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Behavioural Risk Factor Survey (April 2012)

Main Report

Commissioned by

Surveillance and Epidemiology Branch
Centre for Health Protection
Department of Health

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Executive Summary

Introduction

The Department of Health commissioned the Social Sciences Research Centre of the University of Hong Kong (SSRC) in April 2012 to conduct a survey to collect information on health risks and health-related behaviours (behavioural risk factors) among the adult Hong Kong population. The findings of a series of such surveys can also detect any changing trends of the risk factors. This will provide information to facilitate the planning, implementation and evaluation of health promotion programmes on the prevention of diseases related to lifestyle.

The scope of this survey covered the following 10 areas:

1. Weight status, control and perception
2. Physical activities and leisure-time exercise
3. Fruit and vegetable consumption
4. Smoking habits
5. Pattern of alcohol consumption
6. Salt consumption behaviours
7. Consumption of iodine-rich foods
8. Cycling and walking habits
9. Cervical screening (for female respondents only)
10. Demographic information: gender, age, education, marital status, occupation, monthly personal income, monthly household income, and type of living quarters.

Research Methodology

This survey was conducted through Computer Assisted Telephone Interview (CATI). A random sample of telephone numbers was drawn from a sampling frame that included unlisted and new numbers. The sampling frame was generated from the 2007 Hong Kong residential telephone directory (English version) by dropping the last digit of the telephone numbers on the directory, removing the resulting duplicates, and then adding back all 10 possible final digits. The telephone numbers on the final list were then randomized and selected as needed. The target respondents were Cantonese, Putonghua or English speaking residents in Hong Kong aged 18-64 (excluding domestic helpers). A bilingual (Chinese and English) questionnaire with 75 questions was used. Fieldwork took place between 25th April and 16th May 2012. A sample size of 2 041 successful interviews was achieved. The contact rate was 33.6% and the overall response rate was 71.2%. The width of a 95% confidence interval was at most +/- 2.2%. Weighting based on age and gender was applied in order to make our findings representative of the

Hong Kong general population, using the Hong Kong population data compiled by the Census and Statistics Department for end-2011 as reference.

Statistical tests were applied to detect any significant associations between selected demographics and the response variables. Only the findings that are statistically significant at the 5% level (2-tailed) will be presented in the report.

Key Findings of the Survey

Weight status, control and perception

When the World Health Organization (WHO)'s classification of weight status by BMI for adult Asians was used, about half (51.5%) of the respondents were classified as "normal", 18.4% as "overweight" and 19.3% as "obese", while the remaining 10.9% were classified as "underweight".

Regarding respondents' self-perceived current weight status, close to half (49.4%) of the respondents perceived themselves as "just right", 40.9% considered themselves as "overweight", and 9.7% considered themselves as "underweight". A relatively higher proportion of female respondents, respondents aged 35-64, married or divorced/ separated/ widowed respondents and those with primary education or below considered themselves as "overweight". Overall, 65.4% of the respondents perceived their weight status in a way consistent with the WHO's classification of weight status for adult Asians, while 19.1% of the respondents overestimated and 15.4% underestimated their weight status.

During the twelve months prior to the survey, about three-tenths (30.3%) of the respondents had done something deliberately to control their weight, of which 61.6% aimed to lose weight. Among those respondents who had done something deliberately to control their weight, the most commonly used methods to control weight were "doing physical exercise" (84.0%) and "changing dietary habit" (76.3%).

Physical activities and leisure-time exercise

During the seven days prior to the survey, about half (50.1%) of the respondents had not engaged in any moderate physical activity for at least 10 minutes a day and over three-fifths (62.2%) of respondents had not engaged in any vigorous physical activity for at least 10 minutes a day.

Walking was the most common form of physical activity - 68.3% of the respondents had spent at least 10 minutes on walking every day during the seven days prior to the survey. On the other hand, about one-fifth (19.2%) of the respondents sat 10 or more

hours per day during weekdays (Monday to Friday) in the seven days prior to the survey.

Concerning leisure-time exercise, more than one-third (37.9%) of the respondents reported that they exercised less than once a month in their leisure-time.

Overall, only about two-fifths (39.5%) of the respondents' level of physical activity met the WHO's recommended physical activity level for adults. Males, those aged 18-24, never married respondents, service workers and blue collar workers were more likely to meet the physical activity level as WHO recommended.

Fruit and vegetable consumption

While around half (49.9%) of the respondents had eaten fruit every day, about four-fifths of respondents (81.0%) had eaten vegetables daily. Regular fruit or vegetable juice consumption was found to be uncommon amongst respondents - only 1.8% of the respondents drank fruit or vegetable juice daily.

Excluding fruit/ vegetable juice, the average (mean) daily intake of fruit and vegetables by the respondents was only 3.2 servings. Less than one-fifth (17.3%) of the respondents had a daily intake of 5 or more servings of fruit and vegetables per day. Males, never married respondents and clerks were more likely to have consumed less than 5 servings of fruit and vegetables per day. Also, the younger the respondents, the more likely that they consumed less than 5 servings of fruit and vegetables per day.

Smoking habits

About one-tenth (11.1%) of the respondents were current smokers at the time of this survey. Among the current smokers, the vast majority (96.3%) were daily smokers and more than one-third (37.4%) of them reported smoking 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 respondents aged 45-64, those with primary education or below, those with monthly household income below $14,000 and those living in public rental flats.

Pattern of alcohol consumption

About three-tenths (30.8%) of the respondents reported having drunk at least one alcoholic drink during the thirty days prior to the survey. More than two-fifths (44.9%) of these drinkers drank less than one day per week while only 6.2% drank daily. About seven-tenths (69.8%) of these drinkers consumed fewer than 3 standard drinks on each drinking day. On average, they consumed 2.5 standard drinks per day during the thirty days prior to the survey.

On the whole, drinking during the thirty days prior to the survey was more prevalent among males, those aged 18-24, never married respondents, those attained tertiary education or above, service workers, those living in private housing and those with higher monthly household income.

Among those who had drunk alcohol during the thirty days prior to the survey, about one-fifth (20.4%) 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.

On the other hand, among the respondents who had at least one alcoholic drink in the last twelve months, about a quarter (25.5%) reported that they had engaged in binge drinking at least once during the two to twelve months prior to the survey. Binge drinking once or more a week during the two to twelve months prior to the survey was more common among respondents who had not completed secondary education and those with monthly household income below $8,000.

Among those who had drunk alcohol during the thirty days prior to the survey, 12.4% reported that they had drunk so much that they exhibited signs of drunkenness. Drunkenness was more common among male respondents, those aged 18-24 and never married respondents.

Only a small percentage (ranging from 0.2% to 1.7%) of respondents reported that they had encountered problems or conditions because of their own or someone else's drinking, such as having been physically hurt and having had job or work problems.

Salt consumption behaviours

WHO recommends that the daily intake of salt for a healthy adult should not exceed 5 grams. Over nine-tenths (91.1%) of respondents reported that they did not know about the WHO's recommended maximum daily intake of salt. Among those who reported that they knew, only 28.7% could correctly state that the WHO's recommended maximum daily intake of salt for a healthy adult is 5g. Overall, only 2.6% of respondents could correctly state the recommended level.

3.7% of respondents reported that they had always or often added salt to cooked dishes at the table, and about one-tenth (12.2%) reported that they had always or often added sauces to cooked dishes at the table. In addition, more than two-thirds (66.7%) of respondents reported that they had never or seldom checked food labels for salt content when purchasing pre-packaged food.

Consumption of iodine-rich foods

About two-fifths (39.0%) of respondents reported that they often ate seafood such as marine water fish and shellfish, one-third (33.5%) often ate dairy products such as milk

and cheese, and one-tenth (10.9%) often ate dried kelp, seaweed or laver including seaweed snack and nori sheet for sushi during the twelve months prior to the survey. Overall, less than one-tenth (8.4%) of respondents reported that they had never or seldom eaten any of the above three categories of iodine-rich foods during the twelve months prior to the survey.

Cycling and walking habits

More than a quarter (28.9%) of respondents reported that they had ridden a bike during the twelve months prior to the survey. Among these bikers, more than four-fifths (88.7%) never wore a helmet whilst cycling. The most frequently reported reason for never wearing a helmet whilst cycling was "considered it not necessary" (45.6%), followed by "did not have one" (38.7%).

Among those respondents who had ridden a bike during the twelve months prior to the survey, 4.8% claimed that they wore headphones to listen to the radio, music or phone calls, etc. whilst cycling all of the time (2.4%) or most of the time (2.4%).

Besides, 4.5% of all respondents reported that they always wore headphones to listen to the radio, music or phone calls, etc. whilst walking on the street during the thirty days prior to the survey.

Cervical screening

Less than two-thirds (62.4%) of the female respondents reported that they had had a cervical smear before. Women aged 18-34, those who have completed matriculation, never married respondents, those with monthly household income below $40,000, those living in public rental flats, and those living in subsidized sale flats were more likely not to have had a cervical smear.

Among those female respondents who had a cervical smear before, less than half (47.1%) had their last cervical smear taken within twelve months prior to the survey and about two-thirds (66.2%) had a cervical smear at a regular interval. Among those who had cervical smears regularly, 52.7% had the test once a year.

Recommendations

Some recommendations based on the survey findings are made below:

1. The benefits of having adequate levels of physical activity regularly are well-established, such as improving cardio-respiratory and muscular fitness, bone health and reducing the risk of developing chronic diseases and depression. However, about three-fifths of respondents (60.5%) did not meet the recommended amount of physical activity suggested by the WHO. Health promotion programmes could therefore focus on educating the community about the WHO's recommended level of physical activity and some practical tips for being more active. In addition, barriers to participating in physical activities need to be identified and measures to overcome the barriers need to be devised.

2. The survey results showed that 11.1% of the respondents were current smokers and almost all (96.3%) of them were daily smokers. 20.4% 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). Health promotion programmes should focus on educating the high-risk groups about the health benefits of having a smoke-free and alcohol-free lifestyle. Moreover, barriers to quitting smoking need be assessed.

3. Diet rich in fruit and vegetables is associated with a reduced risk of developing major non-communicable diseases, including cardiovascular diseases, type 2 diabetes and certain cancers. However, less than one-fifth of the respondents reported that they had a daily average intake of 5 or more servings of fruit and vegetables. Therefore, the benefits of having at least 5 servings of fruit and vegetables a day should be further promoted.

4. Excess salt intake is associated with an increased risk of hypertension, heart disease and stroke. Overall, only 2.6% of respondents knew the WHO's recommended maximum daily intake of 5 grams of salt for a healthy adult. Also, more than two-thirds of the respondents reported that they had never or seldom checked food labels for salt content when purchasing pre-packaged food. Future educational campaigns could be focused on empowering the public in reading food labels when shopping pre-packaged foods and making healthier food choices.

