the respondents were married - 56.7% had children and 7.1% did not have a child. Nearly one-third (32.3%) of the respondents were never married, 2.8% were divorced or separated and 1.1% of respondents were widowed.

3.1.3 Educational attainment

Most of the respondents (72.4%) had secondary education or above - 30.0% had completed secondary (F.5), 6.8% had matriculation education and 35.6% attained tertiary education or above. The remaining of the respondents (27.6%) had not completed secondary education or had primary education or below.

3.1.4 Occupation

More than one-third (36.9%) of the respondents were not working. This included 8.4% students; 17.5% homemakers; 5.1% unemployed and 5.8% retired persons.

For working respondents, a relatively higher proportion of respondents were clerks (12.9%), followed by employers/ managers/ administrators (9.3%), associate professionals (8.5%) and professionals (8.3%).

3.1.5 Income

More than three-fifths (61.3%) of the respondents had a monthly personal income below \$20,000 - 36.9% had a monthly personal income of \$10,000-\$19,999 and 24.4% had a monthly personal income below \$10,000.

Regarding the monthly household income, less than three-fifths (57.5%) of the respondents had a monthly household income below \$30,000 - 19.3% had a monthly household income of \$20,000-\$29,999, 25.9% had a monthly household income of \$10,000-\$19,999 and 12.4% had a monthly household income below \$10,000.

3.1.6 Household size

Overall, over three-fifths (63.0%) of respondents claimed that their household size was 3-4 persons and 20.9% had 1-2 persons in their household (excluding foreign domestic helpers).

3.1.7 Number of dependants

Over one-third (37.6%) of the respondents did not have any dependants while over twofifths (44.0%) had 1-2 dependants.

3.1.8 Religion

Close to one-third (31.6%) of respondents had religious beliefs. For respondents who had religious beliefs, a relatively higher proportion of them believed in Christianity (16.0%), followed by Buddhism (9.8%) and Catholicism (4.0%).

3.1.9 Type of living quarters

Over half (54.4%) of the respondents were living in private housing, followed by public rental flats (30.7%) and Housing Authority/ Housing Society subsidized sale flats (15.0%).

Gender	Base = 2 123	Age	Base =2 106
Male	45.7%	18-24	12.4%
Female	54.3%	25-29	10.6%
		30-34	10.9%
Marital Status	Base = 2 117	35-39	11.2%
Never married	32.3%	40-44	11.5%
Married and with child(ren) 56.7%	45-49	13.1%
Married and without child	7.1%	50-54	12.6%
Divorced/ Separated	2.8%	55-59	9.9%
Widowed	1.1%	60-64	7.7%
Educational Attainment	Base = 2 115	Occupation	Base = 2 076
Primary or below	9.7%	Employer/ Manager/ Administrator	9.3%
Had not completed secondary	17.9%	Professional	8.3%
Completed secondary (F.5)	30.0%	Associate professional	8.5%
Matriculation	6.8%	Clerk	12.9%
Tertiary (non-degree, degree or above)	35.6%	Service worker	6.5%
		Shop sales worker	3.5%
		Skilled agricultural/ Fishery	0.2%
Type of Living Quarters	Base = 2 097	worker	
Public rental flats	30.7%	Craft and related worker	5.0%
Housing Authority subsidized sale flats	14.3%	Plant and machine operator and assembler	3.3%
Housing Society subsidized	d o cov	Unskilled worker	5.5%
sale flats	0.6%	Student	8.4%
	49.50/	Home-maker	17.5%
Private residential flats	48.3%	Unemployed person	5.1%
Villas/ Bungalows/ Modern village houses	¹ 1.9%	Retired person	5.8%
Simple stone structures/ Traditional village house	2.4%		
Staff quarters	1.5%		

Table 3.1: Demographic information $(Q1, Q23-Q32)^7$

⁷ Refer to the question number in the survey questionnaire, see Annex A.

Religion			Base =2 117
Catholicism			4.0%
Christianity			16.0%
Buddhism			9.8%
Hinduism			0.1%
Muslim			0.3%
Other			1.2%
No religion			68.4%
Monthly Personal	Base = $1 \ 237^8$	Monthly Household	Base =1 652
Income		Income	
Below \$10,000	24.4%	Below \$10,000	12.4%
\$10,000-\$19,999	36.9%	\$10,000-\$19,999	25.9%
\$20,000-\$29,999	16.3%	\$20,000-\$29,999	19.3%
\$30,000-\$49,999	14.7%	\$30,000-\$49,999	21.5%
\$50,000 or above	7.7%	\$50,000 or above	21.0%
Number of	Base = 2 111	Household Size (excluding	Base = 2 101
Dependants		foreign domestic helpers)	
none	37.6%	1	4.5%
1	20.1%	2	16.4%
2	23.9%	3	30.3%
3	10.0%	4	32.8%
4	5.7%	5	11.4%
5	1.6%	6	3.7%
6	0.8%	7 or above	1.0%
7 or above	0.3%		

⁸ For non-working respondents, they did not need to answer question Q27 (monthly personal income).

3.2 Weight status and control

Four questions were asked in this survey to ascertain the respondents' height, weight, waist circumference and the perception of their current weight. Using respondents' reported height and weight, their Body Mass Index (BMI) was derived and classified to assess their weight status according to the World Health Organization (WHO) classifications (both European and Asian Standards).

Those respondents with a body height out of the suggested range 100 - 190cm, body weight out of the suggested range 37 - 120kg or who were pregnant were treated as outliers and excluded from height, weight and BMI analyses (section 3.2.1, 3.2.2 and 3.2.4). Subsequently, a total of 7 outlier cases for height or weight (including three pregnant women) were excluded from analyses in section 3.2.5. In addition, 151 cases were also excluded from the BMI analyses due to missing data for height or weight.

3.2.1 Height (when not wearing shoes)

The reported height of respondents when not wearing shoes ranged from 121.9 to 190.0cm. More than two-fifths (43.6%) of the respondents were within the range from 160.0 to less than 170.0cm, followed by 26.7% in the range from 150.0 to less than 160.0cm. The overall mean and median heights were 163.9cm and 163.0cm respectively (Table 3.2.1).

Height (cm)	Number	% of Total
100.0 - <150.0	48	2.3%
150.0 - <160.0	543	26.7%
160.0 - <170.0	889	43.6%
170.0 - <180.0	474	23.2%
180.0 - 190.0	84	4.1%
Total	2 038*	100.0%
Mean	ean 163.9cm	
Median	163.0cm	

Table 3.2.1: Height distribution of respondents (percentage, mean and median) (Q2a)

Note: *All respondents excluding outliers, "don't know" and refusal

3.2.2 Weight (wearing light clothes)

The reported weight of respondents when wearing simple clothes ranged from 37.7 to 120.0kg. About one-third (34.4%) of the respondents fell into the weight range from 50.0 to less than 60.0kg, followed by 26.1% of the respondents in the range from 60.0 to less than 70.0kg. The overall mean and median weights were 61.0kg and 59.0kg respectively (Table 3.2.2).

Weight (kg)	Number	% of Total
37.0 - <40.0	9	0.4%
40.0 - <50.0	357	17.6%
50.0 - <60.0	698	34.4%
60.0 - <70.0	528	26.1%
70.0 - <80.0	279	13.8%
80.0 - 120.0	156	7.7%
Total	2 028*	100.0%
Mean	61.0kg	
Median	59.0kg	

Table 3.2.2: Weight distribution of respondents (percentage, mean and median) (Q2b)

Note: *All respondents excluding outliers, "don't know" and refusal

3.2.3 Waist circumference

Those respondents with a waist circumference out of the suggested range 50-120cm or who were pregnant were treated as outliers. A total of 3 cases (all of them were pregnant women) were treated as outliers.

The reported waist circumference of the respondents ranged from 55.9 to 114.3cm. About two-fifths (41.2%) of the respondents had their waist circumference in the range from 70.0 to less than 80.0 cm, followed by 28.2% in the range from 80.0 to less than 90.0cm. The overall mean and median waist circumferences were 76.4cm and 76.2cm respectively (Table 3.2.3).

 Table 3.2.3: Waist circumference distribution of respondents (percentage, mean and median) (Q2c)

Waist circumference (cm)	Number	% of Total	
50.0 - <60.0	16	0.8%	
60.0 - <70.0	440	22.7%	
70.0 - <80.0	798	41.2%	
80.0 - <90.0	547	28.2%	
90.0 - 120.0	138	7.1%	
Total	<i>1 939*</i>	100.0%	
Mean	76.4cm		
Median	76.2cm		

Note: *All respondents excluding outliers, "don't know" and refusal

3.2.4 Body Mass Index (BMI)

BMI was derived from weight and height by the following formula:

 $BMI = body weight (kg) / [height (m)]^{2}$

3.2.4.1 Weight status by WHO classification

According to WHO's European and Asian classification of weight status, respondents were classified into four categories of weight status (underweight, normal, overweight and obese) as in Table 3.2.4.1a and Table 3.2.4.1b respectively.

According to the European standard, about two-thirds (68.5%) of the respondents were classified as "normal", 18.4% of respondents were classified as "overweight" and 3.8% were classified as "obese". About one-tenth (9.3%) of the respondents were regarded as "underweight" (Table 3.2.4.1a).

Table 3.2.4.1a: WHO classification for weight status (European standard) (Q2a &Q2b)

Weight status by WHO classifications	BMI	Number	% of Total
Underweight	BMI < 18.5	184	9.3%
Normal	BMI 18.5 – <25.0	1 347	68.5%
Overweight	BMI 25.0 – <30.0	363	18.4%
Obese	BMI ≥ 30.0	74	3.8%
	Total	1 968*	100.0%

Note: *All respondents excluding outliers and missing data for height or weight

Based on the Asian standard, nearly half (49.6%) of the respondents were classified as "normal", 22.2% of the respondents were classified as "obese" and 18.9% were regarded as "overweight", while the remaining 9.3% were classified as "underweight" (Table 3.2.4.1b).

 Table 3.2.4.1b: WHO classification for weight status (Asian standard) (Q2a & Q2b)
 Q2a

Weight status by WHO classifications	BMI	Number	% of Total
Underweight	BMI < 18.5	184	9.3%
Normal	BMI 18.5 – <23.0	976	49.6%
Overweight	BMI 23.0 – <25.0	371	18.9%
Obese	BMI ≥ 25.0	437	22.2%
	Total	1 968*	100.0%

Note: *All respondents excluding outliers and missing data for height or weight

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3.2.5 Perception of current weight status

When respondents were asked their self perceived current weight status, close to half (47.5%) of the respondents perceived it as "just right". However, 43.9% considered themselves as "overweight" while 8.6% considered themselves as "underweight" (Table 3.2.5a).

Perception of current weight	Number	% of Total
Overweight	920	43.9%
Just right	996	47.5%
Underweight	181	8.6%
Total	2 097*	100.0%

 Table 3.2.5a: Perception of current weight status (Q3)
 Image: Comparison of the status (Q3)

Note: * All respondents excluding outliers, "don't know" and refusal

Table 3.2.5b shows the differences of weight status between the WHO (Asian standard) classification and the respondents' perception. Nearly half (47.7%) of respondents considered their weight status as "just right" while close to half (49.6%) of respondents were classified as "normal" under the WHO classification (Asian standard). On the other hand, 43.8% of respondents perceived themselves as "overweight" while 41.1% were classified as "overweight" or "obese" according to the WHO criteria (Asian standard). Overall, 66.9% of the respondents perceived their weight status in a way consistent with the WHO criteria, while 18.4% of the respondents overestimated and 14.7% underestimated.

	Weight status by WHO classification	
standard) and respondents' pe	erception of their current weight (Q2a, Q2b & Q3)	
Table 3.2.5b: Comparison	of weight status between WHO classification (Asian

Cross-tabulation		Weight status by WHO classification				
		(Asian standard)				
		Underweight	Normal	Overweight	Obese	Total
	Overweight	8	259	229	363	858
	% of Total	0.4%	13.2%	11.7%	18.5%	43.8%
Respondents'	Just right	94	637	137	66	934
perception of	% of Total	4.8%	32.5%	7.0%	3.4%	47.7%
current	Underweight	80	75	3	6	165
weight	% of Total	4.1%	3.9%	0.2%	0.3%	8.4%
	Total	182	971	369	435	1 958
	% of Total	9.3%	49.6%	18.9%	22.2%	100.0%

Note: *All respondents excluding refusal, outliers and missing responses either in the questions of perception about current weight or the weight status by WHO classification. The percentages of respondents' perception of current weight are slightly different from Table 3.2.5a since the bases are different.

3.3 Doctor-diagnosed chronic diseases

When respondents were asked whether they had any doctor-diagnosed chronic diseases which require long-term follow up, close to one-tenth (9.8%) of the respondents claimed that they had hypertension, followed by arthritis or rheumatism (7.1%) and diabetes (3.1%). Furthermore, 2.8%, 2.3%, 2.3% and 2.3% of respondents claimed that they had doctor-diagnosed depression, asthma, thyroid disease and liver disease respectively (Fig. 3.3.1).

Base 9.8% 90.2% (2111) Hypertension 92.9% 7.1% (2105)Arthritis or rheumatism 96.9% 3.1% (2110)Diabetes 2.8% 97.2% (2107)Depression 2.3% 97.7% (2116) Asthma (2114)2.3% 97.7% Thyroid disease ∎Yes ∎No 2.3% 97.7% (2112) Liver disease (2108) 2.2% 97.8% Anxiety disorder (2116) 1.4% 98.6% Cancer (2119) 0.7% 99.3% Peptic ulcer (2113) 0.7% 99.3% Kidney disease (2092) 99.4% 0.6% Coronary heart disease (2115) 0.6% 99.4% Schizophrenia, like early psychosis (2118)0.3% 99.7% Stroke (2117)0.03% 99.97% Chronic obstructive pulmonary (2106) disease ,like emphysema 94.0% 6.0% Other chronic disease(s) 0% 20% 40% 60% 80% 100%

Fig. 3.3.1: Whether having doctor-diagnosed chronic diseases which require long-term follow-up (Q4)

Base: All respondents excluding "don't know"

3.4 Smoking habits

In this survey, three questions were asked to understand respondents' smoking habits.

More than three-quarters (76.9%) of the respondents reported that they had never smoked, 10.4% smoked in the past but now abstained and 12.7% of the respondents were current smokers (Fig. 3.4).



Fig. 3.4: Breakdown of smoking habits amongst respondents (Q5a)

Base: All respondents = 2 123

3.4.1 Abstaining from smoking

Among those who smoked before but had now abstained from smoking, most of them (81.8%) reported that they had abstained for more than one year and 15.4% had given up smoking for one month to one year. Only 2.8% of them reported that they had given up smoking for less than one month (Fig. 3.4.1).



Fig. 3.4.1: Length of time abstained from smoking (Q5b)

Base: All past smokers = 220

3.4.2 Cigarette consumption

Among the current smokers, the vast majority (97.0%) of them were daily smokers. About half (49.3%) of the current smokers reported that they smoked 1-10 cigarettes per day and nearly half (47.7%) of the current smokers reported that they smoked at least 11 cigarettes a day (Fig. 3.4.2).

Fig. 3.4.2: Number of cigarettes smoked on average per day by current smokers (Q5c)



Base: All current smokers excluding "don't know" = 264

3.5 Pattern of alcohol consumption

Nine questions were asked in order to understand respondents' alcohol drinking patterns. One respondent who reported drinking more than 24 standard drinks⁹ per drinking day on average was treated as an outlier and was excluded in the analyses from sections 3.5.4 to 3.5.6.

Overall, nearly one-third (31.7%) of the respondents reported that they had consumed at least one alcoholic drink during the thirty days prior to the survey. On the other hand, nearly three-tenths (29.4%) of the respondents reported that they had never drunk alcohol (Fig. 3.5).



Fig. 3.5: Ever had at least one alcoholic drink (Q6a)

Base: All respondents = 2 123

⁹ The amount of drinks consumed was measured using the following standard units: one can or small bottle of beer is equated to 1.5 standard drinks, or one dining glass of wine, or one spirit nip of brandy/whisky, or one small glass of Chinese wine such as rice wine is equated to one standard drink.

3.5.1 Type of alcoholic drink most frequently consumed

Among those respondents who had at least one alcoholic drink during the thirty days prior to the survey, nearly three-fifths (57.2%) of the drinkers reported that they drank "beer" most frequently during the past thirty days, followed by "wine" (33.6%). Other frequently consumed types of alcoholic drink were "spirits" (4.2%), "Chinese rice wine" (1.7%), "fruit liqueur" (1.1%) and "cocktail"(1.1%) (Fig. 3.5.1).

Fig. 3.5.1: Type of alcoholic drink most frequently consumed during the thirty days prior to the survey (Q6b)



Base: Respondents who had at least one alcoholic drink during the thirty days prior to the survey excluding "don't know" = 670

3.5.2 Place where alcoholic drink most frequently consumed

Among those respondents who had at least one alcoholic drink during the thirty days prior to the survey, more than two-fifths (43.0%) of the drinkers reported that they drank at their own homes most frequently during the past thirty days, followed by restaurants (34.4%) and bars, pubs or recreation areas (15.6%) (Fig. 3.5.2a).



Fig. 3.5.2a: Place where alcoholic drink most frequently consumed during the thirty days prior to the survey (Q6c)

(Note: # including park, hotel and street etc.) Base: Respondents who had at least one alcoholic drink during the thirty days prior to the survey excluding "don't know" = 666

The majority (94.6%) of the drinkers drank in Hong Kong most frequently during the thirty days prior to the survey (Fig. 3.5.2b).

Fig. 3.5.2b: The place where alcoholic drink most frequently consumed during the thirty days prior to the survey was in Hong Kong (Q6d)



Base: Respondents who had at least one alcoholic drink during the thirty days prior to the survey excluding "don't know" = 670

Among the drinkers who drank most frequently outside Hong Kong during the thirty days prior to the survey, the majority (83.6%) of them drank in the mainland China (Table 3.5.2).

 Table 3.5.2: Area where alcoholic drink most frequently consumed outside Hong

 Kong during the thirty days prior to the survey (Q6d)

Place	Number	% of Total
Mainland China	30	83.6%
Western countries	3	8.8%
Macau	1	3.9%
Other Asian countries	1	3.7%
Total	36*	100.0%

Note: *Respondents who had at least one alcoholic drink and drank most frequently outside Hong Kong during the thirty days prior to the survey

3.5.3 People with whom alcoholic drink most frequently consumed

Among those respondents who had at least one alcoholic drink during the thirty days prior to the survey, more than two-fifths (44.2%) of the drinkers reported that they drank "with friends" most frequently during the past thirty days, followed by "with family members or relatives" (30.0%) and "with no one" (15.6%) (Fig. 3.5.3).

Fig. 3.5.3: People with whom alcoholic drink was most frequently consumed during the thirty days prior to the survey (Q6e)



Base: All respondents who had at least one alcoholic drink during the thirty days prior to the survey = 673

3.5.4 Frequency of alcohol consumption

Among those respondents who had at least one alcoholic drink during the thirty days prior to the survey, less than one-tenth (6.5%) of the drinkers reported that they drank daily. On the other hand, half (49.6%) of the drinkers reported that they drank less than 1 day per week (Fig. 3.5.4).

Fig. 3.5.4: Frequency of drinkers consuming at least one alcoholic drink during the thirty days prior to the survey (Q6f)



Base: Respondents who had at least one alcoholic drink during the thirty days prior to the survey, excluding outliers, "don't know" and refusal = 664

3.5.5 Amount of alcoholic drinks consumed

Among those who drank at least one alcoholic drink during the thirty days prior to the survey, they were further asked the average number of standard drinks¹⁰ consumed on each drinking day. About two-thirds of them (64.6%) consumed less than 3 standard drinks on each drinking day while about one-seventh (14.4%) consumed 5 or more standard drinks. On average, they consumed 2.9 standard drinks on each drinking day and the median was 1.5 standard drinks (Table 3.5.5).

¹⁰ The amount of drinks consumed was measured using the following standard units: one can or small bottle of beer is equated to 1.5 standard drinks, or one dining glass of wine, or one spirit nip of brandy/whisky, or one small glass of Chinese wine such as rice wine is equated to one standard drink.

	No. of drinkers		
No. of standard drinks	Number	% of Total	
Less than 3	426	64.6%	
3-<5	139	21.0%	
5 or above	95	14.4%	
Total	659*	100.0%	
Mean	2.9 standard drinks		
Median	1.5 standard drinks		

Table 3.5.5: Average number of standard drinks consumed on the days they drank alcohol (Percentage, mean and median) (Q6g)

Note: * Respondents who had at least one alcoholic drink during the thirty days prior to the survey, excluding outliers, "don't know" and refusal

3.5.6 Drinking at least 5 glasses/ cans of alcohol on one occasion (Binge drinking)¹¹

Among those respondents who had at least one alcoholic drink during the thirty days prior to the survey, near one quarter (23.4%) of them had consumed at least 5 glasses/ cans of alcohol on one single occasion during the thirty days prior to the survey (Fig. 3.5.6a).

Fig. 3.5.6a: Consumption of at least 5 glasses/ cans of alcohol on one single occasion by drinkers during the thirty days prior to the survey (Q6h)



Base: Respondents who had at least one alcoholic drink during the thirty days prior to the survey, excluding outliers, "don't know" and refusal = 669

¹¹ Refer to total number of glasses/ cans of any types of alcohol. One single occasion means a period of a few hours.

Among these respondents, about one third (34.7%) of the respondents had engaged in binge drinking once a month, more than one quarter (26.8%) had this experience 2-3 times a month, more than one quarter (28.2%) had the experience 1-6 times a week and more than one-tenth (10.4%) had the experience once or more a day during the thirty days prior to the survey (Fig. 3.5.6b).

Fig. 3.5.6b: Frequency of consuming at least 5 glasses/cans of alcohol on one single occasion by drinkers during the thirty days prior to the survey (Q6h)



Base: Drinkers who drank at least 5 glasses or cans of alcohol on at least one occasion during the thirty days prior to the survey excluding outliers, "don't know" and refusal = 156

Among those respondents who ever had at least one alcoholic drink but excluding those who had at least one alcoholic drink during the thirty days prior to the survey, less than one-sixth (15.5%) of them had ever consumed at least 5 glasses/ cans of alcohol on one single occasion (Fig. 3.5.6c).

Fig. 3.5.6c: Consumption of at least 5 glasses/ cans of alcohol on one single occasion by drinkers who had not consumed alcoholic drink during the thirty days prior to the survey (Q6i)



Base: Respondents who ever had at least one alcoholic drink but excluding those who had at least one alcoholic drink during thirty days prior to the survey excluding "don't know" and refusal= 821

Among those respondents who ever drank 5 glasses or cans of alcohol on one occasion but had not consumed alcoholic drink during the thirty days prior to the survey, more than a quarter (28.3%) of them had engaged in binge drinking less than once a year, more than one-third (34.2%) had engaged in binge drinking 1-3 times a year, 15.1% had engaged in binge drinking 4-11 times a year and more than one-fifth (22.4%) of them had engaged in binge drinking once a month or more (Fig. 3.5.6d).



Fig. 3.5.6d: Frequency of consuming at least 5 glasses/cans of alcohol on one single occasion by drinkers who had not consumed alcoholic drink during the thirty days prior to the survey (Q6i)

Base: All respondents who ever drank at least 5 glasses or cans of alcohol on at least one occasion but not drinking during the thirty days prior to the survey excluding "don't know" and refusal = 127
3.6 Leisure-time exercises

3.6.1 Frequency of doing exercise¹² in leisure-time

Respondents were asked how often they would exercise in their leisure-time during the thirty days prior to the survey. Overall, about two-fifths (39.5%) of the respondents reported that they exercised less than once a month in their leisure-time. On the other hand, 17.9% of respondents reported that they exercised 4 times or more a week and 31.9% exercised one to three times a week in their leisure-time (Fig. 3.6.1).

Fig. 3.6.1: Frequency of doing exercise in leisure-time during the thirty days prior to the survey (Q7)



Base: All respondents excluding "don't know" and refusal = 2 121

¹² Exercise is defined as activities that make people breathe somewhat harder than normal and sweat.