5. To reduce the risk of head and facial injuries to cyclists in the event of a crash, cyclists should wear a helmet while cycling at all times. However, the survey results showed that 88.7% of cyclists never wore a helmet whilst cycling. Educational campaigns on safe cycling should be continued and promoted, especially the importance of wearing a properly fitted helmet that meets international standards.

Chapter 1 Introduction

The Department of Health commissioned the Social Sciences Research Centre of the University of Hong Kong (SSRC) to conduct a survey in April 2012 to collect information on health risks and health-related behaviours (behavioural risk factors) among the adult Hong Kong population. The findings of a series of such surveys can also detect any changing trends of the risk factors. This will provide information to facilitate the planning, implementation and evaluation of health promotion programmes on the prevention of diseases related to lifestyle.

The scope of this survey encompasses the following areas:

- Weight status, control and perception
- Physical activities and leisure-time exercise
- fruit and vegetable consumption
- smoking habits
- pattern of alcohol consumption
- Salt consumption behaviours
- Consumption of iodine-rich foods
- Cycling and walking habits
- Cervical screening (for female respondents only)
- Demographic information: gender, age, education, marital status, occupation, monthly personal income, monthly household income, and type of living quarters.

Chapter 2 Research Methodology

2.1 Mode of survey and sampling method

The survey was conducted through Computer Assisted Telephone Interview (CATI). A random sample of telephone numbers was drawn from a sampling frame generated from the 2007 Hong Kong residential telephone directory (English version) [1] by dropping the last digit of the telephone numbers on the directory, removing the resulting duplicates, and then adding back all 10 possible final digits. The telephone numbers on the final list were then randomized and selected 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 numbers[2].

For each successfully contacted residential unit, when more than one eligible person resided in the household and more than one was present at the time of the telephone contact, the "Next Birthday" rule was applied i.e., the household member who had his/her birthday the soonest was selected.

2.2 Target respondents

Eligible respondents were residents in all 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 61 pre-coded questions and 14 open-ended questions (with 8 demographic questions) was used 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 57 successfully completed interviews was conducted on 22nd and 23rd March 2012 to test the length, logic, wording and format of the questionnaire. The data collected from these pilot interviews were not included in this survey report.

[1] The Chinese residential telephone directory was not used because the total number of telephone numbers is smaller than that in 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 in the call-centre of SSRC on all the weekdays and Saturdays between 25th April and 16th May 2012, except 28th April and 1st May, which are public holidays (a total of 15 weekdays and 2 Saturdays).

Because of the briefing on 25th April, 2012, telephone calls were made between 4:45 p.m. and 10:30 p.m. on that day. On the weekdays, telephone calls were made between 4:00 p.m. and 10:30 p.m. On the Saturdays, telephone calls were made between 2:00 p.m. and 6:00 p.m.

2.6 Response rate

A total of 22 479 telephone numbers were attempted. The number of successful interviews was 2 041. Refusal and dropout cases amounted to 826. All "not available" (2 827), and "no answer" (3 383) cases were attempted five times before being classified as non-contact cases. The contact rate was 33.6%[3] and the overall response rate was 71.2%[4]. Table 2.6 details the breakdown of telephone contact status.

Table 2.6: Final status of telephone numbers attempted

Type	Final status of contacts[5]	Number of cases
1	Success	2 041
2	Drop-out	148
3	Refusal	678
4	Language problems	44
5	Not eligible	530
6	Business lines	1 277
7	Not available	2 827
8	Busy tone	245
9	No answer	3 383
10	Fax/data lines	1 095
11	Invalid	10 211
TOTAL		**22 479**

[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 = (2 041 + 148 + 678 + 44 + 530 + 1 277 + 2 827) / 22 479 = 33.6%.

[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) = 2 041 / (2 041 + 148 + 678) = 71.2%.

[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 sampling error

A sample size of 2 041 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 +/− 2.2%[6]. This means that we can have 95% confidence that the true population proportion falls within the sample proportion plus or minus 2.2%. 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 that considered themselves as "overweight" falls between 43.9% ± 2.2%, i.e. 41.7% and 46.1%.

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 standard 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 age and gender proportions when compared with the Hong Kong population data compiled by the Census and Statistics Department (C&SD) for end-2011. The proportions of respondents among age groups 50-64 were higher than that in the general population while the proportions of respondents aged 25-39 years old were lower. The sample also contained a higher percentage of females when compared with the general population. Table 2.9a shows the differences in terms of age and gender.

In view of the demographic differences between this sample and the Hong Kong general population, weighting for gender and age was applied 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 Hong Kong general population to that of this sample (Table 2.9b).

[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:

$$\pm 1.96 \times \sqrt{\frac{0.5 \times 0.5}{2\,041}} \times 100\% = 2.2\%$$

Table 2.9a: Distribution differences of age and gender between this survey and the Hong Kong population data compiled by the C&SD for end-2011

Age Group	This survey			Hong Kong population data – from the C&SD (end 2011)*		
	Male	**Female**	***Total***	**Male**	**Female**	***Total***
	% of Total	*% of Total*	*% of Total*	*% of Total*	*% of Total*	*% of Total*
18-24	**5.98%**	**6.27%**	*12.25%*	**6.07%**	**6.14%**	*12.20%*
25-29	**1.93%**	**2.72%**	*4.64%*	**4.47%**	**5.98%**	*10.45%*
30-34	**2.02%**	**4.25%**	*6.27%*	**4.47%**	**6.47%**	*10.94%*
35-39	**3.01%**	**5.83%**	*8.84%*	**4.63%**	**6.53%**	*11.15%*
40-44	**3.90%**	**8.74%**	*12.64%*	**4.75%**	**6.53%**	*11.29%*
45-49	**4.15%**	**9.04%**	*13.19%*	**5.75%**	**7.03%**	*12.78%*
50-54	**4.59%**	**11.06%**	*15.65%*	**6.13%**	**6.42%**	*12.54%*
55-59	**3.95%**	**8.69%**	*12.64%*	**5.15%**	**5.26%**	*10.41%*
60-64	**4.99%**	**8.89%**	*13.88%*	**4.12%**	**4.11%**	*8.23%*
Total	**34.52%**	**65.48%**	*100.00%*	**45.54%**	**54.46%**	*100.00%*

*Note: *Provisional figures obtained from the C&SD*

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

Age	Male	Female
18-24	1.015413875	0.978435220
25-29	2.320853014	2.202722814
30-34	2.207640672	1.522361782
35-39	1.536140464	1.119997816
40-44	1.217945793	0.747566708
45-49	1.387171055	0.777988550
50-54	1.333998029	0.580026035
55-59	1.303945541	0.605168537
60-64	0.826262521	0.462295373
Age data missing	1.000000000	1.000000000

Statistical tests were applied to detect any significant differences between sub-groups. Associations between selected demographic information and responses of selected questions were also examined. Significance testing was conducted at the 5% level (2-tailed). The statistical software, IBM SPSS for Windows version 20.0 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 the respondents in this survey (Table 3.1).

3.1.1 Gender and age

As weighting for gender and age was applied, the gender and age distribution in this report matches the Hong Kong Population aged 18-64 compiled by the C&SD for end-2011.

Overall, 54.5% of the respondents were females and 46.2% were aged between 30 and 49.

3.1.2 Marital status

Over three-fifths (63.0%) of the respondents were married - 55.1% had children and 7.8% did not have a child. Nearly one-third (33.1%) of the respondents were never married, 2.5% were divorced or separated and 1.4% were widowed.

3.1.3 Educational attainment

Most of the respondents (75.8%) had secondary education or above - 29.9% had completed secondary (F.5), 7.2% had matriculation education and 38.6% attained tertiary education or above. The remaining respondents (24.2%) had not completed secondary education or had primary education or below.

3.1.4 Occupation

More than one-third (34.6%) of the respondents were not engaged in a job. These included 7.8% students; 17.2% homemakers; 3.8% unemployed and 5.8% retired persons.

For the respondents engaged in a job, the most common occupation is clerks (16.5%), followed by employers/ managers/ administrators (8.2%), service workers (7.8%) and professionals (7.7%).

3.1.5 Income

More than three-fifths (61.2%) of the respondents had a monthly personal income below $20,000, 40.5% had a monthly personal income of $10,000-$19,999 and 20.7% had a monthly personal income below $10,000.

Regarding monthly household income, slight more than half (52.2%) of the respondents had a monthly household income below $30,000, 20.5% had a monthly household income of $20,000-$29,999, 22.3% had a monthly household income of $10,000-$19,999 and 9.4% had a monthly household income below $10,000.

3.1.6 Type of living quarters

Over half (53.4%) of the respondents were living in private housing, followed by public rental flats (32.0%) and Housing Authority/ Housing Society subsidized sale flats (14.5%).

Table 3.1: Demographic information (Gender, Q29-Q35)[7]

Gender	**Base = 2 041**
Male	45.4%
Female	54.6%
Marital Status	**Base = 2 024**
Never married	33.1%
Married and with child(ren)	55.1%
Married and without child	7.8%
Divorced/ Separated	2.5%
Widowed	1.4%
Educational Attainment	**Base = 2 037**
Primary or below	9.6%
Had not completed secondary	14.7%
Completed secondary (F.5)	29.9%
Matriculation	7.2%
Tertiary or above	38.6%

Age	**Base = 2 025**
18-24	12.2%
25-29	10.5%
30-34	10.9%
35-39	11.2%
40-44	11.3%
45-49	12.8%
50-54	12.5%
55-59	10.4%
60-64	8.2%
Occupation	**Base = 1 981**
Employer/ Manager/ Administrator	8.2%
Professional	7.7%
Associate professional	6.8%
Clerk	16.5%
Service worker	7.8%
Shop sales worker	4.6%
Skilled agricultural/ Fishery worker	0.2%

[7] Refers to the question number in the survey questionnaire, see Annex A.

Table 3.1: Demographic information (Gender, Q29-Q35)[8] (Continued)

Type of Living Quarters	**Base = 2 000**
Public rental flats	32.0%
Housing Authority subsidized sale flats	13.0%
Housing Society subsidized sale flats	1.5%
Private residential flats	48.3%
Villas/ Bungalows/ Modern village houses	1.9%
Simple stone structures/ Traditional village house	2.2%
Staff quarters	1.0%
Non-domestic quarters	#

Monthly Personal Income	**Base = 1 181[9]**
Below $10,000	20.7%
$10,000-$19,999	40.5%
$20,000-$29,999	17.8%
$30,000-$49,999	12.9%
$50,000 or above	8.1%

Craft and related worker	4.2%
Plant and machine operator and assembler	3.5%
Unskilled worker	5.9%
Student	7.8%
Homemaker	17.2%
Unemployed person	3.8%
Retired person	5.8%

Monthly Household Income	**Base = 1 494**
Below $10,000	9.4%
$10,000-$19,999	22.3%
$20,000-$29,999	20.5%
$30,000-$49,999	23.3%
$50,000 or above	24.4%

Less than 0.05%

[8] Refers to the question number in the survey questionnaire, see Annex A.
[9] For non-working respondents, they did not need to answer question Q33 (monthly personal income).

3.2 Weight status, control and perception

Eleven questions were asked in this survey to ascertain the respondents' height, weight, and waist circumference; whether they had adopted any methods to control their weight; and their perception of their current weight. The respondents' Body Mass Index (BMI) was calculated from the reported height and weight and was classified according to the World Health Organization (WHO)'s classifications of weight status for both adult Europeans and adult Asians.

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 (sections 3.2.1, 3.2.2 and 3.2.4). Subsequently, a total of 7 outlier cases for height or weight (including two pregnant women) were excluded from analyses in section 3.2.5. In addition, 47 cases were excluded from the BMI analyses due to missing data for height or weight.

3.2.1 Height (when not wearing shoes)

The self-reported height of the respondents (when not wearing shoes) ranged from 130.0 to 188.0cm. More than two-fifths (41.8%) of the respondents were within the height range from 160.0 to less than 170.0cm, followed by 28.1% in the range from 150.0 to less than 160.0cm. The overall mean and median height were 163.8cm and 163.0cm respectively (Table 3.2.1).

Table 3.2.1: Height distribution of respondents (percentage, mean and median) (Q1a)

Height (cm)	Number	% of Total
100.0 – <150.0	33	1.6%
150.0 – <160.0	567	28.1%
160.0 – <170.0	845	41.8%
170.0 – <180.0	491	24.3%
180.0 – 190.0	83	4.1%
Total	***2 020****	***100.0%***
Mean	163.8cm	
Median	163.0cm	

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

3.2.2 Weight (wearing light clothes)

The self-reported weight of the respondents (when wearing simple clothes) ranged from 38.6 to 120.0kg. Over one-third (34.4%) of the respondents fell into the weight range from 50.0 to less than 60.0kg, followed by 26.1% in the range from 60.0 to less than 70.0kg. The overall mean and median weight were 60.2kg and 59.0kg respectively (Table 3.2.2).

Table 3.2.2: Weight distribution of respondents (percentage, mean and median) (Q1b)

Weight (kg)	Number	% of Total
37.0 – <40.0	7	0.3%
40.0 – <50.0	394	19.7%
50.0 – <60.0	689	34.4%
60.0 – <70.0	521	26.1%
70.0 – <80.0	264	13.2%
80.0 – 120.0	126	6.3%
Total	***2 001****	***100.0%***
Mean	60.2kg	
Median	59.0kg	

*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 (~19.7-47.2inch) or who were pregnant were treated as outliers. A total of 3 cases (two of them were pregnant women) were treated as outliers.

The reported waist circumference of the respondents ranged from 50.8 to 116.8cm. Over two-fifths (42.1%) of the respondents had their waist circumference in the range from 70.0 to less than 80.0 cm, followed by 24.8% in the range from 80.0 to less than 90.0cm. The overall mean and median waist circumference were 76.0cm and 76.2cm respectively (Table 3.2.3).

Table 3.2.3: Waist circumference distribution of respondents (percentage, mean and median) (Q1c)

Waist circumference (cm)	Number	% of Total
50.0 – <60.0	11	0.5%
60.0 – <70.0	489	25.1%
70.0 – <80.0	819	42.1%
80.0 – <90.0	483	24.8%
90.0 – 120.0	145	7.5%
Total	***1 946****	***100.0%***
Mean	76.0cm	
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 classification of weight status by BMI for adult Europeans and adult Asians, respondents were classified into four categories of weight status (underweight, normal, overweight and obese) as shown in Table 3.2.4.1a and Table 3.2.4.1b respectively.

According to the classification for adult Europeans, about seven-tenths (69.8%) of the respondents were classified as "normal", 15.8% as "overweight" and 3.5% as "obese". About one-tenth (10.9%) of the respondents were regarded as "underweight" (Table 3.2.4.1a).

Table 3.2.4.1a: Distribution of weight status by WHO classification for adult Europeans (Q1a & Q1b)

Weight status by WHO classifications	BMI	Number	% of Total
Underweight	BMI < 18.5	217	10.9%
Normal	BMI 18.5 – <25.0	1 388	69.8%
Overweight	BMI 25.0 – <30.0	314	15.8%
Obese	BMI ≥ 30.0	69	3.5%
	Total	***1 988****	***100.0%***

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

Based on the classification for adult Asians, about half (51.5%) of the respondents were classified as "normal", 19.3% as "obese" and 18.4% as "overweight", while the remaining 10.9% were classified as "underweight" (Table 3.2.4.1b).

Table 3.2.4.1b: Distribution of weight status by WHO classification for adult Asians (Q1a & Q1b)

Weight status by WHO classifications	BMI	Number	% of Total
Underweight	BMI < 18.5	217	10.9%
Normal	BMI 18.5 – <23.0	1 023	51.5%
Overweight	BMI 23.0 – <25.0	365	18.4%
Obese	BMI ≥ 25.0	383	19.3%
	Total	***1 988****	***100.0%***

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

3.2.5 Perception of current weight status

When respondents were asked about their self-perceived current weight status, close to half (49.4%) of the respondents perceived it as "just right". However, 40.9% considered themselves as "overweight" while 9.7% considered themselves as "underweight" (Table 3.2.5a).

Table 3.2.5a: Perception of current weight status (Q4)

Perception of current weight	Number	% of Total
Overweight	829	40.9%
Just right	1 002	49.4%
Underweight	197	9.7%
Total	***2 028****	***100.0%***

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

Table 3.2.5b shows the differences of weight status between the WHO classification (for adult Asians) and the respondents' perception. Nearly half (49.3%) of the respondents considered their weight status as "just right" while slightly more than half (51.5%) were classified as "normal" under the WHO classification (Asian standard). On the other hand, 40.9% of respondents perceived themselves as "overweight" while 37.7% were classified as "overweight" or "obese" according to the WHO criteria (for adult Asians). Overall, 65.4% of the respondents perceived their weight status in a way consistent with the WHO criteria, while 19.1% of the respondents overestimated and 15.4% underestimated their weight status.

Table 3.2.5b: Comparison of weight status between WHO classification (for adult Asians) and respondents' perception of their current weight (Q1a, Q1b & Q4)

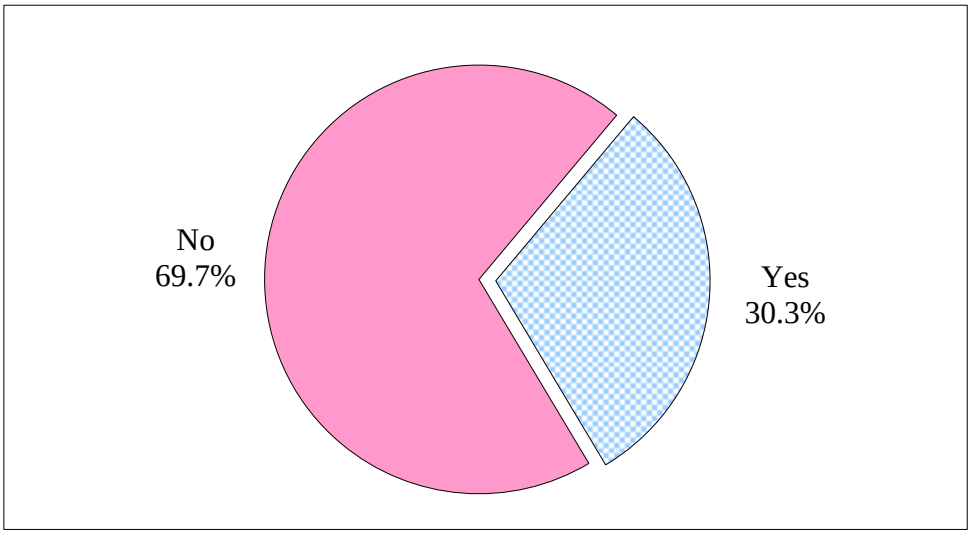
Cross-tabulation		Weight status by WHO classification (for adult Asians)				
		Underweight	**Normal**	**Overweight**	**Obese**	***Total***
Respondents' perception of current weight	**Overweight**	17	248	211	335	811
	% of Total	0.8%	12.5%	10.7%	16.9%	40.9%
	Just right	115	668	150	46	978
	% of Total	5.8%	33.7%	7.5%	2.3%	49.3%
	Underweight	84	106	3	1	194
	% of Total	4.2%	5.3%	0.2%	0.1%	9.8%
	Total	215	1 021	364	383	1 983
	% of Total	10.9%	51.5%	18.4%	19.3%	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.*

3.2.6 Weight control

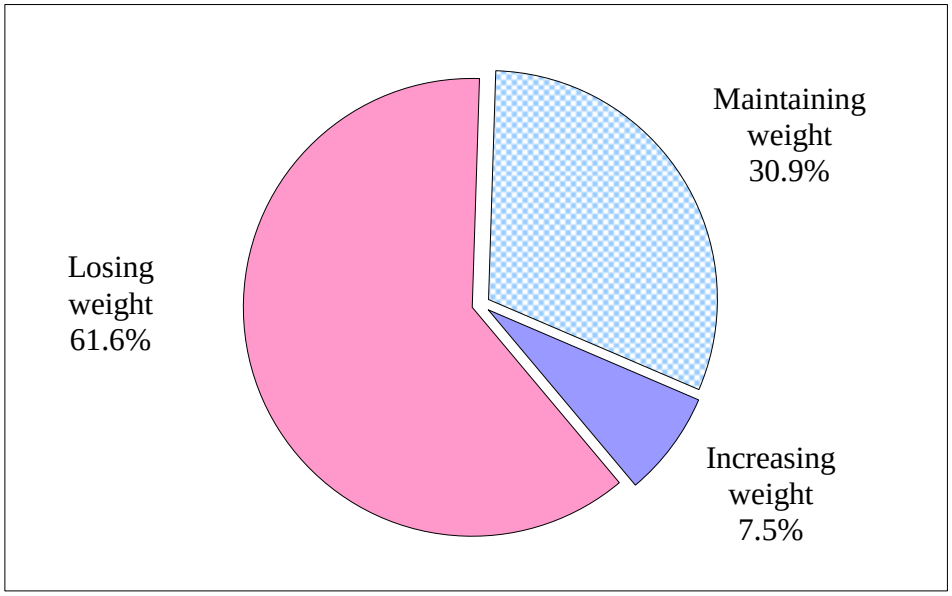
During the twelve months prior to the survey, about three-tenths (30.3%) of the respondents reported that they had done something deliberately to control their weight (Fig. 3.2.6a). Among those respondents, more than three-fifths (61.6%) of them aimed to lose weight, 30.9% aimed to maintain weight and 7.5% tried to increase weight (Fig. 3.2.6b).