3.7 Sleeping habits

Respondents were asked how many hours on average they slept per day during the thirty days prior to the survey.

3.7.1 Hours of sleeping

Overall, 91.4% of the respondents slept for at least six hours on average per day. The overall mean and median daily sleeping hours were both 7.0 hours (Table 3.7.1).

 Table 3.7.1: Average number of hours that respondents slept per day (Percentage, mean and median) (Q8a)

No. of hours	No. of respondents			
No. of nours	Number	% of Total		
Less than 6 hours	182	8.6%		
6-8 hours	1 795	84.9%		
More than 8 hours	137	6.5%		
Total	2 115*	100.0%		
Mean	7.0 hours			
Median	7.0 hours			

Note : *All respondents excluding "don't know" and refusal

3.7.2 Sleeping problems

During the thirty days prior to the survey, 12.2% of the respondents reported that they frequently (three times or more a week) had 'intermittent awakenings or difficulty in maintaining sleep' during the night, 11.8% frequently had 'difficulty in falling asleep'¹³ and 9.4% frequently had 'early morning awakening and unable to sleep again'. In contrast, 51.2% of the respondents did not have 'intermittent awakenings or difficulty in maintaining sleep' during the night, 55.6% did not have 'difficulty in falling asleep' and 62.4% did not have 'early morning awakening and unable to sleep again' (Fig. 3.7.2).

Overall, more than one third (35.2%) of the respondents reported that they did not experience any of the three sleeping problems during the thirty days prior to the survey.

Respondents were further asked how many days that they did not get enough sleep during the thirty days prior to the survey, close to one third (31.6%) of the respondents reported that they did not get enough sleep for at least 10 days. In contrast, 30.9% reported that they had enough sleep every day in the thirty days prior to the survey. The overall mean and median numbers of days that respondents did not get enough sleep during the thirty days prior to the survey were 8.3 days and 3.0 days respectively (Table 3.7.2).

¹³ 'Difficulty in falling asleep' is defined as 'cannot get to sleep within 30 minutes'.

Fig. 3.7.2: Frequency of having different types of sleeping problems during the thirty days prior to the survey (Q8b-Q8d)



Base: All respondents excluding "don't know" and refusal

Table 3.7.2: Number of days that respondents didn't get enough sleep during the thirty days prior to the survey (percentage, mean and median) (Q8e)

No. of days	No. of respondents			
No. of days	Number	% of Total		
0 day	651	30.9%		
1 - <10 days	789	37.4%		
10 - <20 days	240	11.4%		
20 days or more	426	20.2%		
Total	2 106*	100.0%		
Mean	8.3 days			
Median	3.0 days			

Note : *All respondents excluding "don't know" and refusal

3.7.3 Sleeping quality

Overall, more than two-fifths (43.3%) of the respondents considered that they slept "well" or "very well". On the other hand, 13.8% of respondents considered their sleeping quality "poor" or "very poor" (Fig. 3.7.3).





Base: All respondents = 2 123

3.8 Social support

Respondents were asked how many close relatives or friends that they had and could talk to about private matter, call on for emotional support or financial assistance. Overall, 10.3% of respondents reported that they did not have any close relatives or friends who could provide help for their private, emotional or financial issues. On the other hand, over three-fifths (62.5%) of the respondents had three or more close relatives or friends who could provide support for such a need (Table 3.8).

Table 3.8: Number of close relatives or friends that respondents had and could talk to about private matter, call on for emotional support or financial assistance (Percentage, mean and median) (Q9)

No. of close relatives or	No. of respondents			
friends who could help	Number	% of Total		
None	212	10.3%		
1-2	562	27.2%		
3-4	613	29.7%		
5-6	400	19.4%		
7 or more	276	13.4%		
Total	2 062*	100.0%		
Mean	4.0			
Median	3.0			

Note : *All respondents excluding "don't know" and refusal

3.9 General health status

When respondents were asked to assess their general health status, nearly half (46.9%) of them rated their health status as "good", "very good" or "excellent", while 5.2% considered their health status "poor" (Fig. 3.9).



Fig. 3.9: Perception about general health status (Q10)

Base: All respondents excluding "don't know" = 2 121

3.10 Level of psychological distress

The questions about psychological distress covered in this survey were adopted from the Kessler 6-items Psychological Distress Scale (K6). The scale asks about symptoms related to feeling of anxiety, restlessness, depression and hopelessness and is scored on the basis of their frequency during the thirty days prior to the survey in which "none of the time" is given a score of 0 and "all of the time" a score of 4. The K6 score is the total score which ranges from 0 to 24. Higher K6 score indicates a higher level of psychological distress. Details about the instrument could be found at the designated website.¹⁴

3.10.1 Frequency of experiencing six of the psychological distress symptoms

During the thirty days prior to the survey, 11.7% of the respondents frequently ("most" or "all of the time") felt nervous, 7.0% frequently felt restless or fidgety, 5.4% frequently felt that everything was an effort, 4.0% frequently felt so sad that nothing could cheer them up, 3.8% frequently felt worthless and 2.4% frequently felt hopeless. Overall, about one-sixth (15.8%) of the respondents did not experience any psychological distress symptom during the thirty days prior to the survey (Fig. 3.10.1a).



Fig. 3.10.1a: Frequency of experiencing six of the psychological distress symptoms during the thirty days prior to the survey (Q11a-Q11f)

Base: All respondents excluding "don't know" and refusal

¹⁴ Kessler 6-item Psychological Distress Scale (K6) could be found at http://www.hcp.med.harvard.edu/ncs/k6_scales.php

When respondents were asked in sum to compare the frequency of those feelings (i.e., nervous, hopeless, worthless etc) during the thirty days prior to the survey to their usual experience, 11.8% considered that they had such feelings more often than usual. On the other hand, 12.3% considered they had those feelings less often than usual (Fig. 3.10.1b).

Fig. 3.10.1b: Frequency of having psychological distress symptoms during the thirty days prior to the survey compared to usual experience (Q12)



Base: All respondents excluding "don't know" = 2 113

3.10.2 Prevalence of severe psychological distress

As suggested by Kessler and colleagues, a K6 score of 13 or above was used to indicate "severe psychological distress".

Overall, 5.3% of respondents were classified as having severe psychological distress (SPD). The mean and median K6 scores of respondents were 4.6 and 4.0 respectively (Fig. 3.10.2).



Fig. 3.10.2: Prevalence of severe psychological distress (Q11a-Q11f)

Base: All respondents excluding "don't know" and refusal = 2 107

3.11 Impacts of psychological distress or stress

Among respondents who claimed to have experienced any of the six psychological distress symptoms during the thirty days prior to the survey, they were further asked whether these feelings had affected their work, normal activities and health.

Table 3.11a shows that 88.4% of the respondents who had experienced any of the feelings or emotions reported that they had not been totally unable to work or carry out normal activities because of the emotional problems, while 8.5% and 3.1% of the respondents had been totally unable to work or carry out normal activities for half a day to five days and for more than five days during the thirty days prior to the survey respectively. On average, the number of days in the thirty days prior to the survey that respondents with any psychological distress symptoms were totally unable to work or carry out normal activities because of the emotional problems was 0.7 days.

In contrast, among respondents with severe psychological distress (i.e. who had psychological distress (K6) score of 13 or more), 46.9% had been totally unable to work or carry out normal activities because of the emotional problems, while 24.7% and 28.4% had been totally unable to work or carry out normal activities for half a day to five days and for more than five days during the thirty days prior to the survey respectively. On average, the number of days in the thirty days prior to the survey that respondents with severe psychological distress were totally unable to work or carry out normal activities because of the emotional problems.

No. of days	Respondents with any psychological distress symptoms		Respondents with severe psychological distress		
	Number	% of Total	Number	% of Total	
0 day	1 578	88.4%	51	46.9%	
0.5 – 5 days	152	8.5%	27	24.7%	
More than 5 days	56 3.1%		31	28.4%	
Total	1 785*	100.0%	<i>110</i> [#]	100.0%	
Mean	0.7		5.8		
Median	0.0		1.4		

Table 3.11a: Number of days that respondents were totally unable to work or carry out any normal activities because of the emotional problems during the thirty days prior to the survey (percentage, mean and median) (Q13a)

Note:

* All respondents who had experienced any of the six psychological distress symptoms during the thirty days prior to the survey, excluding "don't know"

[#] All respondents who had psychological distress (K6) score of 13 or more, excluding "don't know".

Apart from the days that respondents were totally unable to work or carry out normal activities because of emotional problems, 76.0% of the respondents with any psychological distress symptoms reported that their abilities to work or carry out normal activities had not been affected by those feelings, 18.2% of the respondents reported that they were able to do about half or less of what they would normally do under the influence of those feelings for half a day to five days during the thirty days prior to the survey and 5.8% reported the physical response for more than five days. On average, the number of days that respondents with any psychological distress symptoms were able to do about half or less of what they would normally do was 1.1 days (Table 3.11b).

In contrast, among respondents with severe psychological distress, 35.5% of the respondents reported that their abilities to work or carry out normal activities had not been affected by their emotional problems, 26.1% of the respondents reported that they were able to do about half or less of what they would normally do under the influence of emotional problems for half a day to five days and 38.5% reported the physical response for more than five days during the thirty days prior to the survey, apart from the days that respondents were totally unable to work or carry out normal activities. On average, the number of days that respondents with severe psychological distress were able to do about half or less of what they would normally do was 6.0 days.

No. of days	Respondents with any psychological distress symptoms		Respondents with severe psychological distress		
	Number % of Total		Number	% of Total	
0 day	1 343	76.0%	36	35.5%	
0.5 – 5 days	322	18.2%	27 26.1%		
More than 5 days	102	5.8%	39 38.5%		
Total	1 766*	100.0%	102 [#] 100.0%		
Mean	1.1		6.0		
Median	C	0.0	3	.0	

Table 3.11b: Number of days that respondents were able to do about half or less of what they would normally do under the influence of the emotional problems during the thirty days prior to the survey (percentage, mean and median) (Q13b)

Note:

* All respondents who had experienced any of the six psychological distress symptoms during the thirty days prior to the survey, excluding "don't know" and refusal

[#] All respondents who had psychological distress (K6) score of 13 or more, excluding "don't know" and refusal.

Among those respondents who claimed that they had experienced any of the six psychological distress symptoms during the thirty days prior to the survey, 2.5% had consulted a doctor or other health professional (at least once) because of those feelings or emotional problems (Table 3.11c). Furthermore, among respondents with severe psychological distress, 18.9% had consulted a doctor or other health professional because of those feelings or emotional problems.

Table 3.11c: Number of times that respondents consulted a doctor or other health professional because of their feelings of psychological distress symptoms or emotional problems during the thirty days prior to the survey (Percentage, mean and median)(Q14)

No. of times	Responden psychologi symp	ts with any cal distress otoms	Respondents with severe psychological distress		
	Number	% of Total	Number	% of Total	
None	1 745	97.5%	91	81.1%	
Once	26	26 1.5%		13.2%	
More than once	18	1.0%	6	5.7%	
Total	1 789*	100.0%	<i>112[#] 100.0%</i>		
Mean	0.1		0.8		
Median	0.0		0	.0	

Note :

*All respondents who had experienced any of the six psychological distress symptoms during the thirty days prior to the survey

[#] All respondents who had psychological distress (K6) score of 13 or more.

Those respondents who claimed that they experienced any of the six psychological distress symptoms were asked how often a physical health problem was the main cause of those feelings in the thirty days prior to the survey. Results showed that 4.2% of them considered it "all of the time" or "most of the time" (Fig. 3.11d). At the same time, 25.3% of the respondents with severe psychological distress considered physical health problem as the main cause of their psychological distress all or most of the time.

Fig. 3.11d: Frequency of having physical health problem as the main cause of the psychological distress symptoms during the thirty days prior to the survey (Q15)



Base: All respondents who had experienced any of the six psychological distress symptoms during the thirty days prior to the survey, excluding "don't know" and refusal = 1780

3.12 Physiological response to stress

When distressed or feeling stressed out, 16.5% of respondents reported that they would often have "neck, shoulder or back pain", followed by "sleep disturbance", such as waking up early, difficulty in falling asleep or insomnia (9.7%), "headache" (7.1%) and "loss of/ increase in appetite" (6.4%) (Fig. 3.12).

Fig. 3.12: Frequency of having physiological response when distressed or feeling stressed out (Q16)



Base : All respondents excluding "don't know" and refusal

3.13 Sources of psychological distress or stress

While 20.3% of the working respondents considered that their distress or stress was related to their work "all of the time" or "most of the time", 13.3% of the respondents who engaged in studying reported that study / school work was a source of psychological distress or stress "all of the time" or "most of the time". Furthermore, 11.0%, 5.9%, 4.2% and 4.1% of respondents cited family matters, financial difficulties, physical condition and interpersonal relationship as a source of distress or stress "all of the time" or "most of the time" or stress "all of the time" or stress "all of the time" or stress or stress "all of the time" or "most of the time" or stress "all of the time" or "most of the time" or stress "all of the time" or "most of the time" or "most

Fig. 3.13: Frequency of respondents' distress or stress being related to the following conditions (Q17a-Q17f)



Base : Study/school work: all respondents who are students or other respondents who are also studying excluding "don't know"; work: all working respondents excluding "don't know"; and the rest sources of psychological distress or stress: all respondents excluding "don't know" and refusal

3.14 Stress Management

Of the 94.1% of respondents who reported having experienced stress, 19.5% of them took exercises to cope with stress. Other frequently cited methods by respondents were 'talking to somebody' (12.2%), 'listening to music' (8.6%) and taking 'more rest / sleep'' (8.3%). In addition, 6.6% of these respondents reported that they had not used any method to cope with stress (Fig. 3.14).





Base: All respondents who have experienced stress excluding "don't know" = 1 995

3.15 Attitude towards organ donation

In this section, eight questions were asked to understand respondents' attitude towards organ donation.

3.15.1 Attitude towards organ donation of family members

Overall, the vast majority (96.1%) of the respondents reported that they would not object if their family members had expressed their will to donate organs after death. The rest (3.9%) reported that they would (Fig. 3.15.1).

Fig. 3.15.1: Whether the respondents would object if their family members wish to donate organs after death (Q19)



Base: All respondents excluding "don't know" and refusal = 2 025

3.15.2 Willingness to donate organs after death

When being asked if respondents were willing to donate their organs, about a quarter (25.6%) of them had not decided or considered it yet. While about two-thirds of the respondents (65.7%) reported that they were willing to donate their organs after death, less than one-tenth (8.8%) of them reported that they were not willing to do so (Fig. 3.15.2a).

Fig. 3.15.2a: Willingness to donate organs after death (Q20a)



Base: All respondents excluding refusal = 2 120

The respondents who were not willing to donate their organs were asked about the reasons. More than a quarter of them (27.9%) reported that the decision was their personal preference and about one fifth of them (20.5%) thought organ donation was against their personal belief, while 13.6% of them would like to keep the body intact (Fig. 3.15.2b).

Fig. 3.15.2b: Reasons of not willing to donate organs (Multiple responses allowed) (Q20b)



(Note: "Others" refer to "not suitable to donate due to health problem") Base= Respondents who were not willing to donate their organs= 186

The respondents who were willing to donate their organs were asked about the reasons. About four-fifths of them (80.5%) reported that they would like to help other people and more than one-third of them (36.1%) reported that they thought organs were useless after death (Fig. 3.15.2c).

Fig. 3.15.2c: Reasons of willing to donate organs after death (Multiple responses allowed) (Q20c)



Base = Respondents who were willing to donate their organs = 1 392

3.15.3 Ways to express wish to donate organ

Among those respondents who were willing to donate their organs, 49.5% of them expressed the wish to their family members, more than one-third (35.7%) of them signed on the organ donation card and only about one-eighth (12.8%) of them had registered at the Centralised Organ Donation Register. Besides, 4.8% of them expressed their wish using other methods, included telling their friends and colleagues (Fig. 3.15.3a).



Fig. 3.15.3a: Methods chosen to express wish to donate organs (Q20d)

Base: Respondents who were willing to donate their organs excluding "don't know" and refusal

However, more than one third (37.3%) of the respondents who were willing to donate their organs had done nothing to express their wish to donate organs (Fig. 3.15.3b).

Fig. 3.15.3b: Whether ever expressed will to donate organs among respondents who were willing to do so (Q20d)



Base: Respondents who were willing to donate their organs excluding "don't know" and "refusal" = 1383

Chapter 4 Sub-group Analysis by Demographic Information and Related Questions

4.1 **Re-grouping of variables**

In this chapter, sub-group analyses are performed based on the breakdown of respondents' demographic information including gender, age, marital status, educational attainment, occupation, monthly household income, type of living quarters and number of dependants to see if there are any significant associations between these demographic factors and the areas being investigated. Additional cross tabulations are also done for special areas of interest. For example, Body Mass Index (BMI) is analyzed by perceptions about current weight.

Some of the responses have been re-grouped into smaller number of categories in order to make the sub-group analyses more robust. Table 4.1a shows how the demographic variables have been re-grouped while Table 4.1b illustrates how the responses of some questions were combined. The responses of "don't know", "can't remember", "not sure", "not applicable", "refuse to answer" and "outliers" have been excluded from all the sub-group analyses in this chapter.

Demographic variable	Original level	Re-grouped level	Sample size (weighted)	
Condon	Male	Male	969	
Genuer	Female	Female	1 154	
		18-24	261	
		25 - 34	453	
Age group	No grouping	35 - 44	479	
		45 - 54	541	
		55 - 64	371	
	Never married	Never married	685	
	Married with child(ren)		1 351	
Marital status	Married without child(ren)	Married		
Surus	Divorced/ Separated	Divorced/ Separated/ Widowed	82	
	Widowed	Divolecu/ Separated/ Widowed		
	Primary or below	Primary or below	205	
	Had not completed secondary	Had not completed secondary	379	
Educational	Completed secondary (F.5)	Completed secondary (F.5)	634	
attainment	Matriculation	Matriculation	144	
	Tertiary (non-degree, degree or above)	Tertiary or above	753	
	Less than \$2,000			
	\$2,000 - \$3,999		120	
Monthly	\$4,000 - \$5,999	Below \$8,000	138	
household	\$6,000 - \$7,999			
income	\$8,000 - \$9,999			
	\$10,000 - \$11,999	\$8,000 - \$13,999	260	
	\$12,000 - \$13,999			

Table 4.1a: Re-grouping the responses of demographic information (Q1, Q23-Q26,
Q28-Q29)

Demographic variable	Original level	Re-grouped level	Sample size (weighted)
	\$14,000 - \$15,999 \$16,000 - \$17,999 \$18,000 - \$19,999	\$14,000 - \$19,999	234
	\$20,000 - \$24,999 \$25,000 - \$29,999 \$30,000 - \$34,999 \$35,000 - \$39,999	\$20,000 - \$39,999	534
	\$40,000 - \$44,999 \$45,000 - \$44,999 \$50,000 - \$49,999 \$50,000 - \$54,999 \$55,000 - \$59,999 \$60,000 or above	\$40,000 or above	486
	Employer/ Manager/ Administrator Professional Associate professional	Managerial/ Professional worker	543
Occupation	Clerk	Clerk	268
	Service worker Shop sales worker	Service worker	208
	Skilled agricultural/ Fishery worker Craft and related worker Plant and machine operator and assembler Unskilled worker	Blue collar worker	291
	Student Home-maker Unemployed person Retired person Other non-working person	Non-working person	766
	Public rental flats	Public rental flats	643
Type of	Housing Authority subsidized sale flats Housing Society subsidized sale flats	Subsidized sale flats	314
living quarters	Private residential flats Villas/ Bungalows/ Modern village houses Simple stone structures/ Traditional village houses Staff quarters	Private housing	1 140
		None	793
Number of	No grouping	1 - 2	929
aependants		3 or more	388

Question No.	Question content	Original level	Re-grouped level	
Q6f	Weekly frequency of	Daily		
	alcoholic drink during the	6 days per week	o days or more per week	
	thirty days prior to the	5 days per week		
	survey	4 days per week	4-5 days per week	
		3 days per week		
		2 days per week	2-3 days per week	
		1 day per week		
		Less than 1 day per week	I day of less per week	
Q6g	Average number of		Less than 3 units	
	on the days drinking	No grouping	3 - <5 units	
	alcohol		5 - 24 units	
Q6h	Frequency of drinking at	Once or more a day		
	of alcoholic drink on one	4-6 times a week	Three times or more per	
	occasion during the thirty	1-3 times a week	month	
	days prior to the survey	Three times a month		
		Twice a month	Twice a month	
		Once a month	Once a month	
		Never	Never	
Q6i	Frequency of drinking at	Once or more a week		
	of alcoholic drink on one	1-3 times a month		
	occasion excluding the	7-11 times a year	At least once a year	
	survey	4-6 times a year		
		1-3 times a year		
		Less than once a year	Never or less than once a	
		Never	year	
Q7	Frequency of doing	Once or more a day	- At least 4 times per week	
	exercise in the reisure-time	4-6 times per week	At least 4 times per week	
		2-3 times per week	1.2 times not weak	
		Once a week	1-3 times per week	
		2-3 times a month	1.3 times nor month	
		Once a month	1-5 unies per monun	
		Less than once a month	Less than once a month	
Q8a	Average hours per day of		Less than 6 hours	
	steeping	No grouping	6-8 hours	
			More than 8 hours	

Table 4.1b: Re-grouping the responses of questions

Question No.	Question content	Original level	Re-grouped level	
Q8e	Number of days didn't get		0 days	
	enougn sleep	NY .	1-<10 days	
		No grouping	10-<20 days	
			20 days or more	
Q8f	Sleep quality	Very well	Very well / Well	
		Well		
		Fair	Fair	
		Poor		
		Very poor	Poor / Very poor	
Q9	Number of close relatives		None	
	or mends who can help		1-2	
		No grouping	3-4	
			5-6	
			7 or more	
Q10	General health status	Excellent	Excellent / Very good /	
		Very Good	Good	
		Good		
		Fair	Fair	
		Poor	Poor	
Q12	Frequency of having	A lot more often than		
	psychological distress	usual		
		Somewhat more often than	More often than usual	
		A little more often than	-	
		usual		
		About the same as usual	About the same as usual	
		usual		
		Somewhat less often than usual	Less often than usual	
		A lot less often than usual		
Q13a	Number of days of totally		0 day	
	unable to work or carrying out any normal activities	No grouping	0 day	
	because of the emotional problems	ito grouping	0.5-30 days	
Q13b	Number of days of being			
C	able to do about half or less	No mouning	0 day	
	because of the emotional	ino grouping	0.5-30 days	
014	Number of consultation to		None	
41	health professional because	No grouping		
	or emotional problems		At least once	

Question No.	Question content	Original level	Re-grouped level
Q15	Frequency of having a	All of the time	All of the time / Most of
	physical health problem	Most of the time	the time
	the psychological distress	Some of the time	Some of the time / A little
		A little of the time	of the time / None of the
		None of the time	time
Q16a - h	Frequency of having	Often	Often / Sometimes
	specific symptoms when in	Sometimes	
	out	Rarely	Raroly / Never
		Never	Karery / Never
Q17a - f	Frequency of stress being	All of the time	All / Most of the time
related to specific source		Most of the time	
		Some of the time	
		A little of the time	Some / A little / None of the time
		None of the time	

Three types of statistical tests are used for sub-group analysis in this report, namely Pearson chi-square test, Kruskal-Wallis test and Spearman's rank correlation ¹⁴.

When both variables are nominal, the chi-square test is used. When one variable is nominal and the other one is ordinal, the Kruskal-Wallis test is adopted. Spearman's rank correlation is performed when both variables are ordinal. Only statistically significant results at the 5% level are presented in this chapter. As for the Pearson chi-

Pearson Chi-square test:

$$\chi^{2} = \sum_{i} \sum_{j} \frac{(Oij - \mathcal{e}_{ij})^{2}}{\mathcal{e}_{ij}}$$

where O_{ij} is the observed value corresponding to the ith column and the jth row, e_{ij} is the expected value corresponding to the ith column and the jth row. The calculation of e_{ij} is as follow: expected value = (ith column total x jth row total) / Overall total.