Fig. 3.2.6a: Controlling weight deliberately in twelve months prior to the survey (Q2)



Base: All respondents = 2041

Fig. 3.2.6b: Purpose of controlling weight (Q2)

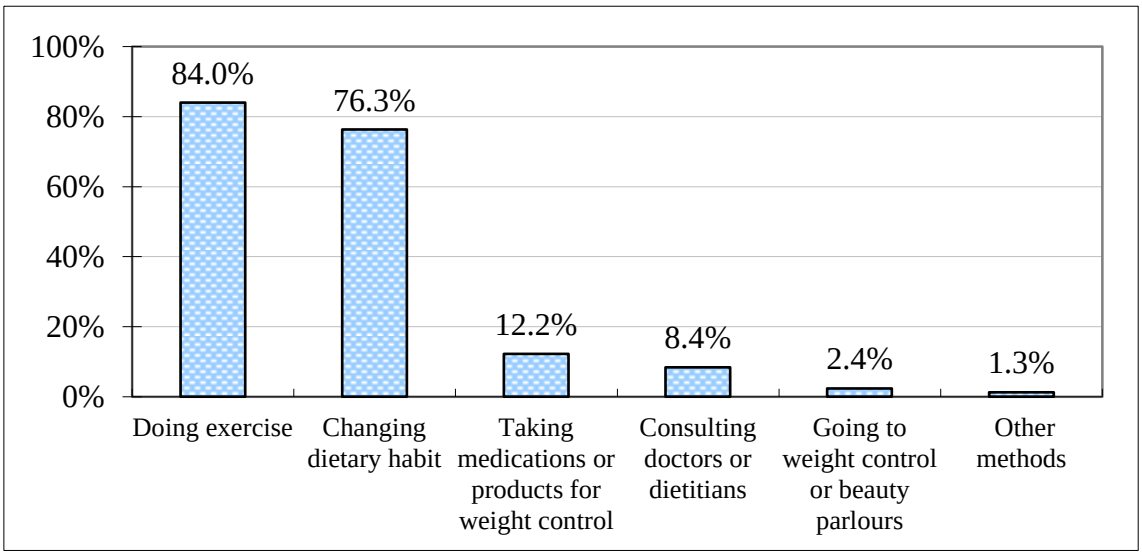


Base: Respondents who had deliberately done something to control their weight = 619

3.2.7 Methods adopted to control weight

Among those respondents who had done something deliberately to control their weight during the twelve months prior to the survey, most of them reported that the methods they used were "doing physical exercise" (84.0%) and "changing dietary habit" (76.3%). Other methods mentioned included "taking drugs or products" (12.2%), "consulting doctors or dieticians" (8.4%) and "going to weight control or beauty parlours" (2.4%) (Fig. 3.2.7).

Fig. 3.2.7: Methods used to control weight (Q3a-f)



Base: Respondents who had deliberately done something to control their weight = 619 (multiple responses)

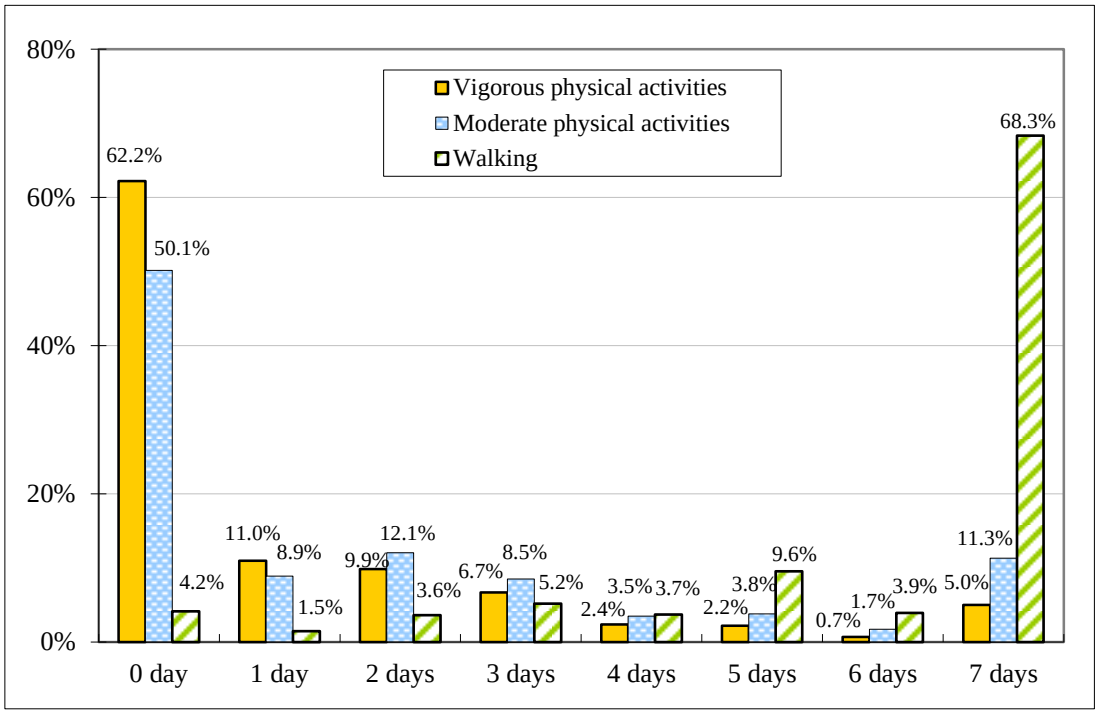
3.3 Physical activities and leisure-time exercise

Eight questions were asked to assess the frequency and duration of physical activities[10] that the respondents had engaged in. Seven of the questions were adopted from the International Physical Activity Questionnaire (IPAQ) short form (see Annex A, Q5a-Q9).

3.3.1 Frequency of physical activities per week

On a weekly basis, walking was far more prevalent than vigorous and moderate physical activities. During the seven days prior to the survey, 68.3% of respondents spent at least 10 minutes walking every day. On the other hand, 37.8% and 49.9% of the respondents reported that they spent at least one day on vigorous and moderate physical activities in the seven days prior to the survey respectively (Fig. 3.3.1a).

Fig. 3.3.1a: Number of days per week spent on doing each type of physical activities in the seven days prior to the survey (Q5a, Q6a & Q7a)

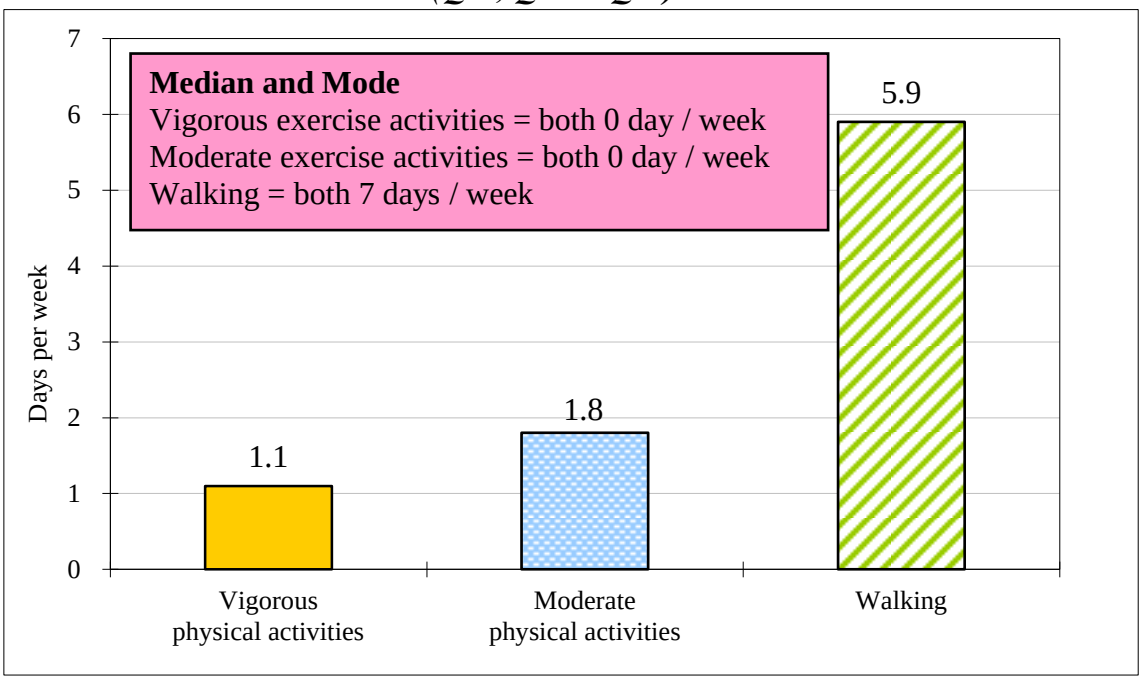


Base: All respondents excluding "don't know" (Vigorous physical activities = 2 040; Moderate physical activities = 2 040; Walking = 2 041)

[10] Respondents were informed of the definitions of vigorous physical activities, moderate physical activities and walking. Vigorous physical activities are defined as those that make people breathe much harder than normal, for example aerobics, football, swimming, heavy physical work and jogging. Moderate physical activities are defined as those that make people breathe somewhat harder than normal, for example, cycling, washing or polishing cars, fast walking and cleaning windows. Walking includes walking to work or school, walking to travel from place to place and walking for leisure. All the questions about vigorous exercise, moderate exercise and walking only referred to those activities on which the respondents had spent at least 10 minutes at a time.

Fig.3.3.1b shows that respondents spent fewer days on vigorous and moderate physical activities. On average, respondents spent 1.1 day per week on vigorous physical activities and 1.8 days per week on moderate physical activities. In contrast, the average number of days spent on walking was much higher at 5.9 days per week (Fig. 3.3.1b).

Fig. 3.3.1b: Weekly average number of days spent on different types of physical activities with median and mode (Q5a, Q6a & Q7a)



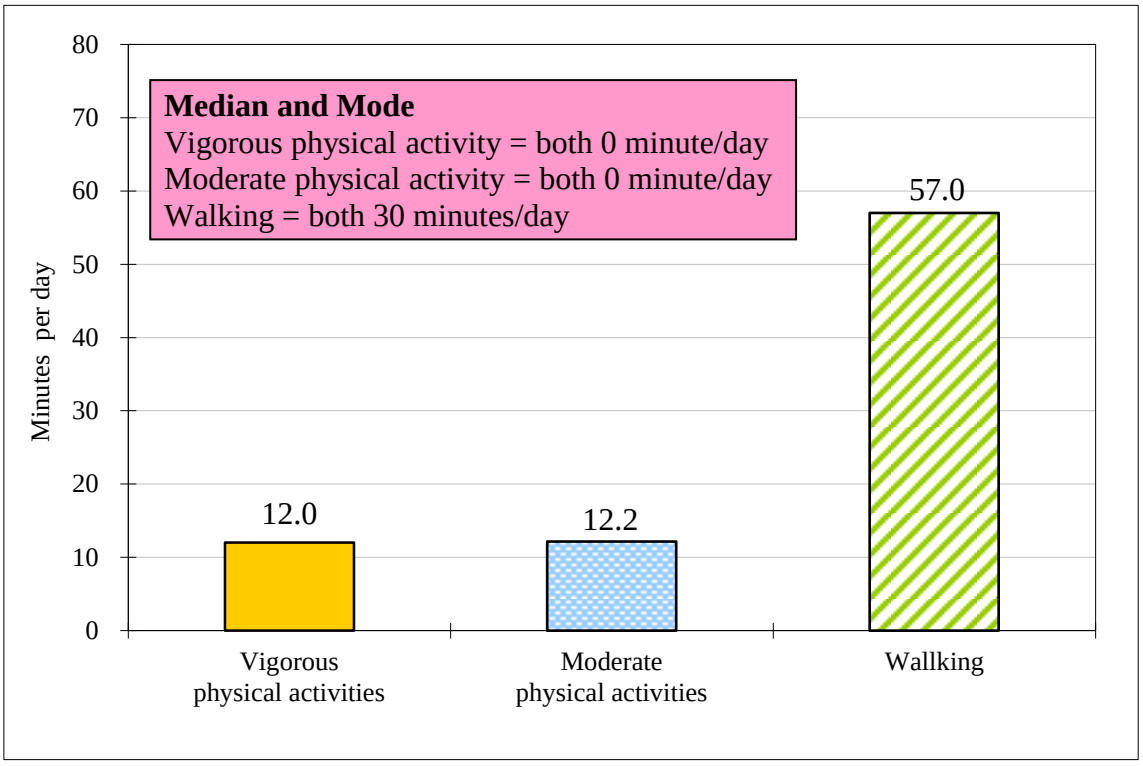
Base: All respondents excluding "don't know" (Vigorous physical activities = 2 040; Moderate physical activities = 2 040; Walking = 2 041)

3.3.2 Daily average time spent on physical activities[11]

On average, respondents spent 12.0 minutes per day on vigorous physical activities, 12.2 minutes on moderate physical activities and 57.0 minutes on walking. The median and mode average time spent per day were both zero minute for vigorous and moderate physical activities and both median and mode time spent per day were 30 minutes for walking (Fig. 3.3.2a).

Overall, less than one-tenth of the respondents spent a daily average of 31 minutes or more on vigorous physical activities (9.7%) and moderate physical activities (8.1%), while 37.7% of respondents spent a daily average of 31 minutes or more on walking (Table 3.3.2b).

Fig.3.3.2a: Daily average minutes spent on different types of physical activity with median and mode (Q5a, Q5b, Q6a, Q6b, Q7a & Q7b)



Base: All respondents excluding "don't know" and refusal (Vigorous physical activities = 2 040; Moderate physical activities = 2 038; Walking = 2 024)

[11] The daily average minutes per day spent on each type of exercise was computed by multiplying the average number of days engaged in each type of exercise on a weekly basis and the average minutes of time spent on each type of exercise on those days they had done exercise and then dividing by 7 days. Vigorous exercise: (Q5a*Q5b)/7; Moderate exercise: (Q6a*Q6b)/7; Walking: (Q7a*Q7b)/7.

Table 3.3.2b: Daily average time spent on doing different types of physical activity (Q5a, Q5b, Q6a, Q6b, Q7a & Q7b)

Minutes	Vigorous physical activity		Moderate physical activity		Walking	
	Number	% of Total	Number	% of Total	Number	% of Total
Below 10	1 521	74.6%	1 432	70.3%	271	13.4%
10 – <16	88	4.3%	181	8.9%	277	13.7%
16 – <31	234	11.5%	259	12.7%	712	35.2%
31 – <61	123	6.0%	101	5.0%	391	19.3%
61 or above	75	3.7%	64	3.1%	373	18.4%
Total	***2 040****	***100.0%***	***2 038****	***100.0%***	***2 024****	***100.0%***

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

3.3.3 Sitting[12]

Respondents were asked how much time per day on average they spent on sitting during weekdays (Monday to Friday) in the seven days prior to the survey. Table 3.3.3 shows that more than half (53.8%) of the respondents reported that they sat for at least six hours per day during weekdays. The mean and median sitting hours were 6.2 and 6.0 respectively (Table 3.3.3).

Table 3.3.3: Average time spent on sitting per day during weekdays in the seven days prior to the survey (Percentage, mean and median) (Q8)

Sitting Hours	Number	% of Total
Below 2	86	4.3%
2 - <4	359	17.9%
4 - <6	483	24.0%
6 - <8	370	18.4%
8 - <10	325	16.2%
10 or above	386	19.2%
Total	***2 010****	***100.0%***
Other statistics	**Hours**	
Mean	6.2	
Median	6.0	

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

[12] Sitting includes time spent sitting at work, at home, visiting friends, reading, travelling on public transport and lying down to watch television.

3.3.4 Analysis of the International Physical Activity Questionnaire

The analysis of the seven questions adopted from IPAQ is based on the guidelines for data processing and analysis of the IPAQ – Short Form (revised November 2005)[13] . The age range of respondents of this survey (18-64) is within the age criteria of the IPAQ analysis, i.e. 15-69. The analysis of the IPAQ short form provides two indicators of physical activity, namely categorical and continuous indicators.

According to the IPAQ data processing and cleaning rules, 22 cases were excluded from this part of analyses for being classified as "don't know" or refusal.

3.3.4.1 Categorical scoring

The categorical score comprises three levels of physical activity, namely "low", "moderate" and "high"[14]. Table 3.3.4.1a details the criteria of classification.

Table 3.3.4.1a: Categorical scoring classification of the level of physical activity

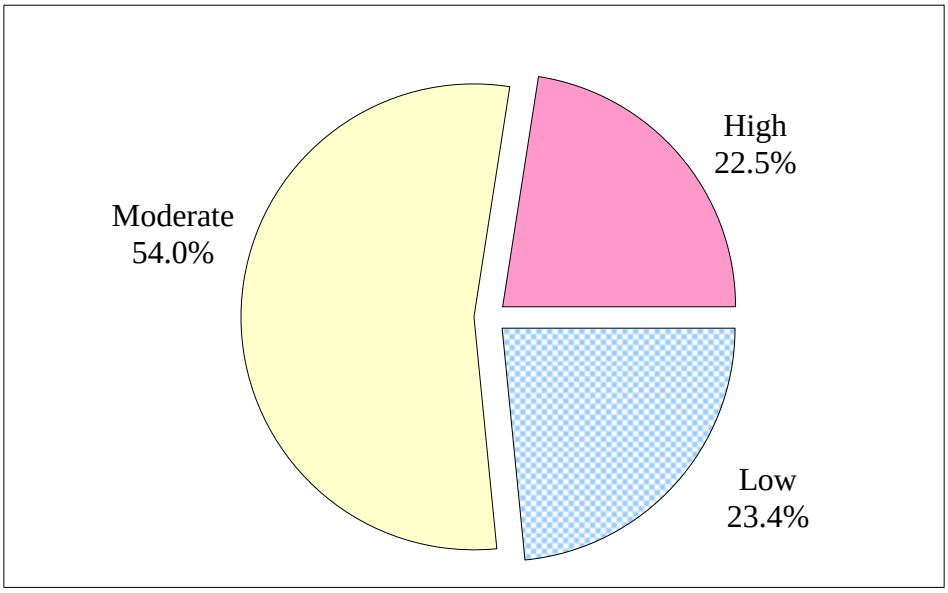
Level of physical activity	Categorical scoring classification criteria
Low	▪ No activity is reported OR ▪ Some activity is reported but not enough to meet categories "Moderate" or "High"
Moderate	Any one of the following 3 criteria ▪ 3 or more days of vigorous-intensity activity of at least 20 minutes per day OR ▪ 5 or more days of moderate-intensity activity or walking of at least 30 minutes per day OR ▪ 5 or more days of any combination of walking, moderate-intensity or vigorous-intensity activities achieving a minimum of at least 600 MET-min/week
High	Any one of the following 2 criteria ▪ Vigorous-intensity activity on at least 3 days and accumulating at least 1500 MET-minutes/week OR ▪ 7 or more days of any combination of walking, moderate-intensity or vigorous-intensity activities achieving a minimum of at least 3000 MET-minutes/week

Note: MET = multiples of resting metabolic rate
Source: Guidelines for data processing and analysis of the IPAQ – short form

[13] This document for data processing and analysis of the IPAQ is available on the website: http://www.ipaq.ki.se/ipaq.htm.
[14] The current categories of IPAQ classification are "Low", "Moderate" and "High". The previous categories were known as "Inactive", "Minimally active" and "HEPA active".

According to the classification criteria listed in Table 3.3.4.1a, more than half (54.0%) of the respondents were classified as having "moderate" level of physical activity. The proportions of respondents having "high" and "low" level of physical activity were 22.5% and 23.4% respectively (Fig. 3.3.4.1b).

Fig. 3.3.4.1b: Classification of respondents' physical activity level (Q5a, Q5b, Q6a, Q6b, Q7a & Q7b)



Base: All respondents excluding "don't know" and outliers according to the data processing rules of the IPAQ analysis guidelines = 2 019

3.3.4.2 Continuous scoring

Continuous scoring is another measurement of physical activity suggested in the IPAQ - short form data processing and analysis guidelines. This is achieved by weighting each type of activity by its energy requirements defined in METs (METs are multiples of the resting metabolic rate) to yield a score in MET-minutes. A MET-minute score[15] is computed by multiplying the MET by the minutes performed. MET-minute scores are equivalent to kilocalories expended for a 60 kilogram person. The selected MET values for different types of activity were derived from work undertaken during the IPAQ Reliability Study conducted in 2000-2001. This study yielded MET values for the three types of activity, namely "walking" = 3.3 METs, "moderate physical activity" = 4.0 METs and "vigorous physical activity" = 8.0 METs. These MET values are used for the continuous scoring analysis of IPAQ data in this part.