Kruskal-Wallis test:

$$H = \frac{12}{N(N+1)} \sum_{i=1}^{k} \frac{R_i^2}{n_i} - 3(N+1)$$

where N is the total number of observations, R_i is the sum of the ranks of the values of the ith sample, n_i is the number of observations of the ith sample.

Spearman's rank correlation coefficient:

$$r = \sum_{i=1}^{N} \frac{(X_i - X)(Y_i - Y)}{(N-1)SxSy}$$

where N is the sample size and Sx and Sy are the standard deviations of the rank of the two variables, X_i and Y_i are the ith rank of X and Y respectively and \overline{X} and \overline{Y} are the mean rank of X and Y respectively. The rank order of each data value is used in the above formula (adjustments are made if there are ties). Pairwise method is used to handle missing data.

¹⁴ The statistical tests have been performed using SPSS. Formulae of the statistical tests are included for reference.

square test, only those tables where no more than 20% of the cells had expected values of less than 5 are included.

Only the Pearson chi-square test uses weighted data; the Kruskal-Wallis test and Spearman's rank correlation are carried out without weighting as SPSS is unable to handle non-integer weights for these two tests. However, all percentages are reported after weighting.

4.2 Weight status and control

4.2.1 Weight status

Using the Asian standard of WHO classification, weight status is associated significantly with six demographic variables including gender, age, marital status, educational attainment, occupation and number of dependents (Table 4.2.1).

More male respondents (31.0%) were classified as "obese" while more female respondents (11.8%) were classified as "underweight". Besides, the older the respondents, the more likely that they were classified as "overweight" or "obese". In contrast, the younger the respondents, the more likely that they were classified as "underweight".

Never married respondents (15.2%) were more likely to be "underweight" than the married respondents and the divorced/ separated/ widowed respondents (6.5% and 6.1% respectively). A relatively higher proportion of married respondents and the divorced/ separated/ widowed respondents (25.6% and 23.8% respectively) were classified as "obese".

A relatively higher proportion of respondents with primary education level or below (33.7%) were classified as "obese".

Regarding the respondents' occupation, a relatively higher proportion of blue collar workers (34.5%) were classified as "obese".

Respondents with one or more dependants (ranged from 24.2% to 25.3%) were more likely to be classified as "obese".

							p-value	
Variable	Level	Base	Under- weight	Normal	Over- weight	Obese	Kruskal- Wallis test	Rank Correlation
Condon	Male	900	6.5%	40.5%	22.1%	31.0%	0.000	
Genuer	Female	1067	11.8%	57.3%	16.2%	14.8%	0.000	
	18-24	241	23.2%	62.9%	7.7%	6.2%		
	25-34	415	14.2%	48.9%	18.3%	18.7%	-	0.000
Age	35-44	454	6.1%	50.8%	19.0%	24.0%		
	45-54	503	4.7%	46.6%	21.9%	26.9%		
	55-64	344	4.6%	44.0%	22.5%	28.8%		
	Never married	626	15.2%	54.0%	15.8%	15.1%		
Marital	Married	1263	6.5%	48.1%	19.8%	25.6%		
Marital status	Divorced/ Separated/ Widowed	74	6.1%	40.1%	30.0%	23.8%	0.000	

 Table 4.2.1: Weight status based on BMI and the classification of WHO (Asian standard)

							p-v	alue
Variable	Level	Base	Under- weight	Normal	Over- weight	Obese	Kruskal- Wallis test	Rank Correlation
	Primary or below	171	3.9%	34.3%	28.1%	33.7%		
	Had not completed secondary	348	6.4%	46.0%	22.7%	24.8%		
attainment	Completed secondary (F5)	593	8.9%	48.3%	17.0%	25.8%		0.000
	Matriculation	137	19.9%	50.1%	13.6%	16.3%		
	Tertiary or above	710	10.1%	56.4%	17.4%	16.1%		
	Managerial/ Professional worker	516	8.7%	48.2%	20.2%	22.9%		
0	Clerk	254	11.0%	49.6%	16.9%	22.6%	0.000	
Occupation	Service worker	191	9.2%	45.5%	25.8%	19.5%	0.000	
	Blue collar worker	269	4.7%	39.4%	21.4%	34.5%		
	Not working	696	10.9%	56.5%	15.5%	17.0%		
	None	727	11.8%	52.1%	17.8%	18.3%		
Number of dependents	1-2	865	9.0%	48.2%	18.7%	24.2%		0.004
uependants	3 or more	365	5.2%	47.6%	21.9%	25.3%		

4.2.2 **Perception about current weight status**

Perception about current weight status is associated significantly with respondents' gender, age, marital status, educational attainment and number of dependants (Table 4.2.2a).

A relatively higher proportion of female respondents (48.7%), respondents aged 35-54 (ranged from 48.9% to 49.4%), married or divorced/ separated/ widowed respondents (ranged from 47.0% to 52.7%), those with primary education or below (55.1%) and those with 3 or more dependents (49.4%) considered themselves as "overweight".

						p-v	alue
Variable	Level	Base	Under- weight	Just right	Over- weight	Kruskal- Wallis test	Rank Correlation
Caralan	Male	956	11.7%	50.1%	38.2%	0.000	
Gender	Female	1141	6.1%	45.2%	48.7%	0.000	

Table 4.2.2a: Perception about current weight status (Q3)

						p-v	alue
Variable	Level	Base	Under- weight	Just right	Over- weight	Kruskal- Wallis test	Rank Correlation
	18-24	260	17.7%	56.1%	26.2%		
	25-34	447	8.7%	48.5%	42.8%		
Age	35-44	473	4.6%	46.0%	49.4%	_	0.000
	45-54	535	8.4%	42.7%	48.9%	-	
	55-64	365	8.0%	48.3%	43.7%		
	Never married	678	11.7%	51.7%	36.6%		
Marital	Married	1335	7.3%	45.7%	47.0%		
Marital status	Divorced/ Separated/ Widowed	78	6.1%	41.2%	52.7%	0.000	
	Primary or below	198	8.4%	36.5%	55.1%		
	Had not completed secondary	368	8.9%	45.0%	46.0%		
Educational attainment	Completed secondary (F5)	631	7.9%	47.0%	45.1%		0.000
	Matriculation	141	12.7%	58.3%	29.0%		
	Tertiary or above	750	8.5%	49.9%	41.5%		
	None	785	10.4%	49.9%	39.7%		
Number of dependents	1-2	916	8.6%	46.2%	45.2%		0.001
aependants	3 or more	383	5.6%	45.1%	49.4%		

Analysis of the relation between respondents' perception about their current weight and their weight status based on the Asian standard of WHO classification revealed that there are significant association between perception of weight and weight status.

For those respondents who were classified as "underweight", about half of them considered themselves "just right" (51.8%) or "overweight" (4.1%). 37.0% of "overweight" respondents and 15.2% of "obese" respondents perceived themselves as "just right". In addition, 1.5% of respondents who were classified as "obese" considered themselves "underweight" (Table 4.2.2b).

Table 4.2.2b: Perception about current weight status analysed by weight status based on WHO classification (Asian standard)

		-			-	p-value	
Variable	Level	Base	Under- weight	Just right	Over- weight	Kruskal- Wallis test	Rank Correlation
	Underweight	182	44.1%	51.8%	4.1%		
Weight Status (Asian	Normal	971	7.8%	65.6%	26.6%		0.000
Status (Asian standard)	Overweight	369	0.9%	37.0%	62.1%		0.000
, tuituitu)	Obese	435	1.5%	15.2%	83.3%		

4.3 Doctor-diagnosed chronic diseases

Whether respondents currently have any doctor-diagnosed chronic disease which requires long-term follow up is associated significantly with their age, marital status, educational attainment, occupation, monthly household income and number of dependents.

The older, the lower the monthly household income of the respondents and the fewer dependants the respondents had, the more likely that they had at least two doctor-diagnosed chronic diseases which require long-term follow up when compared with their respective counterparts.

Also, a relatively higher proportion of divorced/ separated/ widowed respondents (22.9%), respondents with primary education or below (21.0%) and non-working respondents (16.4%) reported that they had at least two doctor-diagnosed chronic diseases which require long-term follow up when compared with their respective counterparts (Table 4.3).

						p-v	alue
Variable	Level	Base	None	One	Two or more	Kruskal- Wallis test	Rank Correlation
	18-24	261	89.8%	8.4%	1.8%		
	25-34	453	87.3%	9.2%	3.5%		
Age	35-44	479	77.8%	16.8%	5.4%		0.000
	45-54	541	66.3%	23.2%	10.5%		
	55-64	371	43.2%	30.8%	26.0%		
	Never married	685	82.3%	11.9%	5.8%		
Manital	Married	1351	68.9%	20.6%	10.5%		
status	Divorced/ Separated/ Widowed	82	45.6%	31.5%	22.9%	0.000	
	Primary or below	205	48.2%	30.7%	21.0%		
	Had not completed secondary	379	61.3%	23.9%	14.7%		
Educational	Completed secondary (F5)	634	71.6%	18.6%	9.8%		0.000
attainment	Matriculation	144	87.7%	9.4%	2.9%		
	Tertiary or above	753	82.3%	13.1%	4.6%		
	Managerial/ Professional worker	543	80.5%	15.3%	4.2%		
Occupation	Clerk	268	85.4%	10.4%	4.2%	0.000	
o companion	Service worker	208	76.1%	18.5%	5.4%	01000	
	Blue collar worker	291	66.4%	25.0%	8.7%		
	Not working	766	64.2%	19.4%	16.4%		
	Below \$8,000	138	49.7%	25.5%	24.8%		
Monthly	\$8,000-\$13,999	260	69.0%	19.1%	11.9%		
household income	\$14,000-19,999	234	74.7%	16.8%	8.5%		0.000
	\$20,000-\$39,999	534	76.6%	16.1%	7.2%		
	\$40,000 or above	486	76.7%	17.0%	6.2%		
Number of	None	793	69.8%	18.0%	12.1%		
dependants	1-2	929	74.0%	18.0%	8.0%		0.006
wependunts	3 or more	388	73.5%	18.8%	7.6%		

Table 4.3: Number of doctor-diagnosed chronic disease (Q4a - Q4p)

4.4 Smoking habits

4.4.1 Smoking habits

Smoking is associated significantly with respondents' gender, age, marital status, educational attainment, occupation, number dependants and type of living quarters.

A relatively higher proportion of male respondents (21.6%), those aged 25-54 (ranged from 13.8% to 14.8%), divorced/ separated/ widowed respondents (17.4%), those who had not completed secondary education (21.2%), blue collar workers (27.7%), service workers (22.9%) and those living in the public rental flats (18.0%) were current smokers when compared with their respective counterparts.

Also, the more dependants the respondents had, the more likely that they were current smokers when compared with their respective counterparts (Table 4.4.1).

						p-value	
Variable	Level	Base	Yes, and still smoking	Yes, but not now	Never	Chi- square test	Kruskal- Wallis test
Condor	Male	969	21.6%	16.4%	62.1%	0.000	
Gender	Female	1154	5.3%	5.3%	89.4%	0.000	
	18-24	261	6.1%	3.8%	90.1%		
	25-34	453	14.8%	8.5%	76.7%		
Age	35-44	479	13.8%	11.6%	74.6%		0.000
	45-54	541	14.5%	9.4%	76.0%		
	55-64	371	11.0%	17.6%	71.5%		
	Never married	685	12.4%	7.0%	80.6%		
	Married	1351	12.6%	12.2%	75.2%		
Marital status	Divorced/ Separated/ Widowed	82	17.4%	9.3%	73.3%	0.005	
	Primary or below	205	14.1%	14.7%	71.2%		
	Had not completed secondary	379	21.2%	13.4%	65.4%		
Educational attainment	Completed secondary (F5)	634	15.9%	13.3%	70.8%		0.000
	Matriculation	144	7.0%	3.0%	90.1%		
	Tertiary or above	753	6.7%	6.7%	86.6%		
	Managerial/ Professional worker	543	11.6%	9.2%	79.2%		
	Clerk	268	4.7%	7.0%	88.3%	0.000	
Occupation	Service worker	208	22.9%	12.1%	65.0%		
	Blue collar worker	291	27.7%	17.5%	54.8%		
	Not working	766	8.2%	9.1%	82.7%		

 Table 4.4.1: Smoking habits (Q5a)

		-			-	p-va	alue
Variable	Level	Base	Yes, and still smoking	Yes, but not now	Never	Chi- square test	Kruskal- Wallis test
	None	793	10.4%	9.4%	80.1%		
Number of dependents	1-2	929	12.8%	10.3%	76.9%		0.023
dependants	3 or more	388	17.1%	12.8%	70.1%		
Type of living	Public rental flats	643	18.0%	11.0%	71.0%		
	Subsidized sale flats	314	11.2%	11.5%	77.3%	0.000	
quarters	Private housing	1140	10.2%	9.9%	79.9%		

4.4.2 Number of cigarettes consumed

The number of cigarettes consumed is associated significantly with current smokers' gender, age and educational attainment.

A relatively higher proportion of male respondents (8.9%) and those who had not completed secondary education or below (ranged from 10.5% to 14.1%) reported that they smoked more than 20 cigarettes per day when compared with their respective counterparts. Also the older the respondents, the more likely that they smoked more than 20 cigarettes per day when compared with their respective counterparts (Table 4.4.2).

			Less			More than	р-ч	value
Variable	Level	Base	than 1 cigarette per day now	1-10 cigarettes per day now	11-20 cigarettes per day now	20 cigarettes per day now	Kruskal- Wallis test	Rank Correlation
Gender	Male	206	1.9%	43.5%	45.7%	8.9%	0.000	
Gender	Female	58	7.0%	69.8%	22.2%	1.1%	0.000	
	18-24	16	5.4%	61.2%	33.3%	0.0%		
	25-34	66	1.9%	76.5%	21.6%	0.0%		
Age	35-44	65	1.3%	50.2%	43.4%	5.2%		0.000
	45-54	78	6.4%	36.7%	45.0%	11.9%		
	55-64	39	0.0%	23.8%	59.8%	16.3%		
	Primary or below	27	6.0%	18.9%	61.0%	14.1%		
	Had not completed secondary	78	2.6%	37.8%	49.1%	10.5%		
Educational attainment	Completed secondary (F5)	98	2.8%	58.9%	33.0%	5.3%		0.000
	Matriculation	10	0.0%	61.9%	38.1%	0.0%		
	Tertiary or above	50	3.0%	62.6%	31.1%	3.3%		

Table 4.4.2: Average number of cigarettes which the respondents smoked per day (Q5c)

4.5 Pattern of alcohol consumption

4.5.1 Consumption of alcohol

Consumption of alcohol is associated significantly with respondents' gender, age, marital status, educational attainment, occupation, monthly household income and type of living quarters.

Male respondents (46.2%), those aged 25-34 (39.9%), never married respondents (36.4%), those with tertiary education or above (38.1%), managerial/ professional workers (44.1%) or service workers (39.0%) and those living in private housing (36.8%) were more likely than their respective counterparts to have consumed at least one alcoholic drink during the month prior to the survey.

Also the higher the monthly household income of the respondents, the more likely that they had consumed at least one alcoholic drink during the month prior to the survey than their respective counterparts (Table 4.5.1).

				Yes,			p-v	alue
Variable	Level	Base	Yes, during the last month	during the previous 2-12 months	Yes, more than 12 months ago	No	Chi-square test	Kruskal- Wallis test
	Male	969	46.2%	20.6%	16.4%	16.8%		
Gender	Female	1154	19.5%	18.8%	21.8%	39.9%	0.000	
	18-24	261	30.0%	33.4%	16.2%	20.5%		
	25-34	453	39.9%	20.2%	20.5%	19.4%		
Age	35-44	479	29.7%	22.6%	20.1%	27.6%		0.000
	45-54	541	32.1%	15.8%	17.6%	34.5%		
	55-64	371	24.8%	11.2%	21.7%	42.3%		
	Never married	685	36.4%	26.6%	16.8%	20.1%		
Marital	Married	1351	29.6%	16.1%	21.0%	33.3%		
status	Divorced/ Separated/ Widowed	82	26.1%	18.5%	14.0%	41.3%	0.000	
	Primary or below	205	26.3%	9.8%	20.4%	43.6%		
Educational attainment	Had not completed secondary	379	23.9%	15.6%	23.1%	37.4%		
	Completed secondary (F5)	634	32.1%	19.1%	19.6%	29.3%		0.000
	Matriculation	144	24.9%	27.5%	14.6%	33.0%		
	Tertiary or above	753	38.1%	23.3%	17.9%	20.7%		

Table 4.5.1: Ever had at least one alcoholic drink (Q6a)
		-		Yes,		-	p-v	alue
Variable	Level	Base	Yes, during the last month	during the previous 2-12 months	Yes, more than 12 months ago	No	Chi-square test	Kruskal- Wallis test
	Managerial/ Professional worker	543	44.1%	22.7%	15.1%	18.1%		
Occupation	Clerk	268	25.4%	22.7%	24.8%	27.0%	0.000	
•	Service worker	208	39.0%	17.4%	17.8%	25.8%		
	Blue collar worker	291	35.1%	18.8%	18.5%	27.6%		
	Not working	766	21.5%	17.2%	21.5%	39.9%		
	Below \$8,000	138	22.1%	9.7%	23.8%	44.4%		
Monthly	\$8,000-\$13,999	260	23.3%	20.4%	23.3%	33.0%		
household	\$14,000-19,999	234	29.6%	19.8%	18.7%	31.9%		0.000
income	\$20,000-\$39,999	534	34.5%	22.3%	17.7%	25.5%		
	\$40,000 or above	486	44.1%	19.0%	15.5%	21.4%		
	Public rental flats	643	23.0%	20.8%	21.5%	34.6%		
Type of living	Subsidized sale flats	314	31.7%	17.7%	20.0%	30.6%	0.000	
quarters	Private housing	1140	36.8%	19.6%	17.9%	25.7%		

4.5.2 Type of alcoholic drink most frequently consumed

Among those who had consumed at least one alcoholic drink during the month prior to the survey, the type of alcoholic drink they consumed most frequently is associated significantly with the drinkers' gender, age, educational attainment and monthly household income.

A relatively higher proportion of male respondents (64.1%) drank beer most frequently while female respondents (43.6%) were more likely to drink wine most frequently compared to their respective counterparts.

Respondents aged 18-24 (64.1%) and 45-54 (64.7%) were more likely than those in other age groups to have drunk beer most frequently during the thirty days prior to the survey. More respondents aged 55-64 (45.1%) than their younger counterparts have drunk wine most frequently while more young drinkers aged 18-24 (13.7%) than other drinkers have consumed spirits most frequently during the thirty days prior to the survey.

Respondents with matriculation education level or below (ranged from 59.3% to 70.1% were more likely to have drunk beer most frequently while those with tertiary education (42.7%) were more likely to have drunk wine most frequently during the thirty days prior to the survey when compared to their respective counterparts.

Compared to their respective counterparts, those with monthly household income below \$14,000 (ranged from 66.6% to 67.8%) were more likely to drink beer most frequently while those with monthly household income of \$40,000 (46.4%) or above and \$14,000-\$19,999 (39.7%) were more likely to drink wine most frequently during the thirty days prior to the survey (Table 4.5.2).

								p-v	alue
Variable	Level	Base	Beer	Wine	Chinese rice wine	Spirits	Others	Chi- square test	Kruskal- Wallis test
Condon	Male	445	64.1%	28.6%	2.1%	3.9%	1.3%	0.000	
Gender	Female	225	43.8%	43.6%	0.9%	4.8%	7.0%	p-v Chi-square test 0.000	
	18-24	78	64.1%	17.3%	0.0%	13.7%	4.9%		
	25-34	181	51.7%	37.5%	0.0%	5.1%	5.7%		
Age	35-44	141	57.5%	35.7%	2.4%	2.5%	2.0%		0.000
	45-54	174	64.7%	30.0%	1.7%	1.7%	1.9%		
	55-64	91	46.0%	45.1%	5.6%	1.8%	1.4%		
	Primary or below	53	70.1%	16.7%	5.6%	5.1%	2.5%		
Educational	Had not completed secondary	91	65.3%	22.3%	3.8%	4.6%	4.0%		0.002
attainment	Completed secondary (F5)	202	59.3%	31.7%	1.4%	5.6%	2.1%		0.002
	Matriculation	36	68.3%	24.3%	0.0%	2.4%	5.0%		
	Tertiary or above	287	49.6%	42.7%	0.8%	3.2%	3.7%		
	Below \$8,000	31	67.8%	20.8%	5.4%	6.0%	0.0%		
Monthly	\$8,000-\$13,999	61	66.6%	23.2%	2.2%	1.6%	6.5%		
household	\$14,000-19,999	68	54.1%	39.7%	3.5%	1.3%	1.4%		0.010
income	\$20,000-\$39,999	184	61.9%	25.1%	2.8%	6.9%	3.3%		
	\$40,000 or above	215	48.3%	46.4%	0.4%	2.6%	2.4%		

 Table 4.5.2: Type of alcoholic drink consumed most frequently (Q6b)

4.5.3 Place where alcoholic drink most frequently consumed

Among those respondents who had at least one alcoholic drink during the thirty days prior to the survey, the place where they consumed alcoholic drink most frequently during that period was associated significantly with the drinkers' age.

Respondents aged 55-64 (63.1%) were more likely to consume alcoholic drink most frequently at home than respondents in other age groups. Also the lower the educational attainment the respondents were, the more likely that they drank at home most frequently compared with their respective counterparts.

Respondents aged 45-54 (43.3%), those with education level of matriculation (41.2%)

and those with one to two dependants (37.9%) were more likely to consume alcoholic drink most frequently in restaurants compared with their respective counterparts.

Respondents who completed secondary education (19.3%) were more likely to consume alcoholic drink at bars, pubs or recreation areas most frequently than their respective counterparts. Also, respondents aged below 35 (ranged from 24.7% to 26.5%) were and the fewer number of dependants the respondents had were more likely to consume alcoholic drink most frequently in bars, pubs or recreation areas compared with their respective counterparts (Table 4.5.3).

				At your friend's		Bars,			p-value
Variable	Level	Base	At your own home	or relative's home	Restaur ants	pubs or recreation areas	Work- place	Other	Kruskal- Wallis test
	18-24	78	34.7%	2.2%	27.6%	26.5%	0.0%	9.1%	
	25-34	179	32.9%	6.8%	31.0%	24.7%	1.7%	3.0%	-
Age	35-44	140	44.6%	4.6%	34.0%	16.8%	0.0%	0.0%	0.000
	45-54	173	44.6%	4.4%	43.3%	6.7%	0.9%	0.0%	-
	55-64	91	63.1%	1.4%	31.4%	3.1%	0.0%	0.9%	
	Primary or below	54	55.9%	3.4%	31.9%	4.3%	3% 3.0%		
	Had not completed secondary	89	51.3%	3.9%	32.8%	12.1%	0.0%	0.0%	
Educational attainment	Completed secondary (F5)	202	45.4%	5.6%	28.5%	19.3%	0.7%	0.6%	0.017
	Matriculation	36	39.8%	2.4%	41.2%	11.6%	0.0%	5.1%	
	Tertiary or above	283	36.6%	4.2%	38.6%	16.8%	0.6%	3.3%	
	None	234	39.7%	2.9%	32.3%	20.8%	0.7%	3.6%	
Number of dependents	1-2	281	38.3%	5.7%	37.9%	15.7%	1.1%	1.4%	0.019
aspendants	3 or more	149	57.0%	4.3%	30.7%	7.4%	0.0%	0.6%	

Table 4.5.3: Place where alcoholic drink most frequently consumed during the thirty days prior to the survey (Q6c)

4.5.4 People with whom alcoholic drink most frequently consumed

Among those respondents who had at least one alcoholic drink during the thirty days prior to the survey, whom they consumed alcoholic drink most frequently with is significantly associated with the drinkers' gender, age, marital status, educational attainment, occupation, monthly household income and number of dependents.

Male drinkers were more likely to drink with people from work (12.0%) or drink alone (18.1%) most frequently compared with their female counterparts. Female drinkers were more likely to drink with family members or relatives (37.8%) most frequently compared with their male counterparts.