More specifically, the continuous score for each type of physical activity was computed according to the formula and examples in Table 3.3.4.2a.

[15] Source of information: Guideline for data processing and analysis of the IPAQ

Table 3.3.4.2a: Continuous score computation

MET-min per week for each activity	= (MET level) x (min of activity) x (events per week)
Total MET-min per week	= (Walk METs x min x days) + (Moderate PA METs x min x days) + (Vigorous PA METs x min x days)
Example:	***Given:*** *MET-min/week for 30 min episodes, 5 times/week, MET levels for walking = 3.3METs, Moderate PA = 4.0METs and Vigorous PA = 8.0METs*
MET-min/week for walking	= 3.3 x 30 x 5 = 495 MET-min/week
MET-min/week for Moderate PA	= 4.0 x 30 x 5 = 600 MET-min/week
MET-min/week for Vigorous PA	= 8.0 x 30 x 5 = 1 200 MET-min/week
Total MET-min/week	Total = 2 295 MET-min/week

Note: PA = physical activity
Source: Guidelines for data processing and analysis of the IPAQ – short form

As suggested by the IPAQ – short form data processing and analysis guidelines, the continuous indicator is presented as median minutes or median MET-minutes rather than mean minutes or mean MET-minutes given the non-normal distribution of energy expenditure in many populations. However, median scores (unlike mean scores) are not additive, so the median score is not the sum of the median scores for each type of physical activity.

Table 3.3.4.2b shows the medians of the continuous scores for each type of physical activities. The medians for vigorous physical activity and moderate activity were both 0 while the median for walking was 693 MET-minutes per week. The median score of these three activities combined was 1 336 MET-minutes per week.

Table 3.3.4.2b: Medians of the IPAQ continuous score for each type of physical activity level (Q5a, Q5b, Q6a, Q6b, Q7a & Q7b)

Statistics	Continuous Score (MET-minutes/week)			
	Vigorous exercise	Moderate exercise	Walking	**Total**
Median	0	0	693	1 336

*Note: *All respondents excluding "don't know" and outliers according to the data processing rules of the IPAQ analysis guideline (Vigorous exercise = 2 041; Moderate exercise = 2 039; Walking = 2 024)*

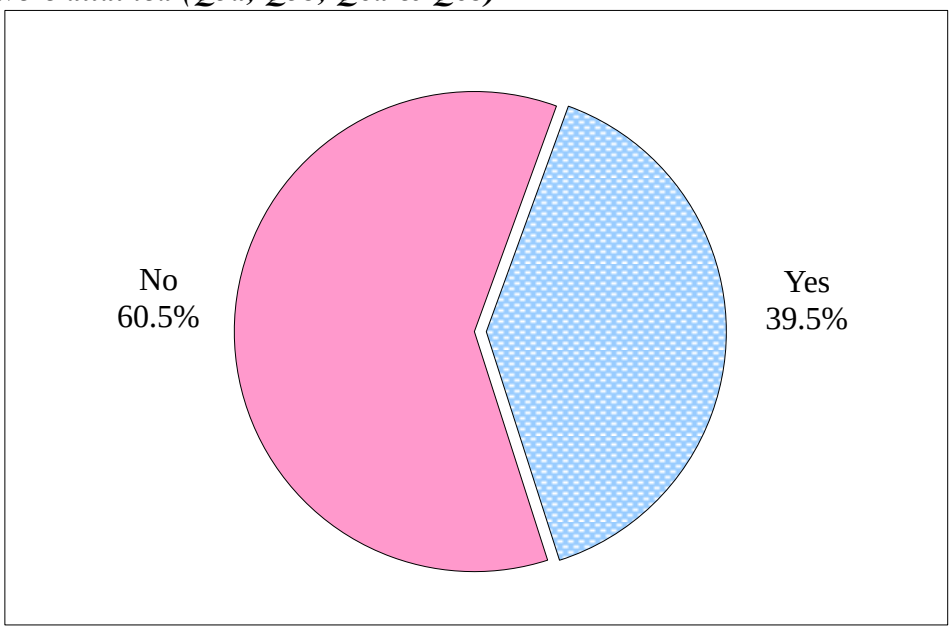
3.3.5 Analysis based on WHO's Global Recommendations on Physical Activity for Health

The WHO published the Global Recommendations on Physical Activity for Health in August 2010[16]. Based on the recommendations, adults aged 18-64 should do at least one of the following amount of physical activities in order to improve body fitness and prevent diseases:

1. At least 150 minutes of moderate-intensity aerobic physical activity throughout the week, OR
2. At least 75 minutes of vigorous-intensity aerobic physical activity throughout the week , OR
3. An equivalent combination of moderate- and vigorous-intensity aerobic physical activity throughout the week[17].

Overall, about two-fifths of the respondents (39.5%) have done the recommended amount physical activity during the seven days prior to the survey (Fig. 3.3.5).

Fig. 3.3.5: Whether the physical activity level recommended by the WHO for adults were attained (Q5a, Q5b, Q6a & Q6b)



Base: All respondents excluding "unknown" physical activity level =2 039

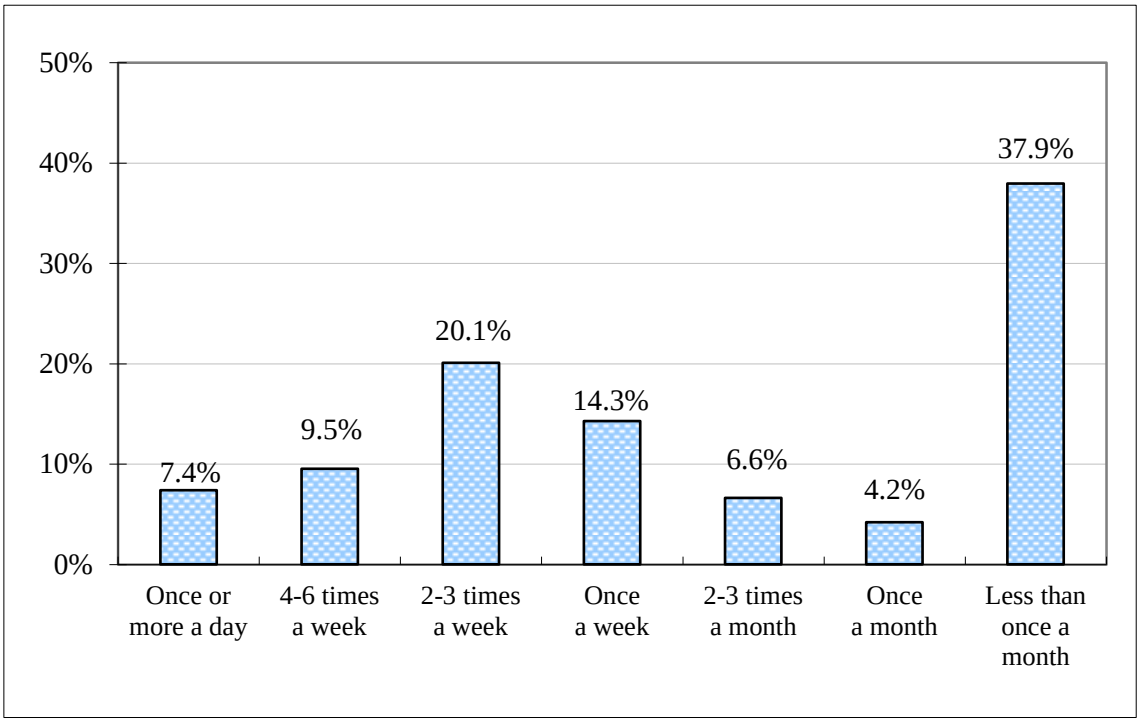
[16] "Global Recommendations on Physical Activity for Health", World Health Organization; 2010. (http://whqlibdoc.who.int/publications/2010/9789241599979_eng.pdf)

[17] Amount of equivalent combination of moderate- and vigorous-intensity aerobic physical activities = duration (in minutes) of moderate-intensity aerobic physical activity in a week + (duration (in minutes) of vigorous-intensity aerobic physical activity in a week x 2)

3.3.6 Frequency of having exercise in leisure-time[18]

Respondents were asked how often they exercised in their leisure-time during the thirty days prior to the survey. Overall, more than one-third (37.9%) of the respondents reported that they exercised less than once a month in their leisure-time. On the other hand, 16.9% of respondents reported that they exercised 4 times or more a week and 34.4% exercised one to three times a week in their leisure-time (Fig. 3.3.6).

Fig. 3.3.6: Frequency of having exercise in leisure-time during the thirty days prior to the survey (Q9)



Base: All respondents excluding "don't know" and refusal = 2 031

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

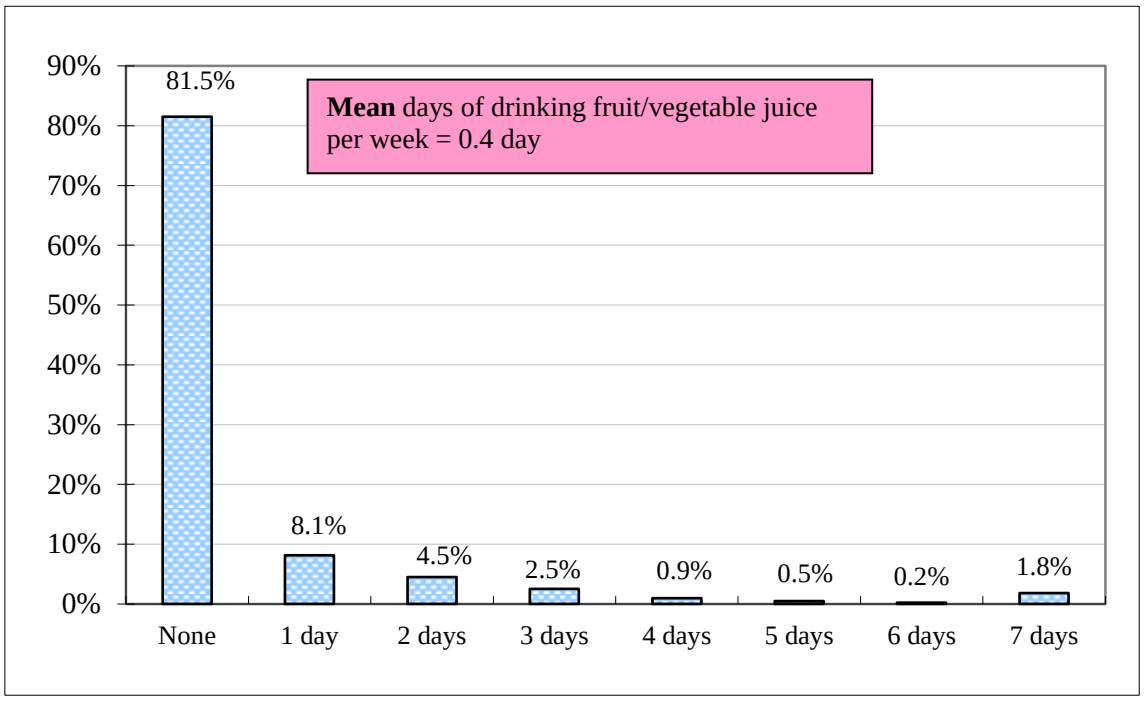
3.4 Fruit and vegetable consumption

Five questions were asked in this survey to gauge respondents' fruit and vegetable consumption.

3.4.1 Frequency of consuming fruit or vegetable juice per week[19]

Overall, only 1.8% of the respondents drank fruit or vegetable juice on a daily basis. The average number of days per week in which the respondents drank fruit or vegetable juice was 0.4 day (Fig.3.4.1).

Fig. 3.4.1: Number of days in the week when respondents drank fruit or vegetable juice (Q12)



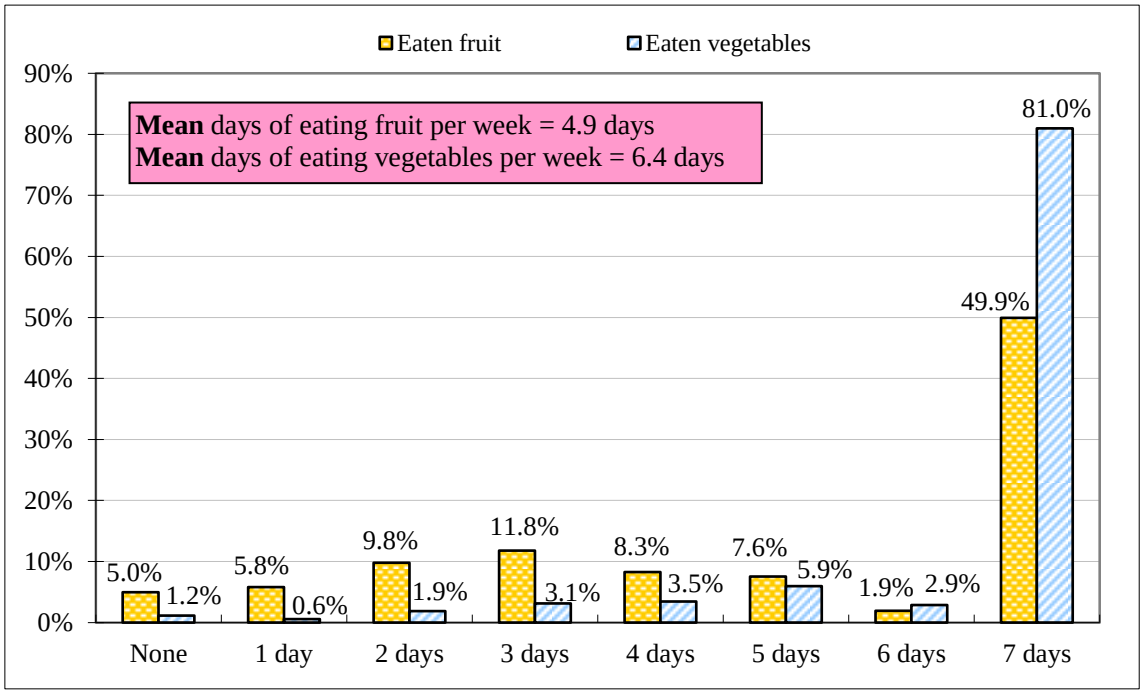
Base: All respondents excluding refusal = 2 040

3.4.2 Frequency of consuming fruit and vegetables per week

On a daily basis, more respondents consumed vegetables than fruit. Fig. 3.4.2 shows that about four-fifths (81.0%) of the respondents had consumed vegetables every day while about half the respondents (49.9%) had eaten fruit on a daily basis. On average, the number of days per week that respondents consumed vegetables (6.4 days per week) was higher than that for consuming fruit (4.9 days per week) (Fig. 3.4.2).

[19] Fruit/vegetable juice refers to freshly squeezed juice or those labelled 100% or pure fruit/vegetable juice.

Fig. 3.4.2: Number of days in the week when respondents ate fruit and vegetables (Q10a & Q11a)



Base: All respondents excluding "don't know" (Eating fruit = 2 037; Eating vegetables =2 041)

3.4.3 Amount of fruit and vegetables eaten per day[20]

On average, 49.5% and 33.4% of respondents consumed less than one fruit per day and less than one bowl of vegetables per day respectively. In addition, less than half (45.3%) of the respondents consumed 1-2 fruit per day and nearly two-thirds (62.6%) of the respondents ate 1-2 bowls of vegetables per day on average. Overall, the daily average amount consumed was 1.0 fruit and 1.1 bowls of vegetables (Table 3.4.3).

[20] Respondents were informed that one fruit was a medium-sized apple or orange, one banana, two kiwi fruits or plums, or one bowl of small fruit like grapes or strawberries. For vegetables, it is calculated in terms of bowl, where one bowl refers to the size of a rice bowl. The average number of fruit eaten per day is calculated by: (the average number of days eating fruit per week x the average number of fruit eaten on those days) / 7. Similarly, the average number of bowls of vegetables eaten per day is calculated by: (the average number of days eating vegetables per week x the average number of bowls of vegetables eaten on those days) / 7.

Table 3.4.3: Average amount of fruit and vegetables eaten per day (Q10a, Q10b, Q11a & Q11b)

Average no. of fruit/ no. of bowls of vegetables eaten per day	No. of respondents			
	Fruit		Vegetables	
	Number	% of Total	Number	% of Total
Less than 1	1 007	49.5%	677	33.4%
1 – 2	922	45.3%	1 269	62.6%
More than 2	105	5.2%	82	4.1%
Total	***2 034****	***100.0%***	***2 028****	***100.0%***
Mean	1.0 fruit		1.1 bowls of vegetables	

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

3.4.4 The total number of servings of fruit and vegetables consumed per day

The WHO recommends that adults should eat at least five servings of fruit and vegetables per day or a daily intake of at least 400 grams of fruit and vegetables[21].

Total servings excluding fruit or vegetable juice

The number of servings of fruit and vegetables consumed per day was defined in this survey as the sum of the average number of fruit eaten per day, and twice the average number of bowls of vegetables eaten per day (i.e. one fruit equates to 1 serving and one bowl of cooked vegetables[22] equates to 2 servings).

Overall, less than one-fifth (17.3%) of the respondents consumed 5 or more servings of fruit and vegetables per day. The mean and median numbers of servings were 3.2 and 3.0 respectively (Table 3.4.4a).

Table 3.4.4a: Number of servings of fruit and vegetables consumed per day excluding juice (Percentage, mean and median) (Q10a, Q10b, Q11a & Q11b)

No. of servings (excluding juice)	**No. of respondents**	
	Number	**% of Total**
Less than 3	983 (0 serving = 11)	48.6% (0 serving = 0.5%)
3 - <5	689	34.1%
5 or above	349	17.3%
Total	***2 022****	***100.0%***
	No. of servings of fruit and vegetables eaten per day	
Mean	3.2 servings	
Median	3.0 servings	

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

Total servings including fruit or vegetable juice

When fruit or vegetable juice was included, the total number of servings of fruit and vegetables consumed per day was defined in this survey as the sum of the average number of fruit eaten per day, and twice the average number of bowls of vegetables eaten per day (i.e. one fruit equates to 1 serving and 1 bowl of cooked vegetables equates to 2 servings), and the average number of days per week having drunk one cup or more of fruit or vegetable juice (fruit/vegetable juice only counted as 1 serving, regardless of how many cups of juice were drunk in one day; less than 1 cup a day did not count)[23].

[21] Fruit, vegetables and NCD disease prevention. Geneva: World Health Organization; 2003. (http://www.who.int/dietphysicalactivity/media/en/gsfs_fv.pdf)
[22] 1 bowl of uncooked vegetable was coded as 0.5 bowl of cooked vegetable.
[23] Juice (fruit and vegetable) only counted as 1 serving a day, regardless of how much is drunk because it has very little fibre. It is also likely to lose some vitamins once juiced (particularly vitamin C, which is easily destroyed by light and air).

Overall, if fruit or vegetable juice is included in the total servings per day, 18.0% of the respondents consumed 5 or more servings of fruit and vegetables per day. The mean and median numbers of servings were 3.3 and 3.0 respectively (Table 3.4.4b).

Table 3.4.4b: Number of servings of fruit and vegetables consumed per day including juice (Percentage, mean and median) (Q10a, Q10b, Q11a & Q11b & Q12)

No. of servings (including juice)	**No. of respondents**	
	Number	**% of Total**
Less than 3	962 (0 serving = 11)	47.6% (0 serving = 0.5%)
3 - <5	695	34.4%
5 or above	363	18.0%
Total	***2 021****	***100.0%***
	No. of servings of fruit and vegetables eaten per day	
Mean	3.3 servings	
Median	3.0 servings	

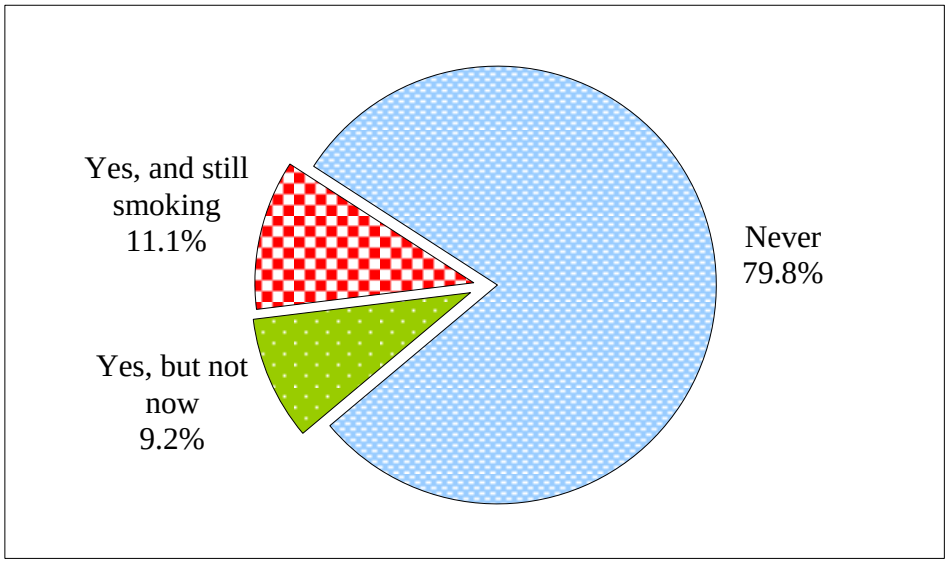
*Note: *All respondents excluding "don't know" and refusal*

3.5 Smoking habits

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

About four-fifths (79.8%) of the respondents reported that they had never smoked, 9.2% smoked in the past but had now abstained and 11.1% of the respondents were current smokers (Fig. 3.5).