The older the drinkers were, the more likely that they drank alone most frequently. On the contrary, the younger the drinkers were, the more likely that they drank with friends most frequently. Drinkers aged 35-64 were more likely to drink with family members or relatives (ranged from 33.3% to 39.7%) most frequently while drinkers aged 25-34 (12.3%) and 45-54 (11.8%) were more likely to drink with people from work most frequently when compared with their respective counterparts.

Divorced/ separated/ widowed drinkers were more likely to drink alone (26.9%) or drink with people from work (18.3%) most frequently compared with their respective counterparts. Never married drinkers were more likely to drink with friends (68.3%) most frequently while married drinkers were more likely to drink with family members or relatives (41.3%) most frequently when compared with their respective counterparts.

The lower the educational attainment of the drinkers, the more likely that they drank alone most frequently. On the contrary, the higher the educational attainment of the drinkers, the more likely that they drank with friends most frequently when compared with their respective counterparts.

Compared with their respective counterparts, blue collar workers were more likely to drink alone (25.4%) but less likely to drink with friends (33.8%) most frequently. Clerk were more likely to drink with family members or relatives (37.9%) most frequently while managerial / professional workers were more likely to drink with people from work (16.4%) most frequently when compared with their respective counterparts.

Drinkers with monthly household income below \$8,000 were more likely to drink alone (36.4%) most frequently while drinkers with monthly household income between \$20,000-\$39,999 were more likely to drink with friends (50.5%) or with people from work (13.0%) when compared with their respective counterparts. Drinkers with monthly household income of \$40,000 or above were more likely to drink with family members or relatives (37.2%) when compared with their respective counterparts.

Drinkers with three or more dependants were more likely to drink alone (25.7%) most frequently while drinkers without dependents were more likely to drink with friends (54.2%) most frequently when compared with their respective counterparts (Table 4.5.4).

					With	With	p-v	alue
Variable	Level	Base	No one	With friends	family members / relatives	people from work	Chi- Square test	Kruskal- Wallis test
	Male	447	18.1%	43.8%	26.1%	12.0%	0.001	
Gender	Female	225	10.5%	45.1%	37.8%	6.6%	Chi- Square test 0.001	
	18-24	77	4.6%	66.4%	23.3%	5.7%		
	25-34	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$						
Age	35-44	142	11.6%	39.1%	39.7%	9.7%		0.000
	45-54	174	21.6%	33.3%	33.3%	11.8%		
	55-64	92	26.4%	28.1%	37.6%	7.9%		
	Never married	248	7.9%	68.3%	14.2%	9.6%		
Marital	Married	401	19.8%	28.8%	41.3%	10.1%	0.000	
status	Divorced/Separated/ Widowed	21	26.9%	54.8%	0.0%	18.3%	0.000	
	Primary or below	54	38.6%	20.7%	30.4%	10.3%		
	Had not completed secondary	91	25.8%	40.1%	29.5%	4.6%		
Educational attainment	Completed secondary (F5)	203	15.5%	44.7%	28.1%	11.7%		0.000
	Matriculation	36	12.3%	45.3%	25.6%	16.7%		
	Tertiary or above	286	8.6%	50.0%	31.4%	10.0%		
	Managerial/ Professional worker	240	10.4%	45.1%	28.1%	16.4%		
Occupation	Clerk	68	1.9%	49.8%	37.9%	10.4%	0.000	
Occupation	Service worker	81	22.6%	52.6%	10.3%	14.5%	0.000	
	Blue collar worker	102	25.4%	33.8%	31.7%	9.1%		
	Not working	164	18.6%	44.9%	35.9%	0.5%		
	Below \$8,000	31	36.4%	30.9%	32.7%	0.0%	-	
Monthly	\$8,000-\$13,999	61	24.7%	44.3%	28.3%	2.7%		
household	\$14,000-19,999	69	25.1%	43.8%	23.9%	7.3%		0.000
meome	\$20,000-\$39,999	183	15.1%	50.5%	21.4%	13.0%		
	\$40,000 or above	215	10.9%	40.6%	37.2%	11.4%		
Number of	None	234	13.6%	54.2%	25.7%	6.5%		0.6
dependants	1-2	284	11.9%	44.0%	31.4%	12.7%		0.000
	3 or more	152	25.7%	30.1%	33.1%	11.1%		

Table 4.5.4 People with whom alcoholic drink was most frequently consumed during the thirty days prior to the survey (Q6e)

4.5.5 Frequency of alcohol consumption

Among the respondents who had at least one alcoholic drink during the thirty days prior to the survey, frequency of alcohol consumption per week during the thirty days prior to the survey is associated significantly with the drinkers' gender, age, marital status and educational attainment.

A relatively higher proportion of male respondents (8.9%), those aged 55-64 (16.9%), divorced/ separated/ widowed respondents (16.1%) reported that they drank 6 days or more per week when compared with their respective counterparts. Also, the lower the educational attainment of the respondents, the more likely that they drank 6 days or more per week during the thirty days prior to the survey (Table 4.5.5).

			6 or				p-v	alue
			more	4-5 days	2-3 days	1 day		
			ner ner	Der	nays per	or less per	Kruskal-	Rank
Variable	Level	Base	week	week	week	week	Wallis test	Correlation
Condon	Male	440	8.9%	4.6%	16.6%	70.0%	0.001	
Gender	Female	224	4.4%	2.2%	11.7%	81.7%	0.001	
	18-24	78	4.7%	0.0%	12.5%	82.8%		
	25-34	179	1.4%	2.1%	16.3%	80.2%		
Age	35-44	140	8.6%	4.6%	16.1%	70.8%		0.001
	45-54	173	9.2%	5.2%	14.7%	71.0%		
	55-64	87	16.9%	5.7%	12.9%	64.5%		
	Never married	247	4.2%	2.0%	14.7%	79.1%		
Marital	Married	395	8.9%	4.7%	15.4%	71.1%		
status	Divorced/ Separated/ Widowed	20	16.1%	8.0%	11.7%	64.2%	0.038	
	Primary or below	52	24.4%	12.7%	11.6%	51.3%		
	Had not completed secondary	86	19.9%	1.6%	13.1%	65.4%		
Educational attainment	Completed secondary (F5)	201	5.9%	2.1%	12.6%	79.4%		0.005
	Matriculation	36	2.4%	3.7%	13.3%	80.6%		
	Tertiary or above	286	2.1%	4.0%	18.1%	75.8%		

Table 4.5.5: Frequency of consuming at least one alcoholic drink during the last thirty days prior to the survey (Q6f)

4.5.6 Amount of alcoholic drinks consumed

The average number of standard drinks consumed on the days they drank alcohol during the thirty days prior to the survey is associated significantly with the drinkers' gender, age, marital status and occupation.

A relatively higher proportion of male respondents (18.2%), those who were aged 35-44 (22.4%), never married respondents (19.0%) and divorced/ separated/ widowed respondents (21.0%) and service workers (33.0%) reported that they drank 5-24 units on average on the days they drank alcohol during the thirty days prior to the survey when compared with their respective counterparts (Table 4.5.6).

Table 4.5.6: Average number of standard drinks consumed on the days they drank alcohol (Q6g)

			Less than			p-v	alue
Variable	Level	Base	3 standard drinks	3-<5 standard drinks	5-24 standard drinks	Kruskal- Wallis test	Rank Correlation
Condon	Male	440	58.8%	23.0%	18.2%	0.000	
Gender	Female	219	76.1%	17.1%	6.8%	0.000	
	18-24	76	56.7%	25.7%	17.6%		
	25-34	176	60.1%	25.2%	14.7%		
Age	35-44	141	58.6%	19.0%	22.4%		0.000
-	45-54	172	68.7%	20.7%	10.6%		
	55-64	87	79.4%	14.2%	6.4%		
	Never married	244	53.9%	27.1%	19.0%		
Marital	Married	393	71.5%	17.3%	11.2%		
status	Divorced/ Separated/ Widowed	21	56.3%	22.7%	21.0%	0.000	
	Managerial/ Professional worker	237	64.8%	23.5%	11.7%		
O a sum officer	Clerk	67	77.4%	14.9%	7.7%	0.000	
Occupation	Service worker	79	46.4%	20.6%	33.0%	0.000	
	Blue collar worker	98	57.5%	23.5%	19.0%		
	Not working	161	69.8%	19.9%	10.4%		

4.5.7 Consumption of at least 5 glasses/ cans of alcohol on one single occasion (binge drinking)

Among the respondents who had at least one alcoholic drink during the thirty days prior to the survey, binge drinking during the thirty days prior to the survey is associated significantly with the drinkers' gender, age, educational attainment, occupation and type of living quarters.

A relatively higher proportion of male respondents (13.4%), those aged 35-44 (18.6%), those with primary education or below (24.0%), service workers (23.9%) and blue collar workers (21.8%), and those living in public rental flats (18.8%) reported that they had engaged in binge drinking three times or more during the thirty days prior to the survey when compared with their respective counterparts (Table 4.5.7a).

			Three				p-va	alue
Variable	Level	Base	times or more	Twice	Once	Never	Kruskal- Wallis test	Rank Correlation
	Male	445	13.4%	5.6%	8.7%	72.2%		
Gender	Female	224	5.1%	2.6%	7.0%	85.3%	0.000	
	18-24	78	14.8%	5.6%	9.1%	70.5%		
	25-34	179	6.2%	6.2%	10.5%	77.1%		
Age	35-44	140	18.6%	3.4%	9.3%	68.7%		0.008
	45-54	174	7.8%	5.2%	7.0%	80.0%		
	55-64	91	9.8%	1.8%	3.2%	85.1%		
	Primary or below	54	24.0%	1.5%	4.8%	69.7%		
	Had not completed secondary	90	19.2%	4.0%	8.7%	68.0%		
Educational attainment	Completed secondary (F5)	202	13.9%	5.4%	9.7%	70.9%		0.001
	Matriculation	36	7.5%	2.4%	9.7%	80.4%		
	Tertiary or above	285	3.6%	5.1%	7.2%	84.0%		
	Managerial/Professional worker	238	6.6%	4.3%	6.9%	82.1%		
	Clerk	68	2.5%	5.5%	8.2%	83.8%	0.000	
Occupation	Service worker	81	23.9%	6.5%	9.3%	60.4%	0.000	
	Blue collar worker	102	21.8%	2.7%	11.2%	64.3%		
	Not working	163	6.5%	5.3%	7.7%	80.4%		
Type of	Public rental flats	148	18.8%	5.7%	9.5%	65.9%		
living	Subsidized sale flats	99	12.1%	5.3%	10.8%	71.8%	0.003	
quarters	Private housing	416	7.6%	4.1%	7.1%	81.2%		

Table 4.5.7a: Consumption of at least 5 glasses/ cans of alcohol on one single occasion by drinkers during the thirty days prior to the survey (Q6h)

Among the respondents who ever had at least one alcoholic drink but not drinking during the thirty days prior to the survey, binge drinking excluding the past thirty days is associated significantly with the drinkers' gender and age.

A relatively higher proportion of male respondents (16.5%) and those aged 25-34 (20.2%) reported that they had engaged in binge drinking at least once a year excluding the past thirty days when compared with their respective counterparts (Table 4.5.7b).

Table 4.5.7b: Consumption of at least 5 glasses/ cans of alcohol on one single occasion by drinkers who ever had consumed alcoholic drink but had not drunk during the thirty days prior to the survey (Q6i)

					p-v	alue
Variable	Level	Base	At least once a year	Never or Less than once a year	Chi- square test	Kruskal- Wallis test
C l	Male	355	16.5%	83.5%	0.000	
Gender	Female	466	7.0%	93.0%	0.000	
	18-24	130	9.8%	90.2%		
	25-34	182	20.2%	79.8%		
Age group	35-44	203	9.3%	90.7%		0.000
	45-54	181	8.7%	91.3%		
	55-64	121	4.1%	95.9%		

4.6 Leisure-time exercise

Frequency of doing exercise in leisure-time during the thirty days prior to the survey is associated significantly with respondents' gender, age, educational attainment, occupation, monthly household income, number of dependents and type of living quarters.

Female respondents (42.6%), those aged 35-44 (47.2%), those who had not completed secondary education or below (ranged from 49.0% to 53.5%), blue collar workers (52.0%), those with at least one dependants (ranged from 42.6% to 43.5%) and those living in the public rental flats (46.5%) were more likely than their respective counterparts to have reported that they did leisure-time exercise less than once a month during the thirty days prior to the survey. Also, the lower the monthly household income of the respondents, the more likely that they did leisure-time exercise less than once a month (Table 4.6).

			At				p-va	alue
			least 4	1-3	1-3	Less		
			times	times	times	than	Kruckal.	Rank
Variable	Level	Base	week	week	month	month	Wallis test	Correlation
	Male	968	19.7%	34.5%	10.0%	35.8%	0.002	
Gender	Female	1152	16.4%	29.8%	11.1%	42.6%	0.003	
	18-24	260	10.9%	45.8%	17.4%	25.9%		
	25-34	453	10.4%	36.0%	13.1%	40.5%		
Age	35-44	479	14.4%	27.3%	11.0%	47.2%		0.000
	45-54	541	20.5%	31.2%	8.1%	40.2%		
	55-64	370	33.6%	24.5%	6.2%	35.7%		
	Primary or below	205	28.2%	18.7%	4.1%	49.0%		
.	Had not completed secondary	377	20.7%	20.4%	5.4%	53.5%		
Educational attainment	Completed secondary (F5)	633	19.5%	30.3%	9.2%	41.0%		0.045
	Matriculation	144	14.5%	37.6%	11.9%	36.0%		
	Tertiary or above	753	13.0%	41.7%	16.0%	29.3%		
	Managerial/Professional worker	543	15.3%	38.4%	13.6%	32.7%		
O	Clerk	268	9.8%	35.2%	13.2%	41.7%	0.000	
Occupation	Service worker	208	10.3%	32.5%	11.4%	45.7%	0.000	
	Blue collar worker	291	20.8%	20.7%	6.5%	52.0%		
	Not working	764	23.6%	30.6%	9.0%	36.8%		
	Below \$8,000	138	29.8%	15.2%	4.5%	50.5%		
Monthly	\$8,000-\$13,999	260	18.4%	29.1%	5.6%	47.0%		
household	\$14,000-19,999	234	16.8%	26.5%	12.0%	44.7%		0.015
income	\$20,000-\$39,999	534	15.6%	34.0%	10.9%	39.4%		
	\$40,000 or above	486	16.4%	40.2%	14.2%	29.1%		
Namah an af	None	792	21.8%	33.4%	11.9%	33.0%		
Number of dependents	1-2	928	15.6%	30.6%	10.4%	43.5%		0.000
acpendants	3 or more	388	16.2%	32.5%	8.8%	42.6%		
Type of	Public rental flats	640	17.0%	26.2%	10.3%	46.5%		
living	Subsidized sale flats	314	19.7%	29.1%	10.3%	41.0%	0.002	
quarters	Private housing	1140	18.1%	36.2%	10.9%	34.8%		

 Table 4.6: Frequency of doing exercise in leisure-time during the thirty days prior to the survey (Q7)

4.7 Sleeping habits

4.7.1 Hours of sleeping

Number of hours of sleeping during the thirty days prior to the survey is associated significantly with respondents' age, marital status and occupation.

A relatively higher proportion of respondents aged 45-64 (ranged from 9.9% to 11.5%), divorced / separated / widowed respondents (18.5%) and service workers (11.9%) reported that they slept less than 6 hours per day on average during the thirty days prior to the survey when compared with their respective counterparts (Table 4.7.1).

						p-va	alue
Variable	Level	Base	Less than 6 hours	6-8 hours	More than 8 hours	Kruskal- Wallis test	Rank Correlation
	18-24	261	7.7%	81.5%	10.8%		
	25-34	453	6.3%	86.3%	7.4%		
Age	35-44	476	7.7%	87.5%	4.8%		0.000
	45-54	539	9.9%	84.8%	5.3%		
	55-64	369	11.5%	82.4%	6.1%		
	Never married	683	8.5%	83.8%	7.7%		
Marital	Married	1346	8.1%	86.1%	5.7%	0.024	
status	Divorced/Separated/ Widowed	80	18.5%	72.9%	8.6%	0.024	
	Managerial/ Professional worker	541	8.5%	87.7%	3.8%		
	Clerk	268	5.4%	90.1%	4.5%	0.020	
Occupation	Service worker	208	11.9%	83.6%	4.5%	0.030	
	Blue collar worker	291	9.0%	85.6%	5.4%		
	Not working	761	8.5%	81.2%	10.3%		

Table 4.7.1: Average number of hours that respondents slept per day (Q8a)

4.7.2 Frequency of having difficulty in falling asleep

The frequency of having difficulty in falling asleep during the thirty days prior to the survey is associated significantly with gender, marital status, educational attainment, occupation, monthly household income, number of dependants and type of quarters.

A relatively higher proportion of female respondents (13.5%), divorced / separated / widowed respondents (28.3%), those who had completed matriculation education or below (ranged from 13.4% to 17.4%), non-working respondents (19.7%), those with monthly household income below \$8,000 (23.5%), those without dependants (14.2%) and those living in the public rental flats (14.1%) had difficulty in falling asleep at least 3 times a week during the thirty days prior to the survey when compared with their respective counterparts (Table 4.7.2).

 Table 4.7.2: Frequency of having difficulty in falling asleep during the thirty days prior to the survey (Q8b)

			Not	Less		Three	p-v	alue
Variable	Level	Base	during the past month	than once a week	Once or twice a week	or more times a week	Kruskal- Wallis test	Rank Correlation
Condon	Male	965	61.8%	13.9%	14.3%	9.9%	0.000	
Gender	Female	1149	50.4%	16.6%	19.5%	13.5%	0.000	
	Never married	683	51.6%	18.6%	18.3%	11.5%		
Marital	Married	1345	58.3%	14.0%	16.6%	11.1%		
status	Divorced/ Separated/ Widowed	81	47.1%	8.5%	16.1%	28.3%	Kruskal- Wallis test 0.000 0.001 0.001 0.000	
	Primary or below	204	49.4%	15.4%	18.8%	16.3%	3%	
Educational	Had not completed secondary	377	53.1%	14.0%	17.9%	15.0%		
attainment	Completed secondary (F5)	631	54.3%	14.1%	18.3%	13.4%		0.000
	Matriculation	144	44.5%	18.1%	20.0%	17.4%		
	Tertiary or above	750	61.9%	16.4%	15.0%	6.7%		
	Managerial/ Professional worker	540	63.7%	14.3%	14.0%	8.0%		
Occupation	Clerk	266	56.6%	15.8%	19.2%	8.4%	0.000	
	Service worker	208	55.5%	17.6%	17.8%	9.1%		
	Blue collar worker	290	65.2%	16.2%	13.9%	4.7%		
	Not working	764	46.3%	14.6%	19.4%	19.7%		

			Not	Less		Three	p-v	alue
Variable	Level	Base	during the past month	than once a week	Once or twice a week	or more times a week	Kruskal- Wallis test	Rank Correlation
	Below \$8,000	137	43.0%	16.6%	16.8%	23.5%		
Monthly	\$8,000-\$13,999	257	50.1%	16.8%	16.7%	16.4%		
household	\$14,000-19,999	234	51.0%	14.5%	23.4%	11.1%		0.000
income	\$20,000-\$39,999	534	56.9%	14.5%	17.1%	11.5%		
	\$40,000 or above	486	61.3%	15.1%	14.9%	8.7%		
	None	789	51.6%	16.6%	17.6%	14.2%		
Number of dependents	1-2	925	55.7%	15.8%	17.0%	11.5%		0.000
ucpendants	3 or more	388	64.6%	10.9%	16.7%	7.8%		
T A	Public rental flats	640	51.9%	16.4%	17.6%	14.1%		
Type of living quarters	Subsidized sale flats	313	58.2%	9.6%	22.7%	9.5%	0.032	
quarters	Private housing	1135	57.2%	16.2%	15.4%	11.2%		

4.7.3 Frequency of having intermittent awakenings or difficulty in maintaining sleep

The frequency of having intermittent awakenings or difficulty in maintaining sleep during the thirty days prior to the survey is associated significantly with respondents' gender, age, marital status, educational attainment, occupation, monthly household income and number of dependants.

A relatively higher proportion of female respondents (14.3%), those aged 55-64 (19.4%), divorced / separated / widowed respondents (27.4%), those with primary education level or below (18.4%), non-working respondents (16.9%) reported that they had at least 3 times a week of having intermittent awakenings or difficulty in maintaining sleep during the thirty days prior to the survey when compared with their respective counterparts. Also the lower the monthly household income of the respondents and the fewer dependants the respondents had, the more likely that they reported this sleeping problem at least 3 times a week when compared with their respective counterparts (Table 4.7.3).

			Not	Less		Three	p-va	lue
			during	than	Once or	or more		
Variable	Loval	Dogo	the past	once a	twice a	times a	Kruskal-	Rank Correlation
variable	Level	069	11101111	10 10/	16 90/	0.70/	wants test	Correlation
Gender		908	55.4%	18.1%	10.8%	9.7%	0.000	
	Female	1147	47.7%	19.7%	18.2%	14.3%		
	18-24	260	55.8%	21.2%	15.1%	7.9%		
	25-34	453	52.7%	20.0%	16.0%	11.3%		
Age	35-44	476	54.1%	18.6%	17.3%	10.0%		0.000
	45-54	541	47.6%	18.9%	21.2%	12.2%		
	55-64	368	47.2%	17.0%	16.4%	19.4%		
	Never married	681	52.9%	19.6%	17.3%	10.2%		
Marital	Married	1346	50.9%	19.0%	17.8%	12.3%	0.005	
Status	Divorced/ Separated/ Widowed	82	44.0%	11.7%	16.8%	27.4%	0.005	
	Primary or below	203	45.1%	16.7%	19.9%	18.4%		
Educational	Had not completed secondary	377	51.8%	18.3%	15.9%	13.9%		0.000
attainment	Completed secondary (F5)	631	48.9%	18.4%	18.4%	14.3%		0.000
	Matriculation	144	49.5%	22.0%	19.0%	9.5%		
	Tertiary or above	751	54.8%	19.8%	16.8%	8.5%		
	Managerial/ Professional worker	543	55.4%	18.0%	17.4%	9.1%		
	Clerk	266	48.7%	20.1%	18.6%	12.6%		
Occupation	Service worker	208	54.2%	17.7%	15.3%	12.8%	0.001	
	Blue collar worker	289	55.6%	20.5%	17.7%	6.2%		
	Not working	763	47.0%	18.8%	17.3%	16.9%		
	Below \$8,000	138	43.0%	15.4%	17.4%	24.2%		
Monthly	\$8,000-\$13,999	257	47.7%	21.2%	18.5%	12.6%		
household	\$14,000-19,999	234	47.3%	19.1%	21.3%	12.2%		0.007
income	\$20,000-\$39,999	533	53.7%	18.9%	15.9%	11.4%		
	\$40,000 or above	485	49.9%	22.3%	16.9%	10.9%		
N	None	787	48.5%	18.1%	17.6%	15.8%		
Number of dependents	1-2	927	51.2%	19.7%	18.8%	10.3%		0.027
appendants	3 or more	388	57.6%	18.7%	13.7%	9.9%		

Table 4.7.3: Frequency of having intermittent awakenings or difficulty inmaintaining sleep during the thirty days prior to the survey (Q8c)

4.7.4 Frequency of having early morning awakening and unable to sleep again

The frequency of having early morning awakening and being unable to sleep again during the thirty days prior to the survey is associated significantly with gender, age, marital status, educational attainment, occupation and monthly household income.

A relatively higher proportion of female respondents (11.2%), those aged 55-64 (14.4%), divorced/ separated/ widowed respondents (21.9%), non-working respondents (13.3%) and those who had monthly household income below \$8,000 (16.4%) reported that they had early morning awakening and were unable to sleep again at least 3 times a week during the thirty days prior to the survey. Also, the lower the education level of respondents, the more likely that they reported this sleeping problem when compared with their respective counterparts (Table 4.7.4).

			Not	Less		Three or	p-v	alue
			during	than	Once or	more	77 1 1	
Variable	Level	Base	the past month	once a week	twice a week	times a week	Kruskal- Wallis test	Rank Correlation
	Male	966	64.8%	14.3%	13.6%	7.2%	0.000	
Gender	Female	1150	60.5%	14.0%	14.3%	11.2%	0.000	
	18-24	261	69.8%	14.1%	10.3%	5.7%		
	25-34	452	69.8%	10.7%	11.4%	8.2%		
Age	35-44	477	67.3%	13.7%	11.3%	7.7%		0.000
	45-54	540	54.7%	17.6%	17.6%	10.2%		
	55-64	370	53.0%	14.5%	18.1%	14.4%		
	Never married	682	67.8%	14.3%	10.3%	7.6%		
Marital	Married	1348	60.8%	13.9%	15.7%	9.6%	0.000	
status	Divorced/ Separated/ Widowed	82	46.6%	15.4%	16.1%	21.9%	0.000	
	Primary or below	205	53.0%	14.8%	15.0%	17.3%		
Educational	Had not completed secondary	377	57.6%	14.3%	15.1%	13.0%		
attainment	Completed secondary (F5)	632	61.8%	12.3%	16.6%	9.3%		0.000
	Matriculation	144	62.3%	18.7%	12.1%	6.9%		
	Tertiary or above	749	68.2%	14.5%	11.3%	6.1%		
	Managerial/ Professional worker	541	67.1%	13.6%	12.5%	6.8%		
O a arran a than	Clerk	267	66.2%	13.5%	12.4%	7.9%	0.001	
Occupation	Service worker	208	64.1%	13.4%	13.0%	9.6%	0.001	
	Blue collar worker	289	61.5%	18.7%	15.1%	4.7%		
	Not working	765	58.9%	12.7%	15.1%	13.3%		
	Below \$8,000	138	54.0%	15.3%	14.3%	16.4%		
	\$8,000-\$13,999	259	58.5%	16.0%	14.5%	11.1%		
Monthly	\$14,000-19,999	234	57.6%	15.6%	17.6%	9.2%		
household income	\$20,000-\$39,999	533	67.7%	12.9%	12.4%	7.0%		0.000
	\$40,000 or above	484	65.0%	14.6%	12.2%	8.2%		

Table 4.7.4: Frequency of having early morning awakening and unable to sleep againduring the thirty days prior to the survey (Q8d)

4.7.5 Frequency of not getting enough sleep

The frequency of not getting enough sleep during the thirty days prior to the survey is associated significantly with respondents' age, marital status, educational attainment, occupation, monthly household income and number of dependants.

Respondents aged 35-44 (26.2%), divorced / separated / widowed respondents (31.5%), those who had not completed secondary education level (22.9%) and had completed matriculation (22.5%), clerks (23.1%) and service workers (23.4%) and those with monthly household income of \$14,000-19,999 (25.6%) were more likely than their respective counterparts to report not getting enough sleep for 20 days or more during the thirty days prior to the survey. Also, the more dependants the respondents had, the more likely than their respective counterparts to report not getting enough sleep for 20 days or more during the thirty days prior to the survey. Also, the more dependants the respondents had, the more likely than their respective counterparts to report not getting enough sleep for 20 days or more during the thirty days prior to the survey (Table 4.7.5).

		-	ſ				p-value	
Variable	Level	Base	0 day	1-<10 days	10-<20 days	20 days or more	Kruskal- Wallis test	Rank Correlation
	18-24	260	20.2%	44.6%	15.3%	19.9%		
	25-34	449	27.9%	35.7%	13.7%	22.7%		
Age	35-44	477	26.7%	35.3%	11.8%	26.2%		0.000
	45-54	541	33.9%	39.3%	9.6%	17.3%		
	55-64	363	44.0%	33.4%	8.6%	14.0%		
	Never married	683	26.0%	38.4%	14.5%	21.1%		
Marital	Married	1339	33.2%	37.6%	10.1%	19.2%	0.000	
status	Divorced/ Separated/ Widowed	79	34.7%	25.5%	8.4%	31.5%	0.000	
	Primary or below	201	41.8%	35.7%	7.1%	15.3%		
Educational	Had not completed secondary	375	41.9%	31.2%	3.9%	22.9%		0.000
attainment	Completed secondary (F5)	627	29.3%	39.5%	11.7%	19.5%		0.000
	Matriculation	143	26.7%	37.9%	12.8%	22.5%		
	Tertiary or above	751	24.4%	39.3%	15.9%	20.4%		
	Managerial/Profe ssional worker	542	25.9%	37.2%	14.9%	22.0%		
o	Clerk	267	21.4%	38.1%	17.5%	23.1%	0.000	
Occupation	Service worker	208	33.6%	37.0%	6.0%	23.4%	0.000	
	Blue collar worker	289	40.4%	31.0%	7.8%	20.7%		
	Not working	754	34.0%	38.9%	10.2%	16.9%		
	Below \$8,000	134	43.2%	31.2%	7.8%	17.8%		
Monthly	\$8,000-\$13,999	259	32.7%	38.3%	7.6%	21.4%		
household	\$14,000-19,999	233	29.7%	35.2%	9.5%	25.6%		0.008
income	\$20,000-\$39,999	532	26.4%	42.8%	11.5%	19.3%		
	\$40,000 or above	486	27.7%	35.7%	17.3%	19.3%		
	None	785	32.8%	37.6%	11.9%	17.8%		
Number of dependents	1-2	925	29.1%	37.9%	12.0%	21.0%		0.031
	3 or more	384	31.8%	35.4%	9.4%	23.4%		

Table 4.7.5: Number of days that respondents did not get enough sleep during the thirty days prior to the survey (Q8e)

4.7.6 Sleeping quality

The perception about sleeping quality is associated significantly with respondents' age, marital status, educational attainment, occupation, monthly household income and type of living quarters.

A relatively higher proportion of divorced/ separated/ widowed respondents (30.2%), those with primary education level or below (17.7%), non-working respondents (16.5%) and those living in public rental flats (15.9%) rated their sleeping quality as "poor" or "very poor" when compared with their respective counterparts. Also the older and the lower the monthly household income of the respondents, the more likely the respondents to rate their sleeping quality as "poor" or "very poor" when compared with their respective counterparts. The more likely the respondents to rate their sleeping quality as "poor" or "very poor" when compared with their respective counterparts (Table 4.7.6).

			Very		Poor /	p-va	alue
Variable	Level	Base	well / Well	Fair	Very poor	Kruskal- Wallis test	Rank Correlation
	18-24	261	45.2%	43.4%	11.4%		
	25-34	453	43.7%	44.4%	11.9%		
Age	35-44	479	44.2%	42.0%	13.9%		0.011
	45-54	541	42.6%	42.7%	14.7%		
	55-64	371	40.9%	41.9%	17.2%		
	Never married	685	45.3%	41.2%	13.5%		
Marital	Married	1351	42.9%	44.0%	13.1%	0.000	
status	Divorced/Separated/ Widowed	82	30.4%	39.4%	30.2%	0.000	
	Primary or below	205	36.2%	46.1%	17.7%		
Educational attainment	Had not completed secondary	379	40.2%	43.1%	16.7%		0.000
	Completed secondary (F5)	634	41.7%	44.5%	13.8%		0.000
	Matriculation	144	37.2%	48.8%	14.0%		
	Tertiary or above	753	49.0%	39.6%	11.4%		
	Managerial/Professional worker	543	46.4%	41.0%	12.6%		
Occuration	Clerk	268	46.2%	40.1%	13.7%	0.019	
Occupation	Service worker	208	43.1%	42.5%	14.4%	0.018	
	Blue collar worker	291	44.5%	45.3%	10.2%		
	Not working	766	40.1%	43.4%	16.5%		
	Below \$8,000	138	41.6%	36.7%	21.7%		
Monthly	\$8,000-\$13,999	260	37.6%	46.4%	16.0%		
household	\$14,000-19,999	234	35.5%	50.3%	14.2%		0.000
income	\$20,000-\$39,999	534	46.3%	40.8%	12.9%		
	\$40,000 or above	486	47.3%	41.5%	11.2%		
Type of	Public rental flats	643	39.7%	44.4%	15.9%	0.042	
living quarters	Subsidized sale flats	314	44.6%	42.2%	13.2%	0.043	
quarters	Private housing	1140	44.9%	42.2%	12.9%		

Table 4.7.6: The perception about sleeping quality (Q8f)

4.8 Social support

4.8.1 Number of close relatives or friends who could help

Number of close relatives or friends that respondents could talk to about private matters, call on for emotional support or financial assistance is associated significantly with respondents' gender, age, marital status, educational attainment, occupation, monthly household income and type of living quarters.

A relatively higher proportion of male respondents (13.6%), divorced/ separated/ widowed respondents (25.3%), blue collar workers (18.2%) and respondents living in public rental flats (13.2%) had no close relatives or friends that they could talk to about a private matter, to call on for emotional support or financial assistance when compared with their respective counterparts.

Also, the older, the lower the education level and the monthly household income of the respondents, the more likely that they did not have any close relatives or friends whom they could talk to about private matter, call on for emotional support or financial assistance when compared with their respective counterparts (Table 4.8.1).

			-		-	-		p-v	alue
Variable	Level	Base	None	1-2	3-4	5-6	7 or more	Kruskal- Wallis test	Rank Correlation
Gender	Male Female	943 1119	13.6% 7.5%	28.9% 25.8%	29.4% 30.0%	15.2% 22.9%	12.9% 13.7%	0.009	
Age Marital status	18-24 25-34 35-44 45-54 55-64 Married Divorced/ Separated/ Widowad	257 446 469 526 350 671 1307 79	3.5% 4.0% 7.6% 13.4% 21.6% 6.2% 11.5% 25.3%	19.8% 21.8% 27.6% 33.0% 29.7% 20.8% 30.2% 32.6%	23.5% 34.3% 31.7% 29.0% 27.8% 30.0% 30.5%	30.9% 22.3% 21.3% 15.0% 11.4% 24.9% 16.8%	22.3% 17.5% 11.8% 9.5% 9.4% 18.1% 11.0% 12.4%	0.000	0.000
Educational attainment	Primary or below Had not completed secondary Completed secondary (F5) Matriculation Tertiary or above	197 368 609 138 743	22.3% 15.8% 10.3% 5.7% 5.1%	36.3% 32.0% 28.7% 30.1% 20.6%	25.1% 29.1% 30.1% 28.7% 31.5%	7.8% 15.4% 17.8% 24.2% 24.7%	8.5% 7.9% 13.1% 11.3% 18.0%		0.000

 Table 4.8.1: Number of close relatives or friend who could help (Q9)

								p-v	alue
Variable	Level	Base	None	1-2	3-4	5-6	7 or more	Kruskal- Wallis test	Rank Correlation
	Managerial/Profe ssional worker	532	7.5%	22.5%	32.7%	20.7%	16.5%		
	Clerk	261	5.9%	27.5%	31.8%	25.7%	9.1%		
Occupation	Service worker	199	12.0%	24.4%	27.9%	18.3%	17.5%	0.000	
	Blue collar worker	279	18.2%	33.5%	28.4%	11.2%	8.6%		
	Not working	748	9.9%	28.8%	28.7%	19.8%	12.7%		
	Below \$8,000	132	25.6%	33.9%	23.1%	11.9%	5.5%		
Monthly	\$8,000-\$13,999	254	9.9%	36.3%	28.0%	16.5%	9.3%		
household	\$14,000-19,999	228	9.3%	34.8%	26.4%	18.2%	11.3%		0.000
income	\$20,000-\$39,999	525	6.5%	26.0%	34.2%	19.5%	13.7%		
	\$40,000 or above	477	5.3%	22.0%	33.5%	23.6%	15.6%		
	Public rental flats	622	13.2%	28.5%	30.4%	17.8%	10.0%		
Type of living quarters	Subsidized sale flats	303	8.2%	33.2%	27.0%	17.4%	14.2%	0.000	
	Private housing	1112	9.0%	25.0%	30.5%	20.8%	14.7%		

4.9 General health status

4.9.1 Perceived general health status

Perceived general health status is associated significantly with respondents' gender, age, marital status, educational attainment, occupation, monthly household income and type of living quarters.

A relatively higher proportion of female respondents (5.6%), those aged 55-64 (9.6%), divorced/ separated/ widowed respondents (14.5%), those with primary education level or below (10.4%), non-working respondents (8.7%), and those living in public rental flats (6.6%) self-rated their health status as "poor" when compared with their respective counterparts. Also the lower the monthly household income of the respondents, the more likely that they self-rated their health status as "poor" when compared with their respective counterparts (Table 4.9.1).

						p-va	alue
Variable	Level	Base	Excellent/ very good/ good	Fair	Poor	Kruskal- Wallis test	Rank Correlation
Condon	Male	968	50.4%	44.8%	4.7%	0.000	
Gender	Female	1153	44.0%	50.4%	5.6%	0.000	
	18-24	261	52.4%	42.7%	4.9%		
	25-34	453	50.3%	46.5%	3.2%	-	
Age	35-44	478	48.8%	46.4%	4.8%	-	0.000
	45-54	541	42.6%	52.9%	4.5%	-	
	55-64	371	43.5%	46.9%	9.6%		
	Never married	685	50.4%	43.5%	6.0%	-	
Marital	Married	1349	46.2%	49.5%	4.2%	-	
status	Divorced/ Separated/ Widowed	82	28.1%	57.3%	14.5%	0.000	
	Primary or below	204	36.0%	53.6%	10.4%		
Educational	Had not completed secondary	379	38.5%	54.3%	7.2%		
attainment	Completed secondary (F5)	633	46.2%	49.5%	4.3%		0.000
	Matriculation	144	43.5%	51.5%	5.0%		
	Tertiary or above	753	55.2%	41.2%	3.6%		

 Table 4.9.1: Perceived general health status (Q10)

		-		-		p-value	
Variable	Level	Base	Excellent/ very good/ good	Fair	Poor	Kruskal- Wallis test	Rank Correlation
Occupation	Managerial/ Professional worker	543	53.2%	43.5%	3.2%		
	Clerk	268	48.7%	48.2%	3.0%		
	Service worker	208	48.0%	49.5%	2.5%	0.000	
	Blue collar worker	291	42.2%	53.5%	4.2%		
	Not working	764	43.3%	48.0%	8.7%		
	Below \$8,000	138	35.7%	45.9%	18.4%		
Monthly	\$8,000-\$13,999	260	39.3%	55.2%	5.5%		
household	\$14,000-19,999	234	40.3%	55.4%	4.3%		0.000
income	\$20,000-\$39,999	534	50.8%	45.1%	4.1%		
	\$40,000 or above	486	56.8%	40.8%	2.4%		
T C	Public rental flats	642	43.0%	50.4%	6.6%		
Type of living	Subsidized sale flats	313	45.9%	49.4%	4.7%	0.023	
quar iers	Private housing	1140	49.4%	46.3%	4.4%		

4.10 Level of psychological distress

4.10.1 Severe psychological distress

Experience of severe psychological distress (i.e. K6 score of 13 or above) during the thirty days prior to the survey is associated significantly with respondents' marital status and monthly household income.

Divorced/ separated/ widowed respondents (13.1%) and those with monthly household income of below \$8,000 (9.6%) were more likely to report that they have severe psychological distress during the thirty days prior to the survey when compared with their counterparts (Table 4.10.1a).

Table 4.10.1a: Experience of severe psychological distress during the thirty days prior to the survey (Q11a-Q11f)

			Without		p-v	alue
Variable	Level	Base	severe psychological distress	Severe psychological distress	Chi-square test	Kruskal- Wallis test
	Never married	679	92.6%	7.4%		
Marital	Married	1341	96.2%	3.8%	0.000	
status	Divorced/Separated/ Widowed	81	86.9%	13.1%	0.000	
	Below \$8,000	135	90.4%	9.6%		
Monthly	\$8,000-\$13,999	256	95.2%	4.8%		
household	\$14,000-19,999	234	93.6%	6.4%		0.043
income	\$20,000-\$39,999	534	94.8%	5.2%		
	\$40,000 or above	486	95.7%	4.3%		

Severe psychological distress and physical health

The number of doctor-diagnosed chronic diseases which required long-term follow up and respondents' perception about their perceived general health status are associated significantly with having severe psychological distress during the thirty days prior to the survey.

The more chronic diseases the respondents had and the poorer the general health status the respondents rated, the more common they were to report having severe psychological distress during the thirty days prior to the survey (Table 4.10.1b).

			****	q	p-value
Variable	Level	Base	without severe psychological distress	Severe psychological distress	Kruskal-Wallis test
Number of	0	1523	96.4%	3.6%	
doctor-diagnosed	1	386	93.6%	6.4%	0.000
chronic diseases	2 or more	198	83.7%	16.3%	
Self rated health	Excellent/ very good/ good	990	99.1%	0.9%	
status	Fair	1006	93.0%	7.0%	0.000
	Poor	110	70.7%	29.3%	

Table 4.10.1b: Experience of severe psychological distress and physical health

Severe psychological distress and health behaviour

Respondents' frequency of having physical activities in the leisure time is associated significantly with having severe psychological distress during the thirty days prior to the survey (Table 4.10.1c).

The less frequent the respondents exercised in leisure-time, the more common they were to report having severe psychological distress during the thirty days prior to the survey when compared with their respective counterparts (Table 4.10.1c).

Table 4.10.1c: Experience of severe psychological distress and health relatedbehaviours

			Without	Severe	p-value
Variable	Level	Base	psychological distress	psychological distress	Kruskal-Wallis test
	At least 4 times per week	376	95.9%	4.1%	
Frequency of	1 - 3 times per week	675	95.6%	4.4%	
leisure-time exercise	1 - 3 times per month	223	95.6%	4.4%	0.004
	Less than once a month	831	93.1%	6.9%	

Severe psychological distress and social support

Availability of social support is associated significantly with having severe psychological distress during the thirty days prior to the survey.

The fewer the close relatives or friends that the respondents can talk to about private matters, call on for emotional support or financial assistance, the more common that the respondents reported to have severe psychological distress during the thirty days prior to the survey when compared with their respective counterparts (Table 4.10.1d).

Variable	Land	Dece	Without severe psychological	Severe psychological	p-value Kruskal-Wallis
variable	Level	Base	aistress	aistress	test
	None	209	85.3%	14.7%	
Number of close	1-2	556	93.7%	6.3%	
relatives or friends who could	3-4	612	95.9%	4.1%	0.000
help	5-6	398	96.2%	3.8%	
-	7 or more	275	98.8%	1.2%	

 Table 4.10.1d: Experience of severe psychological distress and social support

4.10.2 Frequency of having psychological distress symptoms

The frequency of having psychological distress symptoms during the thirty days prior to the survey as compared to usual experience is associated significantly with respondents' age, marital status, educational attainment and number of dependants.

Respondents aged 18-24 (25.4%), never married respondents (19.3%), those who had completed matriculation (21.3%) and those without dependants (14.6%) were more likely to have psychological distress symptoms more often than usual during the thirty days prior to the survey when compared with their counterparts (Table 4.10.2).

			More	More		p-va	alue
Variable	Level	Base	often than usual	About the same as usual	often than usual	Kruskal- Wallis test	Rank Correlation
	18-24	261	25.4%	63.1%	11.5%		
	25-34	452	15.1%	73.1%	11.8%		
Age	35-44	475	9.0%	77.8%	13.1%		0.000
	45-54	539	7.8%	77.9%	14.3%		
	55-64	368	7.9%	82.1%	10.0%		
	Never married	680	19.3%	69.6%	11.1%		
	Married	1346	7.8%	79.2%	12.9%		
Marital status	Divorced/ Separated/ Widowed	82	15.6%	72.3%	12.1%	0.000	
	Primary or below	204	8.4%	79.6%	12.0%		
	Had not completed secondary	375	11.6%	73.2%	15.2%		
Educational attainment	Completed secondary (F5)	632	8.0%	76.9%	15.1%		0.000
	Matriculation	144	21.3%	70.7%	8.0%		
	Tertiary or above	750	14.3%	76.1%	9.5%		
	None	790	14.6%	74.5%	10.9%		
Number of dependents	1-2	923	9.6%	77.9%	12.4%		0.042
ucpenuants	3 or more	388	11.6%	73.5%	14.9%		

Table 4.10.2: Frequency of having psychological distress symptoms during the thirty days prior to the survey compared to usual experience (Q12)

4.11 Impacts of psychological distress or stress

4.11.1 Totally unable to work or carry out any normal activities

Among those who claimed that they experienced any of the six psychological distress symptoms during the thirty days prior to the survey, the number of days that the respondents were totally unable to work or carry out any normal activities because of those symptoms is significantly associated with respondents' age, marital status, educational attainment, occupation, monthly household income and type of living quarters.

Respondents aged 18-24 (18.5%), divorced/ separated/ widowed respondents (20.2%), those who had not completed secondary school (15.5%), non-working respondents (16.7%) and those living in the public rental flats (15.9%) were more likely to claim that they were unable to work or carry out any normal activities because of the six psychological distress symptoms for at least half day during the thirty days prior to the survey when compared with their respective counterparts.

Also, the lower the monthly household income of the respondents, the more likely they claimed that they were unable to work or carry out any normal activities because of the six psychological distress symptoms for at least half day during the thirty days prior to the survey when compared with their respective counterparts (Table 4.11.1).

					p-value		
Variable	Level	Base	0 day	0.5-30 days	Chi-square test	Kruskal- Wallis test	
	18-24	247	81.5%	18.5%			
	25-34	415	86.6%	13.4%			
Age	35-44	413	91.2%	8.8%		0.000	
	45-54	436	89.7%	10.3%			
	55-64	262	90.9%	9.1%			
	Never married	629	85.7%	14.3%			
Marital status	Married	1088	90.4%	9.6%	0.001		
	Divorced/ Separated/ Widowed	64	79.8%	20.2%	0.001		
	Primary or below	150	85.9%	14.1%			
	Had not completed secondary	303	84.5%	15.5%	-		
Educational	Completed secondary (F5)	520	88.4%	11.6%	-	0.014	
attainment	Matriculation	126	85.1%	14.9%		0.014	
	Tertiary or above	681	91.2%	8.8%			

Table 4.11.1: Number of days that respondents were totally unable to work or carry out any normal activities because of the emotional problems during the thirty days prior to the survey (Q13a)

					p-value	
Variable	Level	Base	0 day	0.5-30 days	Chi-square test	Kruskal- Wallis test
	Managerial/ Professional worker	482	94.1%	5.9%		
	Clerk	247	87.4%	12.6%		
Occupation	Service worker	173	88.2%	11.8%	0.000	
	Blue collar worker	217	90.2%	9.8%		
	Not working	627	83.3%	16.7%		
	Below \$8,000	105	78.9%	21.1%		
Monthly	\$8,000-\$13,999	208	87.2%	12.8%		
household	\$14,000-19,999	207	87.6%	12.4%		0.001
income	\$20,000-\$39,999	467	88.1%	11.9%	_	
	\$40,000 or above	421	92.0%	8.0%		
Tuno of living	Public rental flats	522	84.1%	15.9%		
auarters	Subsidized sale flats	261	90.1%	9.9%	0.001	
quarters	Private housing	983	90.4%	9.6%		

4.11.2 Able to do about half or less of what would normally do

Among those respondents who claimed that they experienced any of the six psychological distress symptoms during the thirty days prior to the survey, the number of days that respondents were able to do about half or less of what would normally do because of the symptoms is significantly associated with respondents' age, marital status, educational attainment and occupation.

Respondents who never married (31.2%), those who had completed matriculation (29.0%) and non-working respondents (28.7%) were more likely to claim that they were able to do about half or less of what would normally do because of the six psychological distress symptoms for at least 0.5 day during the thirty days prior to the survey when compared with their respective counterparts.

Also, the younger the respondents, the more likely they claimed that they were able to do about half or less of what would normally do because of the six psychological distress symptoms for at least half day during the thirty days prior to the survey when compared with their respective counterparts (Table 4.11.2).

Table 4.11.2: Number of days that respondents were able to do about half or less of what they would normally do because of the emotional problems during the thirty days prior to the survey (Q13b)

					p-v	alue
Variable	Level	Base	0 day	0.5-30 days	Chi-square test	Kruskal- Wallis test
	18-24	247	59.6%	40.4%		
	25-34	412	73.3%	26.7%		
Age	35-44	408	76.9%	23.1%		0.000
	45-54	429	82.2%	17.8%		
	55-64	259	83.9%	16.1%		
	Never married	625	68.8%	31.2%		
Marital status	Married	1074	80.5%	19.5%	0.000	
Maritai status	Divorced/Separated/ Widowed	64	71.9%	28.1%	0.000	
	Primary or below	146	84.1%	15.9%		
	Had not completed secondary	298	77.2%	22.8%		
Educational	Completed secondary (F5)	514	75.0%	25.0%		0.034
attainment	Matriculation	126	71.0%	29.0%	_	
	Tertiary or above	677	75.4%	24.6%		
	Managerial/Professional worker	480	79.3%	20.7%		
Occupation	Clerk	246	76.6%	23.4%	0.007	
Occupation	Service worker	173	74.9%	25.1%	0.007	
	Blue collar worker	216	81.4%	18.6%		
	Not working	613	71.3%	28.7%		

4.11.3 Health consultation for psychological distress or stress

Among those respondents who claimed that they experienced any of the six psychological distress symptoms during the thirty days prior to the survey, frequency of consulting a doctor or other health professionals because of any of the six psychological distress symptoms is associated significantly with respondents' marital status, occupation and monthly household income.

Divorced/ separated/ widowed respondents (6.9%) and non-working respondents (4.4%) were more likely to have consulted a health professional because of the six psychological distress symptoms at least once during the thirty days prior to the survey when compared with their respective counterparts. Also, the lower the monthly household income of the respondents, the more likely that they have consulted a health professional for the psychological distress or stress at least once during the thirty days prior to the survey when compared with their counterparts. The stress at least once during the thirty days prior to the survey when compared with their counterparts (Table 4.11.3).

Table 4.11.3: Frequency of consulting health professional because of psychological
distress during the thirty days prior to the survey for those who had experienced any
of the six psychological symptoms (Q14)

					p-va	alue
Variable	Level	Base	None	At least once	Chi- square test	Kruskal- Wallis test
M	Never married	630	96.5%	3.5%		
Maritai status	Married	1089	98.4%	1.6%	0.003	
status	Divorced /Separated/Widowed	66	93.1%	6.9%		
	Managerial/Professional worker	482	98.2%	1.8%		
	Clerk	247	98.4%	1.6%		
Occupati	Service worker	173	98.6%	1.4%	0.004	
	Blue collar worker	217	99.6%	0.4%		
	Not working	631	95.6%	4.4%		
	Below \$8,000	108	91.2%	8.8%		
Monthly	\$8,000-\$13,999	209	97.3%	2.7%		
household	\$14,000-19,999	207	98.4%	1.6%		0.004
income	\$20,000-\$39,999	467	98.5%	1.5%		
	\$40,000 or above	421	98.6%	1.4%		

Among those respondents who claimed that they experienced any of the six psychological distress symptoms, frequency of having a physical health problem as the main cause of those feelings is associated significantly with respondents' age, educational attainment, occupation and monthly household income.

Respondents aged 55-64 (6.9%), non-working respondents (6.3%) and those with monthly household income below \$8,000 (12.8%) were more likely that a physical health problem was the main cause of the psychological distress symptoms all of the time or most of the time during the thirty days prior to the survey when compared with their respective counterparts.

Also, the lower the educational attainment of the respondents, the more likely that a physical health problem was the main cause of the psychological distress symptoms all or most of the time during the thirty days prior to the survey when compared with their counterparts (Table 4.11.4).

				Some of the	p-v	alue
Variable	Level	Base	All of the time / Most of the time	time / A little of the time / None of the time	Chi-square test	Kruskal- Wallis test
	18-24	247	3.8%	96.2%		
	25-34	415	2.3%	97.7%		
Age	35-44	412	4.0%	96.0%		0.021
	45-54	432	5.2%	94.8%		
	55-64	261	6.9%	93.1%		
	Primary or below	150	7.0%	93.0%		
	Had not completed secondary	301	5.8%	94.2%		
Educational attainment	Completed secondary (F5)	516	4.1%	95.9%		0.019
	Matriculation	126	3.3%	96.7%		
	Tertiary or above	681	3.3%	96.7%		
	Managerial/ Professional worker	482	3.3%	96.7%		
	Clerk	246	3.3%	96.7%	0.01.6	
Occupation	Service worker	172	1.2%	98.8%	0.016	
	Blue collar worker	213	4.1%	95.9%		
	Not working	629	6.3%	93.7%		
Monthly	Below \$8,000	105	12.8%	87.2%		
	\$8,000-\$13,999	207	4.8%	95.2%		
household	\$14,000-19,999	206	4.9%	95.1%		0.000
income	\$20,000-\$39,999	466	2.4%	97.6%		
	\$40,000 or above	421	1.9%	98.1%		

Table 4.11.4: Frequency of having a physical health problem which is the main cause of the psychological distress during the thirty days prior to the survey (Q15)

4.12 Physiological response to stress

4.12.1 Frequency of having headache

Frequency of having headache when distressed or feeling stressed out is significantly associated with respondents' gender, age, marital status, type of living quarters and number of dependants.

Female respondents (31.5%), respondents aged 18-24 (32.9%) or 35-44 (31.3%),divorced/ separated/ widowed respondents (37.3%), respondents living in public rental flats (29.2%) and those with one or two dependants (27.6%) were more likely to report that they often or sometimes had headache when distressed or feeling stressed out when compared with their respective counterparts (Table 4.12.1).

					p-value	
Variable	Level	Base	Often / Sometimes	Rarely / Never	Chi-square test	Kruskal- Wallis test
Caralan	Male	969	18.8%	81.2%	0.000	
Gender	Female	1148	31.5%	68.5%	0.000	
	18-24	261	32.9%	67.1%		
	25-34	453	24.6%	75.4%		
Age	35-44	479	31.3%	68.7%		0.000
	45-54	539	21.1%	78.9%		
	55-64	369	20.2%	79.8%		
	Never married	684	26.4%	73.6%		
Marital status	Married	1347	24.6%	75.4%	0.035	
	Divorced/ Separated/ Widowed	81	37.3%	62.7%	0.055	
Type of living	Public rental flats	642	29.2%	70.8%		
auarters	Subsidized sale flats	313	26.8%	73.2%	0.032	
quarters	Private housing	1136	23.6%	76.4%		
N	None	791	23.3%	76.7%		
Number of dependents	1-2	926	27.6%	72.4%		0.050
acpendants	3 or more	388	25.8%	74.2%		

Table 4.12.1 Frequency of having headache when distressed or feeling stressed out (Q16a)

4.12.2 Frequency of loss of or increase in appetite

Frequency of loss of or increase in appetite when distressed or feeling stressed out is significantly associated with respondents' gender, age, marital status, educational attainment and occupation.

Female respondents (27.9%), never married respondents (33.2%), respondents with educational attainment at matriculation or above (ranged from 27.8% to 37.6%) and clerks (30.5%) were more likely to report that they often or sometimes experience a loss of or increase in appetite when distressed or feeling stressed out when compared with their respective counterparts. Also, the younger the respondents, the more likely that they often or sometimes experienced a loss of or increase in appetite when distressed or feeling stressed out when distressed or feeling stressed out when compared with their counterparts (Table 4.12.2).

Table 4.12.2 Frequency of loss of or increase in appetite when distressed or feeling stressed out (Q16b)

				Ē	p-value	
Variable	Level	Base	Often / Sometimes	Rarely / Never	Chi-square test	Kruskal- Wallis test
Condon	Male	966	19.6%	80.4%	0.000	
Gender	Female	1150	27.9%	72.1%	0.000	
	18-24	261	38.9%	61.1%		
	25-34	453	30.4%	69.6%		
Age	35-44	477	24.4%	75.6%		0.000
	45-54	540	18.1%	81.9%		
	55-64	368	15.0%	85.0%		
	Never married	685	33.2%	66.8%		
Marital status	Married	1346	19.3%	80.7%	0.000	
	Divorced/ Separated/ Widowed	80	27.5%	72.5%	0.000	
	Primary or below	204	15.1%	84.9%		
Educational	Had not completed secondary	377	18.4%	81.6%		0.000
attainment	Completed secondary (F5)	631	23.0%	77.0%		0.000
	Matriculation	144	37.6%	62.4%		
	Tertiary or above	752	27.8%	72.2%		
	Managerial/Professional worker	542	24.2%	75.8%		
Occupation	Clerk	267	30.5%	69.5%	0.022	
Occupation	Service worker	206	24.8%	75.2%	0.025	
	Blue collar worker	291	18.3%	81.7%		
	Not working	763	24.2%	75.8%		

4.12.3 Frequency of having neck/ shoulder/ back pain

Frequency of having neck/ shoulder/ back pain when distressed or feeling stressed out is significantly associated with respondents' gender, occupation and number of dependants.

Female respondents (43.0%), clerks (45.9%) and those with one or more dependants (ranged from 39.1% to 40.0%) were more likely to report that they often or sometimes had neck/ shoulder/ back pain when distressed or feeling stressed out when compared with their respective counterparts (Table 4.12.3).

					p-value	
Variable	Level	Base	Often / Sometimes	Rarely / Never	Chi-square test	Kruskal- Wallis test
Condon	Male	960	31.0%	69.0%	0.000	
Gender	Female	1142	43.0%	57.0%	0.000	
	Managerial/Professional worker	541	40.6%	59.4%		
	Clerk	264	45.9%	54.1%	0.001	
Occupation	Service worker	207	34.3%	65.7%	0.001	
	Blue collar worker	288	30.6%	69.4%		
	Not working	758	35.5%	64.5%		
Number of	None	785	33.4%	66.6%		
	1-2	920	40.0%	60.0%		0.000
ucpendants	3 or more	385	39.1%	60.9%		

Table 4.12.3 Frequency of having neck/ shoulder/ back pain when distressed or feeling stressed out (Q16c)
4.12.4 Frequency of having stomach ache

Frequency of having stomach ache when distressed or feeling stressed out is significantly associated with respondents' gender and occupation.

Female respondents (20.9%) and clerks (23.3%) were more likely to report that they often or sometimes had stomach ache when distressed or feeling stressed out when compared with their respective counterparts (Table 4.12.4).

 Table 4.12.4 Frequency of having stomach ache when distressed or feeling stressed out (Q16d)

					p-value	
Variable	Level	Base	Often / Sometimes	Rarely / Never	Chi-square test	
Gender	Male	962	9.1%	90.9%	0.000	
	Female	1146	20.9%	79.1%	0.000	
	Managerial/Professional worker	543	12.2%	87.8%		
	Clerk	265	23.3%	76.7%		
Occupation	Service worker	208	14.4%	85.6%	0.000	
	Blue collar worker	288	8.7%	91.3%		
	Not working	759	18.4%	81.6%		

4.12.5 Frequency of having abdominal pain

Frequency of having abdominal pain when distressed or feeling stressed out is significantly associated with respondents' age, marital status and educational attainment.

Respondents aged 18-24 (17.7%), divorced / separated/ widowed respondents (17.6%) and those with educational attainment at matriculation (14.9%) were more likely to report that they often or sometimes had abdominal pain when distressed or feeling stressed out when compared with their respective counterparts (Table 4.12.5).

					p-v	alue
Variable	Level	Base	Often / Sometimes	Rarely / Never	Chi-square test	Kruskal- Wallis test
	18-24	260	17.7%	82.3%		
	25-34	453	10.9%	89.1%		
Age	35-44	478	14.7%	85.3%		0.000
	45-54	541	8.4%	91.6%		
	55-64	369	6.9%	93.1%		
	Never married	683	14.1%	85.9%		
Marital status	Married	1348	9.4%	90.6%	0.001	
	Divorced/Separated/ Widowed	81	17.6%	82.4%	0.001	
	Primary or below	204	7.5%	92.5%		
	Had not completed secondary	378	10.5%	89.5%		
Educational attainment	Completed secondary (F5)	631	11.1%	88.9%		0.027
	Matriculation	144	14.9%	85.1%		
	Tertiary or above	752	11.9%	88.1%		

Table 4.12.5 Frequency of having abdominal pain when distressed or feeling stressed out (Q16e)

4.12.6 Frequency of having chest pain

Frequency of having chest pain when distressed or feeling stressed out is significantly associated with respondents' gender, marital status, educational attainment, occupation and monthly household income.

Female respondents (11.8%), divorced/ separated/ widowed respondents (18.8%), respondents who completed secondary education or below (ranged from 11.0% to 12.7%), non-working respondents (12.8%) or service workers (11.2%) and respondents with monthly household income below \$14,000 (range from 12.5% to 13.7%) were more likely to report that they often or sometimes had chest pain when distressed or feeling stressed out when compared with their respective counterparts (Table 4.12.6).

					p-v:	alue
Variable	Level	Base	Often / Sometimes	Rarely / Never	Chi-square test	Kruskal- Wallis test
Garadara	Male	968	6.3%	93.7%	0.000	
Gender	Female	1147	11.8%	88.2%	0.000	
	Never married	683	9.5%	90.5%		
Marital status	Married	1347	8.7%	91.3%	0.011	
Mai ital Status	Divorced /Separated/Widowed	79	18.8%	81.2%	0.011	
	Primary or below	201	11.5%	88.5%		
Educational attainment	Had not completed secondary	377	12.7%	87.3%		
	Completed secondary (F5)	630	11.0%	89.0%		0.001
	Matriculation	144	7.2%	92.8%		
	Tertiary or above	753	6.0%	94.0%		
	Managerial/Professional worker	543	5.1%	94.9%		
	Clerk	266	8.9%	91.1%	0.000	
Occupation	Service worker	208	11.2%	88.8%	0.000	
	Blue collar worker	291	8.4%	91.6%		
	Not working	759	12.8%	87.2%		
	Below \$8,000	135	12.5%	87.5%		
Monthly	\$8,000-\$13,999	259	13.7%	86.3%		
household	\$14,000-19,999	233	11.3%	88.7%		0.004
income	\$20,000-\$39,999	534	8.3%	91.7%		
	\$40,000 or above	485	6.4%	93.6%		

Table 4.12.6 Frequency of having chest pain when distressed or feeling stressed out (Q16f)

4.12.7 Frequency of having sleep disturbance

Frequency of having sleep disturbance when distressed or feeling stressed out is significantly associated with respondents' gender, marital status and occupation.

Female respondents (31.8%), divorced/ separated/ widowed respondents (38.9%) and non-working respondents (33.2%) were more likely to report that they often or sometimes had sleep disturbance when distressed or feeling stressed out when compared with their respective counterparts (Table 4.12.7).

					p-va	lue
Variable	Level	Base	Often / Sometimes	Rarely / Never	Chi-square test	Kruskal- Wallis test
Condon	Male	968	25.7%	74.3%	0.002	
Gender	Female	1148	31.8%	68.2%	0.002	
	Never married	683	31.3%	68.7%		
Marital	Married	1348	27.1%	72.9%	0.020	
status	Divorced/ Separated/ Widowed	80	38.9%	61.1%	0.020	
	Managerial/Professional worker	543	26.8%	73.2%		
	Clerk	268	28.8%	71.2%	0.022	
Occupation	Service worker	208	26.7%	73.3%	0.022	
	Blue collar worker	291	24.3%	75.7%		
	Not working	760	33.2%	66.8%		

Table 4.12.7 Frequency of having sleep disturbance when distressed or feelingstressed out (Q16g)

4.12.8 Frequency of feeling dizzy

Frequency of feeling dizzy when distressed or feeling stressed out is significantly associated with respondents' gender, educational attainment, occupation and monthly household income.

Female respondents (16.7%), respondents whose educational attainment at matriculation (18.0%) or primary or below (17.1%) and non-working respondents (17.5%) were more likely to report that they often or sometimes felt dizzy when distressed or feeling stressed out when compared with their respective counterparts. Also the lower the monthly household income of the respondents, the more likely that they often or sometimes felt dizzy when distressed out when compared with their counterparts (Table 4.12.8).

					p-v	alue
Variable	Level	Base	Often / Sometimes	Rarely / Never	Chi-square test	Kruskal- Wallis test
	Male	967	8.0%	92.0%	0.000	
Gender	Female	1146	16.7%	83.3%	0.000	
Educational attainment	Primary or below	202	17.1%	82.9%		
	Had not completed secondary	376	15.4%	84.6%		
	Completed secondary (F5)	631	13.4%	86.6%		0.000
	Matriculation	144	18.0%	82.0%		
	Tertiary or above	752	8.6%	91.4%		
	Managerial/Professional worker	542	8.8%	91.2%		
	Clerk	267	13.9%	86.1%	0.000	
Occupation	Service worker	208	11.3%	88.7%	0.000	
	Blue collar worker	289	8.6%	91.4%		
	Not working	760	17.5%	82.5%		
	Below \$8,000	136	22.7%	77.3%		
Monthly	\$8,000-\$13,999	260	16.3%	83.7%		
household	\$14,000-19,999	234	13.1%	86.9%		0.000
income	\$20,000-\$39,999	531	10.9%	89.1%		
	\$40,000 or above	486	10.1%	89.9%		

Table 4.12.8 Frequency of feeling dizzy when distressed or feeling stressed out (Q16h)

4.13 Sources of psychological distress or stress

4.13.1 Frequency of having distress or stress being related to physical condition

The frequency of having distress or stress being related to physical condition is significantly associated with respondents' age, educational attainment, occupation and monthly household income.

Respondents who had not completed secondary education or below (ranged from 7.2% to 8.4%) and non-working respondents (6.9%) were more likely to report that their distress or stress was related to their physical condition all or most of the time. Also, the older and the lower the monthly household income of the respondents, the more likely that they reported having distress or stress being related to their physical condition all or most of the time (Table 4.13.1).

Table 4.13.1 Frequency of having distress or stress being related to physical condition (Q17a)

				Some /	p-v	p-value		
Variable	Level	Base	All / Most of the time	A little / None of the time	Chi-square test	Kruskal- Wallis test		
	18-24	261	2.1%	97.9%				
Age	25-34	452	2.6%	97.4%				
	35-44	479	3.9%	96.1%		0.000		
	45-54	537	5.4%	94.6%				
	55-64	367	6.7%	93.3%				
	Primary or below	203	8.4%	91.6%				
Educational attainment	Had not completed secondary	377	7.2%	92.8%				
	Completed secondary (F5)	630	3.5%	96.5%		0.000		
	Matriculation	144	3.6%	96.4%				
	Tertiary or above	752	2.4%	97.6%				
	Managerial/ Professional worker	543	3.1%	96.9%				
	Clerk	268	2.9%	97.1%	0.001			
Occupation	Service worker	207	2.3%	97.7%	0.001			
	Blue collar worker	290	2.8%	97.2%				
	Not working	760	6.9%	93.1%				
	Below \$8,000	137	9.4%	90.6%				
Monthly	\$8,000-\$13,999	259	5.6%	94.4%				
household	\$14,000-19,999	233	5.2%	94.8%		0.000		
income	\$20,000-\$39,999	532	2.8%	97.2%				
	\$40,000 or above	486	2.2%	97.8%				

4.13.2 Frequency of having distress or stress being related to work

Among working respondents, the frequency of having distress or stress being related to work is significantly associated with respondents' age, marital status, educational attainment, occupation, monthly household income and type of living quarters.

Never married respondents (27.0%), managerial/ professional workers (28.7%), respondents with monthly income of below \$8,000 (20.9%) or \$14,000 or above (ranged from 20.1% to 22.8%) and respondents living in private housing (22.5%) or subsidized sale flats (22.1%) were more likely to report that their distress or stress was related to their work (such as work demand or working conditions) all or most of the time. Also, the younger and the higher the educational attainment of the respondents, the more likely that they reported having distress or stress being related to their work all or most of the time (Table 4.13.2).

				Some /	p-v	alue
Variable	Level	Base	All / Most of the time	A little / None of the time	Chi-square test	Kruskal- Wallis test
	18-24	164	27.6%	72.4%		
	25-34	402	27.4%	72.6%		
Age	35-44	419	22.7%	77.3%		0.000
	45-54	435	13.1%	86.9%		
	55-64	208	11.2%	88.8%		
	Never married	562	27.0%	73.0%		
Marital	Married	1024	16.5%	83.5%	0.000	
status	Divorced/ Separated/ Widowed	53	22.7%	77.3%	0.000	
	Primary or below	118	6.0%	94.0%		
	Had not completed secondary	271	13.7%	86.3%		
Educational	Completed secondary (F5)	499	16.1%	83.9%		0.000
attamment	Matriculation	95	25.4%	74.6%		
	Tertiary or above	656	28.3%	71.7%		
	Managerial/ Professional worker	543	28.7%	71.3%		
Ossunstian	Clerk	268	21.2%	78.8%	0.000	
Occupation	Service worker	208	19.7%	80.3%	0.000	
	Blue collar worker	290	10.6%	89.4%		
	Not working	291	14.7%	85.3%		
	Below \$8,000	76	20.9%	79.1%		
Monthly	\$8,000-\$13,999	173	12.9%	87.1%		
household	\$14,000-19,999	189	21.2%	78.8%		0.036
income	\$20,000-\$39,999	435	20.1%	79.9%		
	\$40,000 or above	425	22.8%	77.2%		
Type of	Public rental flats	480	15.4%	84.6%		
living	Subsidized sale flats	242	22.1%	77.9%	0.006	
quarters	Private housing	900	22.5%	77.5%		

Table 4.13.2 Frequency of having distress or stress being related to work (Q17b)

4.13.3 Frequency of having distress or stress being related to financial difficulties

The frequency of having distress or stress being related to financial difficulties is significantly associated with respondents' educational attainment, occupation, monthly household income, number of dependants and type of living quarters.

Respondents who had not completed secondary education or below (ranged from 9.7% to 10.2%), non-working respondents (8.4%) and those living in the public rental flats (8.2%), were more likely to report that their distress or stress was related to their financial difficulties all or most of the time. Also, the lower the monthly household income of the respondents and the more dependants the respondents had, the more likely that they reported having distress or stress being related to their financial difficulties all or most of the time (Table 4.13.3).

				Some /	p-value	
Variable	Level	Base	All / Most of the time	A little / None of the time	Chi-square test	Kruskal- Wallis test
	Primary or below	204	9.7%	90.3%		
Educational	Had not completed secondary	378	10.2%	89.8%		
attainment	Completed secondary (F5)	632	5.9%	94.1%		0.000
	Matriculation	144	1.3%	98.7%		
	Tertiary or above	752	3.5%	96.5%		
	Managerial/ Professional worker	543	3.0%	97.0%		
	Clerk	267	3.0%	97.0%		
Occupation	Service worker	208	6.5%	93.5%	0.000	
	Blue collar worker	291	6.9%	93.1%		
	Not working	764	8.4%	91.6%		
	Below \$8,000	138	16.1%	83.9%		
Monthly	\$8,000-\$13,999	260	7.6%	92.4%		
household	\$14,000-19,999	234	7.3%	92.7%		0.000
income	\$20,000-\$39,999	534	4.5%	95.5%		
	\$40,000 or above	486	1.7%	98.3%		
	None	791	5.1%	94.9%		
Number of dependents	1-2	927	5.9%	94.1%		0.018
uepenuants	3 or more	388	7.1%	92.9%		
	Public rental flats	643	8.2%	91.8%		
Type of living	Subsidized sale flats	313	7.6%	92.4%	0.000	
qual tel s	Private housing	1137	3.9%	96.1%		

Table 4.13.3 Frequency of having distress or stress being related to financialdifficulties (Q17c)

4.13.4 Frequency of having distress or stress being related to family matters

The frequency of having distress or stress being related to family matters is significantly associated with respondents' gender, marital status, occupation, and number of dependants.

Female respondents (14.5%), divorced/ separated/ widowed respondents (14.9%), nonworking respondents (14.1%) were more likely to report that their distress or stress was related to their family matters, such as marital conflicts, care for spouse, children or other family members, all or most of the time. Also, the more dependants the respondents had, the more likely that they reported having distress or stress being related to their family matters all or most of the time (Table 4.13.4).

				Some /	p-value		
Variable	Level	Base	All / Most of the time	A little / None of the time	Chi-square test	Kruskal- Wallis test	
Condon	Male	965	6.8%	93.2%	0.000		
Gender	Female	1152	14.5%	85.5%	0.000		
	Never married	680	7.9%	92.1%			
Marital status	Married	1350	12.3%	87.7%	0.006		
	Divorced/Separated/ Widowed	81	14.9%	85.1%	0.000		
	Managerial/Professional worker	542	8.1%	91.9%			
	Clerk	268	12.0%	88.0%	0.005		
Occupation	Service worker	208	7.7%	92.3%	0.005		
	Blue collar worker	288	10.1%	89.9%			
	Not working	764	14.1%	85.9%			
	None	790	7.4%	92.6%			
Number of dependents	1-2	926	12.8%	87.2%		0.000	
ucpentiants	3 or more	388	13.3%	86.7%			

Table 4.13.4 Frequency of having distress or stress being related to family matters (Q17d)

4.13.5 Frequency of having distress or stress being related to interpersonal relationships with others

The frequency of having distress or stress being related to interpersonal relationships with others is significantly associated with respondents' age, marital status and type of living quarters.

Respondents aged 18-24 (7.8%), never married respondents (6.8%) and those living in the public rental flats (5.9%) were more likely to report that their distress or stress was related to their interpersonal relationships with others, such as workmates and friends, all or most of the time (Table 4.13.5).

				Some /	p-v	o-value	
Variable	Level	Base	All / Most of the time	A little / None of the time	Chi-square test	Kruskal- Wallis test	
	18-24	261	7.8%	92.2%			
	25-34	453	6.5%	93.5%			
Age	35-44	479	2.2%	97.8%		0.000	
	45-54	539	4.0%	96.0%			
	55-64	370	1.4%	98.6%			
	Never married	683	6.8%	93.2%			
Marital status	Married	1349	2.9%	97.1%	0.000		
Marital status	Divorced/Separated/ Widowed	81	1.7%	98.3%	0.000		
T	Public rental flats	643	5.9%	94.1%			
Type of living	Subsidized sale flats	312	3.1%	96.9%	0.032		
quarters	Private housing	1140	3.5%	96.5%	I		

Table 4.13.5 Frequency of having distress or stress being related to interpersonal relationships with others (Q17e)

4.13.6 Frequency of having distress or stress being related to study or school work

Among the respondents who were students or engaged in studying, the frequency of having distress or stress being related to study or school work is significantly associated with respondents' age, marital status, educational attainment, occupation and number of dependants.

Never married respondents (24.4%), those who had completed matriculation (41.6%), non-working respondents (24.3%) were more likely to report that their distress or stress was related to their study or school work all or most of the time. Also the younger the respondents and also the fewer dependants the respondents had, the more likely that they reported having distress or stress being related to their study or school work all or most of the time (Table 4.13.6).

				Some /	p-value	
				A little /		
			All / Most	None of the	Chi-square	Kruskal-
Variable	Level	Base	of the time	time	test	Wallis test
	18-24	211	35.1%	64.9%		
	25-34	160	8.5%	91.3%		
Age	35-44	169	6.2%	93.8%		0.000
	45-54	142	3.0%	97.0%		
	55-64	88	0.0%	100.0%		
	Never married	366	24.4%	75.6%		
Marital status	Married	381	3.2%	96.8%	0.000	
Waritai status	Divorced/Separated/ Widowed	24	6.1%	93.9%	0.000	
	Primary or below	37	1.8%	98.2%		
Educational	Had not completed secondary	103	5.8%	94.2%		
attainment	Completed secondary (F5)	212	4.2%	95.8%		0.000
	Matriculation	82	41.6%	58.4%		
	Tertiary or above	338	15.8%	84.2%		
	Managerial/ Professional worker	207	6.6%	93.4%		
	Clerk	88	7.4%	92.6%	0.000	
Occupation	Service worker	83	5.2%	94.8%	0.000	
	Blue collar worker	66	0.0%	100.0%		
	Not working	322	24.3%	75.7%		
Number of	None	361	22.4%	77.6%		
dependents	1-2	293	5.5%	94.5%		0.000
pendento	3 or more	117	3.8%	96.2%		

 Table 4.13.6 Frequency of having distress or stress being related to study or school work (Q17f)

4.14 Attitude towards organ donation

4.14.1 Attitude towards organ donation of family members

Whether or not respondents would object if their family members wish to donate their organs after death is associated with respondents' educational level, monthly household income and type of living quarters.

Respondents with monthly household income below \$8,000 (8.0%), and those living in public rental flats (6.3%) were more likely to object their family members to donate organs after death compared with their respective counterparts. Also, the lower the education level of the respondents, the more likely that they would object their family members to donate organs after death (Table 4.14.1).

Table 4.14.1: Whether the respondents would object if their family members wish todonate organs after death (Q19)

					p-v	alue
Variable	Level	Base	No	Yes	Chi-square test	Kruskal- Wallis test
	Primary or below	185	91.8%	8.2%		
Educational attainment	Had not completed secondary	348	94.5%	5.5%		
	Completed secondary (F5)	601	96.5%	3.5%		0.000
	Matriculation	142	97.0%	3.0%		
	Tertiary or above	741	97.4%	2.6%		
	Below \$8,000	127	92.0%	8.0%		
Monthly	\$8,000-\$13,999	244	95.5%	4.5%		
household	\$14,000-19,999	228	95.4%	4.6%		0.004
income	\$20,000-\$39,999	516	97.4%	2.6%		
	\$40,000 or above	481	97.7%	2.3%		
T	Public rental flats	601	93.7%	6.3%		
Type of living	Subsidized sale flats	301	96.4%	3.6%	0.001	
quarters	Private housing	1099	97.3%	2.7%		

4.14.2 Willingness to donate organs after death

Willingness to donate organs after death is significantly associated with respondents' age, marital status, educational attainment, occupation, monthly household income and type of living quarters.

Never married respondents (74.4%), managerial/ professional workers (76.7%) and those living in subsidized sale flats (73.2%) were more likely to report that they were willing to donate organs after death when compared with their respective counterparts. Also, the younger, the higher the educational attainment and the higher the monthly household income of the respondents, the more likely to report that they were willing to donate organs after death (Table 4.14.2).

					Not	p-v	alue
Variable	Level	Base	No	Yes	decided / considered yet	Chi-square test	Kruskal- Wallis test
	18-24	261	7.9%	74.0%	18.1%		
	25-34	453	5.7%	71.6%	22.7%		
Age	35-44	479	8.0%	70.8%	21.2%		0.000
	45-54	538	9.3%	60.9%	29.9%		
	55-64	371	13.1%	53.7%	33.2%		
	Never married	683	6.8%	74.4%	18.8%		
Marital	Married	1349	9.3%	61.6%	29.1%	0.000	
status	Divorced/Separated/ Widowed	82	16.2%	60.0%	23.8%	0.000	
	Primary or below	205	13.2%	51.1%	35.7%		
	Had not completed secondary	377	13.2%	54.5%	32.3%		
Educational attainment	Completed secondary (F5)	634	8.1%	64.0%	27.9%		0.000
	Matriculation	144	8.6%	67.4%	24.0%		
	Tertiary or above	752	5.9%	76.4%	17.7%		
	Managerial/ Professional worker	542	5.9%	76.7%	17.3%		
O	Clerk	268	6.4%	72.9%	20.6%		
Occupation	Service worker	207	6.2%	59.7%	34.1%	0.000	
	Blue collar worker	290	11.4%	57.4%	31.3%		
	Not working	766	11.3%	60.3%	28.4%		
	Below \$8,000	138	16.3%	52.7%	31.0%		
Monthly household income	\$8,000-\$13,999	259	9.7%	57.2%	33.0%		
	\$14,000-19,999	234	7.6%	68.6%	23.8%		0.000
	\$20,000-\$39,999	533	7.8%	69.5%	22.7%		
	\$40,000 or above	486	4.9%	78.8%	16.3%		
Type of living	Public rental flats	643	10.4%	57.1%	32.5%		
quarters	Subsidized sale flats	314	8.7%	73.2%	18.1%	0.000	
	Private housing	1138	7.7%	68.8%	23.5%		

Table 4.14.2: Willingness to donate organs after death (Q20a)

4.14.3 Ways to express wish to donate organs

(A) Centralised Organ Donation Register

Whether or not respondents who were willing to donate organs after death had registered at the Centralised Organ Donation Register to express their wish to donate organ is significantly associated with their education attainment, occupation and monthly household income.

A relatively higher proportion of those respondents with tertiary education or above (15.1%), clerks (17.5%) or managerial/ professional workers (16.6%) and those with monthly household income of \$20,000 or above (ranged from 15.0% to 17.8%) had registered at the Centralised Organ Donation Register to express their wish to donate organs when compared with their respective counterparts (Table 4.14.3a).

 Table 4.14.3a: Whether registered at the Centralised Organ Donation Register to express wish to donate organs (Q20d_i)

					p-value	
Variable	Level	Base	Yes	No	Chi-square test	Kruskal- Wallis test
	Primary or below	104	5.5%	94.5%		
Educational	Had not completed secondary	204	10.7%	89.3%		
attainment	Completed secondary (F5)	398	12.7%	87.3%		0.006
	Matriculation	97	12.2%	87.8%		
	Tertiary or above	567	15.1%	84.9%		
	Managerial/ Professional worker	407	16.6%	83.4%	0.000	
	Clerk	194	17.5%	82.5%		
Occupation	Service worker	123	13.3%	86.7%		
	Blue collar worker	163	11.3%	88.7%		
	Not working	460	7.5%	92.5%		
	Below \$8,000	73	8.8%	91.2%		
Monthly	\$8,000-\$13,999	148	7.7%	92.3%		
household	\$14,000-19,999	157	9.6%	90.4%		0.000
income	\$20,000-\$39,999	370	15.0%	85.0%		
	\$40,000 or above	373	17.8%	82.2%		

(B) Organ donation card

Among respondents who were willing to donate organs after death, whether or not they had signed on organ donation card to express their wish to donate organs is significantly associated with their age, educational attainment, occupation, monthly household income, number of dependents and type of living quarters.

A relatively higher proportion of those respondents aged 25-44 (ranged from 42.9% to 44.6%), managerial/ professional workers (49.9%), those with monthly household income of \$40,000 or above (45.8%), and those living in subsidized sale flats (40.1%) or private housing (39.7%) had signed on organ donation card to express their wish to donate organs when compared with their respective counterparts. Also, the higher the educational attainment of the respondents and the more dependants the respondents had, the more likely that they had signed on organ donation card to express their wish to donate organs (Table 4.14.3b).

					p-value	
					Chi-square	Kruskal-
Variable	Level	Base	Yes	No	test	Wallis test
	18-24	192	32.5%	67.5%		
	25-34	321	44.6%	55.4%		
Age	35-44	336	42.9%	57.1%		0.000
	45-54	325	32.2%	67.8%		
	55-64	199	19.2%	80.8%		
	Primary or below	105	18.4%	81.6%		
T. J., 4 ² 1	Had not completed secondary	205	20.1%	79.9%		
Educational	Completed secondary (F5)	399	32.9%	67.1%		0.000
attaininent	Matriculation	97	35.2%	64.8%		
	Tertiary or above	570	46.7%	53.3%		
	Managerial/Professional worker	415	49.9%	50.1%		
	Clerk	193	37.5%	62.5%		
Occupation	Service worker	121	32.9%	67.1%	0.000	
	Blue collar worker	165	23.5%	76.5%		
	Not working	460	26.7%	73.3%		
	Below \$8,000	71	25.5%	74.5%		
Monthly	\$8,000-\$13,999	148	25.4%	74.6%		
household	\$14,000-19,999	158	32.7%	67.3%		0.000
income	\$20,000-\$39,999	368	37.1%	62.9%		
	\$40,000 or above	379	45.8%	54.2%		
	None	511	29.2%	70.8%		
Number of dependants	1-2	625	39.6%	60.4%		0.002
	3 or more	240	39.7%	60.3%		
Type of	Public rental flats	363	25.5%	74.5%		
living quarters	Subsidized sale flats	229	40.1%	59.9%	0.000	
	Private housing	776	39.7%	60.3%		

 Table 4.14.3b: Whether signed on organ donation card to express wish to donate organs (Q20d_ii)

(C) Expressed to family members

Among respondents who were willing to donate organs after death, whether or not they had expressed to their family members their wish to donate organs is significantly associated with their gender, marital status, educational attainment, occupation, monthly household income and type of living quarters.

A relatively higher proportion of the female respondents (55.0%), married respondents (53.1%), those with tertiary education or above (57.2%), clerks (56.4%), those with monthly household income of \$40,000 or above (57.5%) and those living in subsidized sale flats (56.0%) had expressed to their family members their wish to donate organs when compared with their respective counterparts (Table 4.14.3c).

					p-value	
Variable	Level	Base	Yes	No	Chi-square test	Kruskal- Wallis test
Gender	Male	620	42.7%	57.3%	0.000	
	Female	765	55.0%	45.0%	0.000	
	Never married	504	43.9%	56.1%		
Marital status	Married	828	53.1%	46.9%	0.004	
	Divorced/ Separated/Widowed	49	44.7%	55.3%	0.004	
	Primary or below	104	43.9%	56.1%		
Educational	Had not completed secondary	205	42.4%	57.6%		0.000
attainment	Completed secondary (F5)	405	43.4%	56.6%		0.000
	Matriculation	97	50.1%	49.9%		
	Tertiary or above	570	57.2%	42.8%		
	Managerial/ Professional worker	415	52.4%	47.6%		
	Clerk	193	56.4%	43.6%	0.045	
Occupation	Service worker	124	43.0%	57.0%	0.045	
	Blue collar worker	165	44.2%	55.8%		
	Not working	460	47.5%	52.5%		
	Below \$8,000	73	40.8%	59.2%		
Monthly	\$8,000-\$13,999	148	48.0%	52.0%		
household	\$14,000-19,999	160	41.0%	59.0%		0.002
income	\$20,000-\$39,999	369	52.2%	47.8%		
	\$40,000 or above	380	57.5%	42.5%		
	Public rental flats	365	39.2%	60.8%		
Type of living quarters	Subsidized sale flats	229	56.0%	44.0%	0.000	
quarters	Private housing	779	52.7%	47.3%		

Table 4.14.3c: Whether expressed to family members the wish to donate organs(Q20d_iii)

(D) Other ways

Among those respondents who were willing to donate organs after death, whether or not they had used other ways to express their wish to donate organ is significantly associated with their marital status.

A relatively higher proportion of never married respondents (8.0%), had used other ways to express their wish to donate organ when compared with their respective counterparts (Table 4.14.3d).

					p-value	
					Chi-square	Kruskal-
Variable	Level	Base	Yes	No	test	Wallis test
Marital status	Never married	507	8.0%	92.0%		
	Married	831	3.0%	97.0%	0.000	
	Divorced/ Separated/Widowed	49	2.6%	97.4%		

 Table 4.14.3d: Whether used other ways to express wish to donate organ

Chapter 5 Conclusion and Recommendations

5.1 Conclusion

5.1.1 Weight status and control

Using the World Health Organization (WHO)'s standard Asian classification of weight status, about half (49.6%) of the respondents were classified as "normal", 18.9% of the respondents were regarded as "overweight" and 22.2% were classified as "obese", while the remaining 9.3% were classified as "underweight".

Regarding respondents' self-perceived current weight status, close to half (47.5%) of the respondents perceived themselves as "just right". In addition, 43.9% considered themselves as "overweight" while 8.6% considered themselves as "underweight". A relatively higher proportion of females, respondents aged 35-54, married or divorced/ separated/ widowed respondents and those with primary education or below and those with 3 or more dependants considered themselves as "overweight". Overall, 66.9% of the respondents perceived their weight status in a way consistent with the WHO's weight status classification for Asians, while 18.4% of the respondents overestimated and 14.7% underestimated their weight status.

5.1.2 Doctor-diagnosed chronic diseases

Regarding doctor-diagnosed chronic diseases that require long-term follow up, the three leading chronic conditions were hypertension (9.8%), arthritis or rheumatism (7.1%) and diabetes (3.1%). For the selected doctor-diagnosed mental illnesses, 2.8% of respondents reported that they have depression and 2.2% had anxiety disorder. A relatively higher proportion of divorced/ separated/ widowed respondents, those with primary education or below and non-working respondents reported that they had at least two doctor-diagnosed chronic diseases which require long-term follow up. Also the older, the lower monthly household income of the respondents and the fewer dependants the respondents had, the more likely that they had at least two doctor-diagnosed chronic diseases.

5.1.3 Smoking habits

About one-eighth (12.7%) of the respondents were current smokers at the time of this survey. Among the current smokers, the vast majority (97.0%) were daily smokers. In addition, about half (49.3%) of the current smokers reported that they smoked 1-10 cigarettes per day and nearly half (47.7%) of the current smokers reported that they smoked at least 11 cigarettes a day. A relatively higher proportion of current smokers who reported smoking more than 20 cigarettes a day were found amongst male respondents, older respondents and those who had not completed secondary education or below.

5.1.4 Pattern of alcohol consumption

Nearly one-third (31.7%) of the respondents were drinkers who had drunk at least one alcoholic drink during the thirty days prior to the survey. Nearly half (49.6%) of these drinkers drank less than one day per week while only 6.5% drank daily. The majority (64.6%) of these drinkers consumed less than 3 standard drinks on each drinking day. On average, they consumed 2.9 standard drinks per day during the thirty days prior to the survey.

Regarding the type of alcoholic drink they most frequently consumed during the thirty days prior to the survey, nearly three-fifths (57.2%) drank beer, one-third (33.6%) drank wine, while other drank spirits (4.2%), Chinese rice wine (1.7%), fruit liqueur (1.1%) and cocktail (1.1%). The majority of these drinkers most frequently drank at home (43.0%) or in restaurants (34.4%) during the thirty days prior to the survey. They most frequently drank with friends (44.2%) and with family members or relatives (30.0%), while 15.6% reported that they drank alone.

On the whole, drinking during the thirty days prior to the survey was more prevalent among males, those aged 25-34, never married respondents, those with tertiary educational attainment or above, managerial/ professional workers or service workers, those living in private housing and those with higher monthly household income.

Among the drinkers who had drunk alcohol during the thirty days prior to the survey, nearly one quarter (23.4%) of them reported that they had engaged in binge drinking (drinking 5 or more glasses/ cans of alcohol on one occasion) at least once during the thirty days prior to the survey. Binge drinking with 3 times or more per month was more common among males, those aged 35-44, those with primary education or below, service workers and blue collar workers, and those living in public rental flats.

Among those respondents who ever had at least one alcoholic drink but excluding those who had drunk during the thirty days prior to the survey, less than one-sixth (15.5%) had ever engaged in binge drinking. Binge drinking at least once a year excluding the past thirty days was more common among males and those aged 25-34.

5.1.5 Leisure time exercises

About two-fifths (39.5%) of the respondents reported that they exercised less than once a month in their leisure-time, while 17.9% exercised 4 times or more a week and 31.9% exercised one to three times a week in their leisure-time. Females, those age 35-44, those who had not completed secondary education or below, blue collar workers, those with at least one dependants, those living in the public rental flats and those with lower monthly household income were more likely to exercise less than once a month in leisure-time than their respective counterparts.

5.1.6 Sleeping habits

On average, the respondents slept for seven hours per day during the thirty days prior to the survey. The majority (91.4%) of the respondents claimed that they slept for at least six hours on average per day.

During the thirty days prior to the survey, slightly over one-tenth (11.8%) of the respondents frequently (three or more times a week) had 'difficulty in falling asleep', 12.2% frequently had 'intermittent awakenings or difficulty in maintaining sleep' during the night and 9.4% frequently had 'early morning awakening and unable to sleep again'. In contrast, more than one third (35.2%) of the respondents did not experience any of the three sleeping problems during the thirty days prior to the survey.

Nearly one-third (31.6%) of the respondents did not get enough sleep for at least 10 days during the thirty days prior to the survey. In addition, 43.3% of the respondents considered that they slept "well" or "very well", while 13.8% of respondents considered their sleeping quality "poor" or "very poor".

5.1.7 Social support

Over three-fifths (62.5%) of the respondents reported that they had three or more close relatives or friends who could provide support for their private, emotional or financial needs. At the same time, about one-tenth (10.3%) of the respondents did not have any close relatives or friends who can provide help for such needs.

5.1.8 General health status

Regarding respondents' self-rated health status, nearly half (46.9%) of the respondents rated their general health status as "good", "very good" or "excellent", while 5.2% considered their general health status "poor".

5.1.9 Level of psychological distress

Based on the Kessler 6-items Psychological Distress Scale (K6), 11.7% of the respondents felt nervous, 7.0% felt restless or fidgety, 5.4% felt that everything was an effort, 4.0% felt so sad that nothing could cheer them up, 3.8% felt worthless and 2.4% felt hopeless "most" or "all of the time" during the thirty days prior to the survey. About one-sixth (15.8%) of the respondents did not experience any psychological distress symptom during the thirty days prior to the survey.

Overall, 5.3% of respondents were classified as having severe psychological distress (measured by K6 score of 13 or above) during the thirty days prior to the survey. Severe psychological distress was more prevalent among respondents with low monthly household income (below \$8,000) and in divorced, separated or widowed respondents. In addition, respondents with more chronic diseases, poorer self-rated health status, were more likely to have severe psychological distress. Respondents with less frequent exercise in their leisure-time and fewer close relatives or friends who could offer help for their emotional or financial needs were also more likely to have severe psychological distress.

5.1.10 Impacts of psychological distress or stress

The effects of psychological distress to work or carry out normal activities are significant. More than a quarter (28.4%) of respondents with severe psychological distress had been totally unable to work or carry out normal activities for more than five days during the thirty days prior to the survey, as compared to only 3.1% for respondents with any psychological distress symptoms. On the other hand, 18.9% of respondents with severe psychological distress had consulted a doctor or other health professional because of their emotional problems and 25.3% of respondents with severe psychological distress considered physical health problem as the main cause of their psychological distress "all" or "most of the time", as compared to 2.5% and 4.2% for respondents with any psychological distress symptoms respectively.

5.1.11 Physiological response to stress

When feeling distress or stressed out, 16.5% of respondents reported that they often had "neck, shoulder or back pain", followed by "sleep disturbance" (9.7%), "headache" (7.1%) and "loss of/ increase in appetite" (6.4%). Female respondents were more likely to report that they often or sometimes had neck/ shoulder/ back pain, sleep disturbance, headache, loss of/ increase in appetite, stomach ache, chest pain and felt dizzy when distressed or feeling stressed out.

5.1.12 Sources of psychological distress/stress

While 20.3% of the working respondents considered that their distress or stress was related to their work "all of the time" or "most of the time", 13.3% of the respondents who engaged in studying reported that study / school work was a source of psychological distress or stress "all of the time" or "most of the time". Furthermore, 11.0%, 5.9%, 4.2% and 4.1% of respondents cited family matters, financial difficulties, physical condition and interpersonal relationship as a source of distress or stress "all of the time" or "most of the time" or stress "all of the time" or "most of the time" or stress "all of the time" or "most of the time" or stress "all of the time" or "most of the time" or "most of the time" respectively

5.1.13 Stress Management

Among the respondents (94.1%) who reported having experienced stress, 19.5% of them took exercises, talked to somebody (12.2%), listened to music (8.6%) and took more rest / sleep (8.3%) to cope with stress. In addition, 6.6% of these respondents reported that they had not used any method to cope with stress.

5.1.14 Attitude towards organ donation

The vast majority (96.1%) of the respondents reported that they would not object their family members to donate organs after death. Respondents who had primary education or below, those with monthly household income below \$8,000, and those who were living in public rental flats were more likely to object their family members to donate organs after death.

About two-thirds of the respondents (65.7%) were willing to donate their organs after death. Notably, about a quarter (25.6%) reported that they had not made the decision yet. Only 8.8% of them reported that they were not willing to donate their organs after death.

Among respondents willing to donate their organs after death, about four-fifths (80.5%) of them reported that they would like to help other people and over one third (36.1%) of them thought organs were useless after death. Furthermore, 49.5% of them expressed the wish to their family members, more than one third (35.7%) of them signed on the organ donation card and only 12.8% of those expressed their wish to donate their organs had registered at the Centralised Organ Donation Register. However, more than one third (37.3%) of them had done nothing to express their wish to donate organs.

Among respondents not willing to donate their organs after death, more than a quarter (27.9%) reported that the decision was their personal preference and one fifth (20.5%) thought organ donation was against their personal belief.

5.2 **Recommendations**

Some recommendations based on the survey findings are suggested below:

- 1. Regular physical activity is critically important for the health and well being of people of all ages as it helps prevent or minimize many chronic illnesses. However, about two-fifths (39.5%) of the respondents reported that they exercised less than once a month in their leisure-time in the thirty days prior to the survey. Thus, the importance of engaging in regular physical activity needs to be further emphasized. Some groups of people(include females, people aged between 35 and 44, those with lower education level, blue collar workers, those with dependants, those living in the public rental flats and those with lower monthly household income) are less likely to engage in regular activity. These are the potential targets for the promotion of regular physical activity
- 2. The survey results showed that 12.7% of the respondents were current smokers and almost all (97.0%) of them were daily smokers. 23.4% of the drinkers who had drunk alcohol during the thirty days prior to the survey reported that they had engaged in binge drinking (drinking 5 or more glasses/ cans of alcohol on one occasion). Promotion of the health benefits of stopping smoking and of sensible drinking should be also carried out at these high-risk groups.
- 3. About 10% of the respondents reported that they did not have any close relatives or friends who can provide help for their private, emotional or financial issues. Social support in general is important in coping stress and can provide emotional help during stressful times. It is likely to improve physical health and increase longevity. Promotion of the importance of helping others and social support networks should be encouraged.
- 4. The survey finds that 5.3% of people aged 18-64 were classified as having severe psychological distress. More promotions or campaigns should be introduced to educate the public about how to cope better with stress, and to dispel the misconceptions that smoking, drinking, gambling or using drugs would relieve stress.
- 5. The vast majority (96.1%) of respondents did not object their family members to donate organs after death and about two-thirds of respondents (65.7%) were willing to donate their organs. It is important to note that more than one third (37.3%) of those who were willing to donate their organs had done nothing to express their wish. Promotion is still needed to encourage people to express their wish to donate organs by telling their family members, signing the organ donation card and registering at the Centralised Organ Donation Register.

5.3 Limitations

- 1. Although the data were weighted by age and sex distribution in order to correct for over- or under-representation of certain age/sex groups in the sample, the data were not weighted for other demographics of respondents, the number of eligible respondents in a household and the number of phones in a household, or to account directly for non-response.
- 2. The use of the "Next Birthday" rule to select respondent when there is more than one eligible respondent who resided in a household at the time of the telephone contact cannot cover people who are always not at home in the evening and weekends.
- 3. A household telephone survey, by definition, excludes the institutionalized population and households without fixed line telephones, so the findings cannot be generalized to these sub-populations. However, as the fixed line telephone coverage in households in Hong Kong still exceeds 80%, a household telephone survey should only exclude a relatively small proportion of households.
- 4. The survey relied on self-reported data and had certain limitations.
 - i. Respondents might not be willing to disclose information to interviewers and deliberately under-report those behaviours that are socially undesirable or considered as unhealthy (such as high alcohol consumption). Conversely, respondents might over-report those behaviours that are considered desirable.
 - ii. Self-reporting behaviour or practices is also subject to recall bias and recall error. However, the recall period was kept quite short in this survey to reduce such bias.
- 5. The results of psychological distress based on the K6 scale should be interpreted with caution because it is not a diagnostic tool but only a screening tool for non-specific mental illness.
- 6. Finally, this was a cross-sectional study. The causal or time relationship between various factors could not be established.

Annex A Survey Questionnaire

BEHAVIOURAL RISK FACTOR SURVEY APRIL 2011 QUESTIONNAIRE

Introduction

Hello! My name is ______, an interviewer from the Social Sciences Research Centre of the University of Hong Kong (SSRC). We are commissioned by the Department of Health to conduct a public survey on healthy living. This survey takes approximately 20 minutes to complete. All the information provided by you will be kept strictly confidential and for collective analysis only. If you have any queries on this survey, you can call the SSRC at phone number: 3921 2600 during office hours between 9 am and 6 pm. If you have questions about your rights as a research participant, please contact the Human Research Ethics Committee for Non-Clinical Faculties of the University at 2241 5267.

Respondent selection

[S1] Telephone No. _____

[S2] Interviewer No.

Because we are choosing a respondent randomly, please tell me how many household members aged 18-64 years there are at home right now? (Members not at home and foreign domestic helpers were excluded)

[S3] Persons

Who is the one who will next have a birthday? (Interviewer: explain the "Next Birthday" rule if respondent questions)

Q1. Record the gender

- 1. Male
- 2. Female

A) Weight Status and Control

Q2a. What is your height without wearing shoes? _____ cm

Q2b. What is your weight wearing simple clothes? _____Kg

- Q2c. What is your waist circumference? _____ cm
- Q3. What do you think about your current weight?
 - 1. Overweight
 - 2. Just right
 - 3. Underweight

B) Physical and mental health status

The Department of Health would like to know about the health status of Hong Kong people, please provide the information as accurate as possible. Thank you.

Doctor-diagnosed Chronic Diseases

- Q4. Do you have the following doctor-diagnosed chronic diseases which require long-term follow up? (Interviewer: Read out the answers)
 - a. Cancer
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure
 - b. Hypertension
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure
 - c. Coronary heart disease
 - 1. Yes
 - 2. No

- 3. Don't know/Unsure
- d. Stroke
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure
- e. Diabetes
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure

f. Asthma

- 1. Yes
- 2. No
- 3. Don't know/Unsure

g. Chronic obstructive, like emphysema

- 1. Yes
- 2. No
- 3. Don't know/Unsure

h. Thyroid disease

- 1. Yes
- 2. No
- 3. Don't know/Unsure
- i. Kidney disease
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure
- j. Peptic ulcer
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure

- k. Liver disease
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure
- l. Arthritis or rheumatism
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure
- m. Depression
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure
- n. Anxiety disorder
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure
- o. Schizophrenia, like Early psychosis
 - 1. Yes
 - 2. No
 - 3. Don't know/Unsure
- p. Other chronic disease(s): Please specify:

Smoking Pattern

- Q5a. Have you smoked before? (Interviewer: read out the answers one by one)
 - 1. Yes, but not now
 - 2. Yes, and still smoking (skip to Q5c)
 - 3. Never (skip to Q6a)
- Q5b. How long have you abstained from smoking? (Interviewer: read out the answers one by one)
 - 1. Had abstained for less than 1 month (skip to Q6a)
 - 2. Had abstained for 1 month to 1 year (skip to Q6a)

- 3. Had abstained for more than 1 year (skip to Q6a)
- Q5c. How many cigarettes do you smoke per day? (Interviewer: Do not read out the answers)
 - 1. Less than 1 cigarette per day now
 - 2. 1-10 cigarettes per day now
 - 3. 11-20 cigarettes per day now
 - 4. More than 20 cigarettes per day now

Pattern of Alcohol Consumption

Q6a. Have you ever had at least one alcoholic drink? (Interviewer: read out the answers one by one)

- 1. Yes, during the last month
- 2. Yes, during the previous 2 12 months (skip to Q6i)
- 3. Yes, more than 12 months ago (skip to Q6i)
- 4. No (skip to Q7)
- Q6b. During the past 30 days, which type of alcoholic drink did you most frequently have? (Interviewer: do not read out the answers, one answer only)
 - 1. Beer
 - 2. Wine (e.g. red wine, white wine, Champagne)
 - 3. Chinese rice wine (e.g. Sheung Jin Chiew, San Cheng Chiew, Glutinous rice wine, Yuk Ping Shu Chiew, Mou Tai Chiew, Kao Liang Chiew)
 - 4. Spirits (e.g. whisky, brandy, vodka, gin)
 - 5. Others, please specify:_____
- Q6c. During the past 30 days, at where did you most frequently drink alcohol? (Interviewer: do not read out the answers, one answer only)
 - 1. At your own home
 - 2. At your friend's or relative's home
 - 3. Restaurants
 - 4. Bars, pubs or recreation areas
 - 5. Workplace
 - 6. Other, please specify:

Q6d. Is the place in Hong Kong?

- 1. Yes
- 2. No, please specify:_____

Q6e. During the past 30 days, with whom did you most frequently drink alcohol? (Interviewer: do not read out the answers, one answer only)

- 1. No one (drink alcohol by yourself)
- 2. With friends
- 3. With family members / relatives
- 4. With people from work
- 5. Others, please specify:_____
- Q6f. On how many days per week during the last 30 days, on average, did you drink at least one alcoholic drink? (Interviewer: do not read out the answers)
 - 1. Daily
 - 2. 6 days per week
 - 3. 5 days per week
 - 4. 4 days per week
 - 5. 3 days per week
 - 6. 2 days per week
 - 7. 1 day per week
 - 8. Less than 1 day per week
- Q6g. During the past 30 days, how many standard units of drinks on average did you drink on those days? (Read out the types of standard drink) (A can or small bottle of beer is approximately equal to 1.5 standard units of drinks.)

_____ unit of drinks

1 standard drink is approximately equal to

- 1 dining glass of wine, or
- 1 spirit nip of brandy/whisky, or
- 1 small glass of Chinese wine such as rice wine).

[Interviewer please refer to the standard drink information sheet- the illustrated

- Q6h. In the last 30 days, how often did you drink at least 5 glasses or cans of alcohol on one occasion? That means the total number of glasses and cans of any type of alcoholic drink, and one occasion means period of a few hours. (Interviewer: do not read out the answers)
 - 1. Once or more a day (skip to Q7)
 - 2. 4-6 times a week (skip to Q7)
 - 3. 1-3 times a week (skip to Q7)
 - 4. Three times a month (skip to Q7)
 - 5. Twice a month (skip to Q7)
 - 6. Once a month (skip to Q7)
 - 7. Never (skip to Q7)
- Q6i. Excluding the past 30 days, when you drink, how often did you drink at least 5 glasses or cans of alcohol on one occasion? That means the total number of glasses and cans of any type of alcoholic drink, and one occasion means period of a few hours. (Interviewer: do not read out the answers)
 - 1. Once or more a week
 - 2. 1-3 times a month
 - 3. 7-11 times a year
 - 4. 4-6 times a year
 - 5. 1-3 times a year
 - 6. Less than once a year
 - 7. Never

Leisure-time activities

- Q7. During the past 30 days, how often do you exercise in your leisure time, which at least made you breathe somewhat harder than normal and sweat?
 - 1. Once or more a day
 - 2. 4-6 times a week
 - 3. 2-3 times a week
 - 4. Once a week
 - 5. 2-3 times a month
 - 6. Once a month
 - 7. Less than once a month

Sleeping Habits

- Q8a. On average, how many hours did you sleep per day in the past 30 days? [Interviewer: The numbers can be recorded as half such as 0.5 or 1.5.] _____ Hours
- Q8b. In the past 30 days, how often did you have difficulty in falling asleep, e.g. you cannot get to sleep within 30 minutes? [Interviewer: Read out the answers one by one]
 - 1. Not during the past month
 - 2. Less than once a week
 - 3. Once or twice a week
 - 4. Three or more times a week
- Q8c. In the past 30 days, how often did you have intermittent awakenings or difficulty in maintaining sleep during the night? [Interviewer: Read out the answers one by one]
 - 1. Not during the past month
 - 2. Less than once a week
 - 3. Once or twice a week
 - 4. Three or more times a week
- Q8d. In the past 30 days, how often did you have early morning awakening and unable to sleep again? [Interviewer: Read out the answers one by one]
 - 1. Not during the past month
 - 2. Less than once a week
 - 3. Once or twice a week
 - 4. Three or more times a week

Q8e. During the past 30 days, for about how many days you felt you did not get enough sleep?

_____ Days

Q8f. Overall, how well do you consider your sleep? [Interviewer: Read out the answers one by one]

- 1. Very Well
- 2. Well
- 3. Fair
- 4. Poor
- 5. Very poor

Social support

Q9. How many close relatives or friends that you have and can talk to about private matter, call on for emotional support or financial assistance? (Interviewer: Close relatives or friends also include respondents' spouse, parents or off-spring)

____ (99 Refuse to answer)

General Health

- Q10. In general, you would say your health is: (Interviewer: Read out the answers)
 - 1. Excellent
 - 2. Very good
 - 3. Good
 - 4. Fair
 - 5. Poor

Level of Psychological Stress

The next set of questions is about your emotional health. In the past 30 days, how often have you experienced these feelings? Please choose the choice closest to your experience.

- Q11a. In the past 30 days, how often did you feel nervous? (Interviewer: Read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time

- Q11b. In the past 30 days, how often did you feel hopeless? (Interviewer: Read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time
- Q11c. In the past 30 days, how often did you feel restless or fidgety? (Interviewer: Read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time
- Q11d. In the past 30 days, how often did you feel so sad that nothing could cheer you up? (Interviewer: Read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time
- Q11e. In the past 30 days, how often did you feel that everything was an effort? (Interviewer: Read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time

- Q11f. In the past 30 days, how often did you feel worthless? (Interviewer: Read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time
- Q12. Taking them altogether, how often did these feelings occur in the past 30 days? More frequent than usual, about the same as usual, or less often than usual? (Interviewer: For those respondents who did not have any of these feelings, choose option "4". Read out the answers)
 - 1. A lot more often than usual
 - 2. Somewhat more often than usual
 - 3. A little more often than usual
 - 4. About the same as usual
 - 5. A little less often than usual
 - 6. Somewhat less often than usual
 - 7. A lot less often than usual

Interviewer's prompt: For those respondents who claim they did not experience the six kinds (Q11a – Q11f) of feelings mentioned above -> Please go straight to Section C.

The next set of questions is about how these feelings may have affected you in the past 30 days.

Q13a. How many days, out of the past 30 days, were you totally unable to work or carry out your normal activities because of the above-mentioned feelings or emotions? (Interviewer: If answered '30', go to Q14)

_____ Days

Q13b. Apart from the _____ days you indicated in the last question, how many days of the past month were you able to do about half or less of what you would normally do under the influence of those feelings?

_____ Days

Q14. In the past 30 days, how many times did you see a doctor or other health professional(s) because of these feelings or emotional problems?

Times

- Q15. In the past 30 days, how often was that a physical health problem to be the main cause of those feelings? (Interviewer: Read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time

C) Physiological response to stress

The Department of Health would like to know how your body responds when you are under stress.

- Q16. When you are in distress or feeling stressed out, how often do you have the following symptoms (interviewer: read out the answers) ?
 - a. headache
 - 1. Often
 - 2. Sometimes
 - 3. Rarely
 - 4. Never
 - b. loss of/increase in appetite
 - 1. Often
 - 2. Sometimes
 - 3. Rarely
 - 4. Never
 - c. neck/shoulder/back pain
 - 1. Often
 - 2. Sometimes
 - 3. Rarely
 - 4. Never
 - d. stomach ache
 - 1. Often
 - 2. Sometimes
- 3. Rarely
- 4. Never
- e. abdominal pain
 - 1. Often
 - 2. Sometimes
 - 3. Rarely
 - 4. Never
- f. chest pain
 - 1. Often
 - 2. Sometimes
 - 3. Rarely
 - 4. Never
- g. sleep disturbance (such as waking up early, difficulty in falling asleep or insomnia)
 - 1. Often
 - 2. Sometimes
 - 3. Rarely
 - 4. Never
- h. dizzy
 - 1. Often
 - 2. Sometimes
 - 3. Rarely
 - 4. Never
- Do you have any other stress symptoms that you often had but were not listed above?
 Please specify: ______

D) Sources of psychological distress/stress

Q17. In general, how often would your distress or stress be related to the following?

Q17a. Your physical condition? (Interviewer: read out the answers)

- 1. All of the time
- 2. Most of the time
- 3. Some of the time
- 4. A little of the time
- 5. None of the time

- Q17b. Your work, such as work demand or working conditions? (Interviewer: read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time
 - 6. Not applicable (e.g. not working)
- Q17c. Your financial difficulties? (Interviewer: read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time
- Q17d. Your family matters, such as marital conflicts, care for spouse, children or other family members? (Interviewer: read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time
- Q17e. Your interpersonal relationships with others, such as workmates and friends including boy-/girl-friend? (Interviewer: read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time

- Q17f. Your study/school work? (Interviewer: read out the answers)
 - 1. All of the time
 - 2. Most of the time
 - 3. Some of the time
 - 4. A little of the time
 - 5. None of the time
 - 6. Not applicable (e.g. not a student)

Stress management

- Q18. What is your most frequently adopted stress coping mechanism? (no prompt, one answer only)
 - 1. Exercise
 - 2. More rest/sleep
 - 3. Talking to somebody
 - 4. Smoking
 - 5. Drinking
 - 6. Eating
 - 7. Shopping
 - 8. Reading
 - 9. Watching TV
 - 10. Listening to music
 - 11. Attend stress management class
 - 12. Leisure activities
 - 13. Others (please specify: _____)
 - 14. No method used
 - 15. Not applicable as no stress

E) **Organ donation**

The following questions are related to organ donation. In general, organ donation is performed by removing the organ(s) from donors after death and surgically transplanting the useful organs to recipients in need.

- Q19. If your family members have expressed their will of donating their organs after death, will you object to the transplant?
 - 1. No
 - 2. Yes

Q20a. Are you willing to donate your organs?

- 1. No
- 2. Yes (skip to Q20c)
- 3. Not decided / considered yet (skip to Q21)
- Q20b. What are your reasons for NOT willing to donate your organs? (Interviewer: Do not read out the answers. May have more than one answer)
 - 1. Would like to keep body intact
 - 2. Not supported by family members
 - 3. Fear that donation will increase my suffering when I am critically ill
 - 4. Fear of being given less treatment by medical personnel
 - 5. Religious beliefs, the religion: _____
 - 6. Personal belief (e.g. Touch wood)
 - 7. Others (please specify): _____
 - 8. Personal preference (e.g. I don't want to)
 - 9. No comment / Don't know

(skip to Q21)

- Q20c. What are your reasons for WILLING to donate your organs? (Interviewer: Do not read out the answers. May have more than one answer)
 - 1. Would like to help other people
 - 2. Influenced by friends
 - 3. Influenced by family members
 - 4. Religious beliefs, the religion:
 - 5. In support of medical personnel's appeal
 - 6. In support of celebrities' appeal
 - 7. In support of patients' stories / appeal
 - 8. Touched by successful organ donation cases as reported by the press
 - 9. I / my family member / friend was a recipient
 - 10. Organs are useless after death
 - 11. Others (please specify): _____
 - 12. No comment / Don't know

Q20d. Have you used any of the following ways to express your wish to donate organ? (Interviewer: Read out the answers)

- i) Registered at the Centralised Organ Donation Register
 - 1. Yes
 - 2. No
- ii) Signed on the organ donation card
 - 1. Yes
 - 2. No

iii)Expressed your wish to your family members

- 1. Yes
- 2. No
- iv)Others
 - 1. Yes (please specify): _____
 - 2. No

F) Evaluation of 'For Health, We Change' Publicity Activities

The Department of Health recently launched a series of publicity activities under the 'For Health, We Change' campaign to promote healthy eating and physical activity participation.

- Q21. Have you ever seen or heard any publicity activities related to the 'For Health, We Change' campaign? (Interviewer: if respondent answered "NO", please read out the following prompts: the 'For Health, We Change' logo is made of orange and green colours. Besides the words 'For Health, We Change', there are two human figures in orange and green.
 - 1. Yes
 - 2. No (Skip to next section G. Demographics)
- Q22. Do you remember from where or which channels you have seen or heard the logo or slogan of 'For Health, We Change'?

(Interviewer: Do not read out answers. Multiple answers are allowed.)

- 1. Yes, Posters at bus stops
- 2. Yes, Posters on the bodies of tramcars
- 3. Yes, Posters on the bodies of vans
- 3. Yes, Posters on the bodies of light buses
- 4. Yes, Website advertising
- 5. Yes, Red packets
- 6. Yes, Radio advertising
- 7. Yes, from other channels
- 8. Forgotten from where or which channels

G) Demographic characteristics

Please tell us more about yourself in order to facilitate our analysis. All information collected would be kept strictly confidential.

Q23. What is your age?

_____ years (99 – refuse to answer)

Q24. What is your highest educational attainment? (Interview: read out the answers one by one)

- 1. Primary or below
- 2. Had not completed secondary
- 3. Completed secondary (F5)
- 4. Matriculation
- 5. Tertiary (Non-degree, degree or above)
- 6. Refuse to answer
- Q25. What is your marital status (Interview: read out the answers one by one)
 - 1. Never married
 - 2. Married and with child (ren)
 - 3. Married and without child (ren)
 - 4. Divorced or Separated
 - 5. Widowed
 - 6. Refuse to answer

Q26a. Are you currently engaged in a job?

- 1. Yes
- 2. No (skip to Q26c)

Q26b. What is your occupation?

- 1. Employer/Manager/Administrator
- 2. Professional
- 3. Associate Professional
- 4. Clerk
- 5. Service worker
- 6. Shop sales worker
- 7. Skilled agricultural/ fishery worker
- 8. Craft and related worker
- 9. Plant and machine operator and assembler
- 10. Un-skilled worker
- 11. Others, specify: _____

(skip to Q27)

Q26c. Are you a.....? (Interviewer: read out the answers one by one)

- 1. Student
- 2. Home-maker
- 3. Unemployed person
- 4. Retired person
- 5. Others, specify _____

(skip to Q28)

Q27. How much is your monthly personal income including all the income?

- 1. None
- 2. \$1-1,999
- 3. \$2,000-3,999
- 4. \$4,000-5,999
- 5. \$6,000-7,999
- 6. \$8,000-9,999
- 7. \$10,000-11,999
- 8. \$12,000-13,999
- 9. \$14,000-15,999
- 10. \$16,000-17,999
- 11. \$18,000-19,999
- 12. \$20,000-24,999
- 13. \$25,000-29,999
- 14. \$30,000-34,999
- 15. \$35,000-39,999

- 16. \$40,000-44,999
- 17. \$45,000-49,999
- 18. \$50,000 or above
- 19. Refuse to answer
- Q28. How much is your monthly household income including all the income?
 - 1. Less than \$2,000
 - 2. \$2,000-3,999
 - 3. \$4,000-5,999
 - 4. \$6,000-7,999
 - 5. \$8,000-9,999
 - 6. \$10,000-11,999
 - 7. \$12,000-13,999
 - 8. \$14,000-15,999
 - 9. \$16,000-17,999
 - 10. \$18,000-19,999
 - 11. \$20,000-24,999
 - 12. \$25,000-29,999
 - 13. \$30,000-34,999
 - 14. \$35,000-39,999
 - 15. \$40,000-44,999
 - 16. \$45,000-49,999
 - 17. \$50,000-54,999
 - 18. \$55,000-59,999
 - 19. \$60,000 or above
 - 20. Don't know
 - 21. Refuse to answer
- Q29. How many 'dependants' do you currently have?

_____ persons (99 – Refuse to answer)

- Q30. What is your religion?
 - 1. Catholicism
 - 2. Christianity
 - 3. Buddhism
 - 4. Hinduism
 - 5. Muslim
 - 6. Others, specify:_____
 - 7. No religion
- Q31. What is your type of living quarters?
 - 1. Public rental flats
 - 2. Housing Authority subsidized sale flats
 - 3. Housing Society subsidized sale flats
 - 4. Private residential flats
 - 5. Villas/ Bungalows/ Modern village houses
 - 6. Simple stone structures/ traditional village houses
 - 7. Staff quarters
 - 8. Non-domestic quarters
 - 9. Refuse to answer
- Q32. How many people are living in this household, including yourself but excluding live-in maids?

_____ persons (99 – Refuse to answer)

The survey has come to the end. Thank you very much for your participation. Goodbye!

END