Fig. 3.5: Breakdown of smoking habits amongst respondents (Q13a)

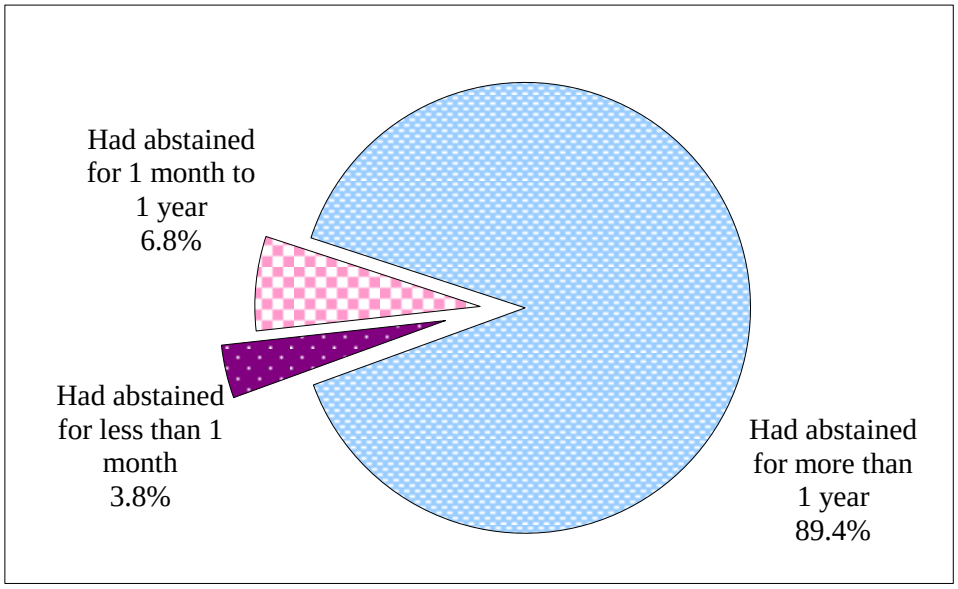


Base: All respondents = 2 041

3.5.1 Abstaining from smoking

Among those who had smoked before but had now abstained from smoking, most of them (89.4%) reported that they had abstained for more than one year and 6.8% had given up smoking for one month to one year. Only 3.8% of them reported that they had given up smoking for less than one month (Fig. 3.5.1).

Fig. 3.5.1: Length of time abstained from smoking (Q13b)

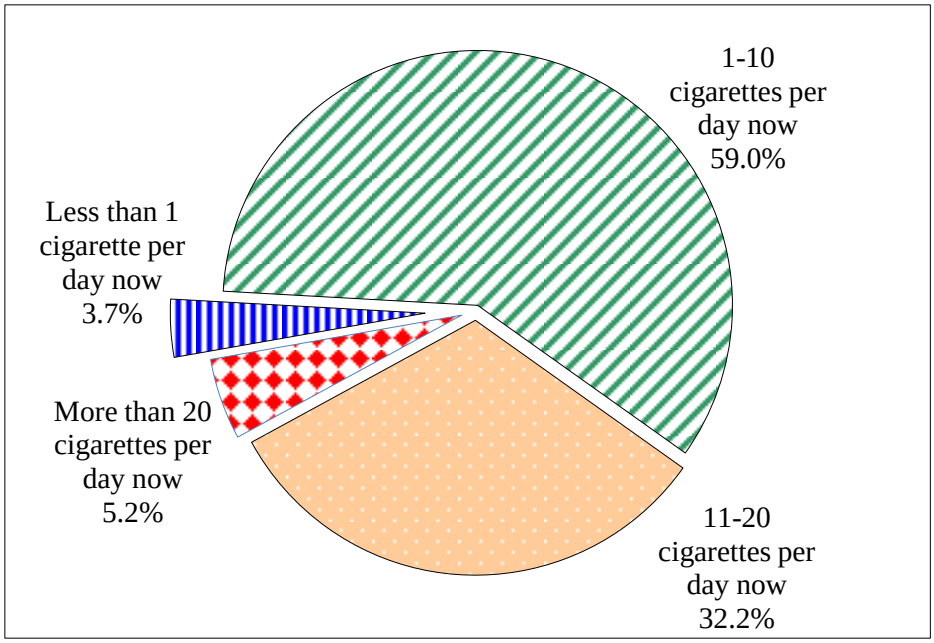


Base: All past smokers = 187

3.5.2 Cigarette consumption

Among the current smokers, the vast majority (96.3%) of them were daily smokers. Nearly three-fifths (59.0%) of the current smokers reported that they smoked 1-10 cigarettes per day and more than one-third (37.4%) of the current smokers reported that they smoked at least 11 cigarettes a day (Fig. 3.5.2).

Fig. 3.5.2: Number of cigarettes smoked on average per day by current smokers (Q13c)

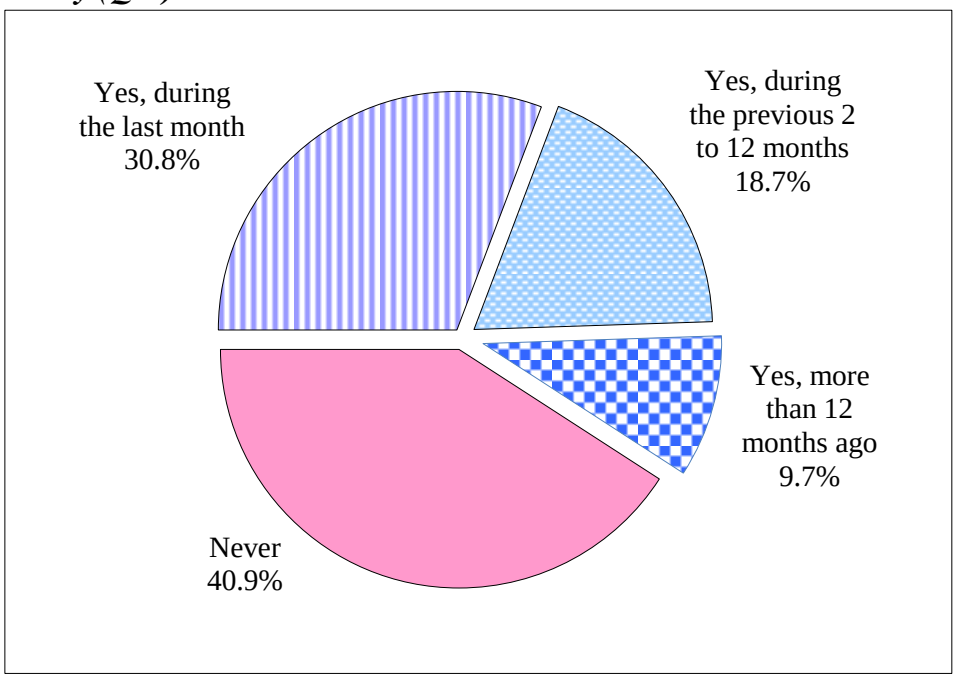


Base: All current smokers = 226

3.6 Pattern of alcohol consumption

Eleven questions were asked to identify the respondents' alcohol drinking patterns. Overall, about three-tenths (30.8%) 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, about two-fifths (40.9%) of the respondents reported that they had never drunk alcohol during the thirty days prior to the survey (Fig. 3.6).

Fig. 3.6: Ever had at least one alcoholic drink during the thirty days prior to the survey (Q14)

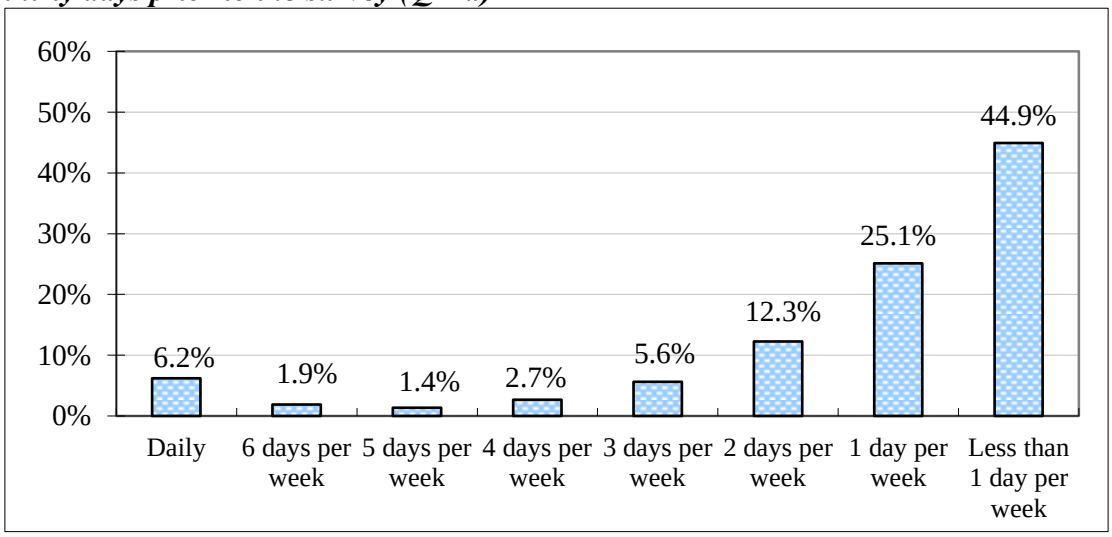


Base: All respondents excluding "don't know" = 2 039

3.6.1 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 (6.2%) reported that they drank daily. On the other hand, more than two-fifths (44.9%) reported that they drank less than 1 day per week (Fig. 3.6.1).

Fig. 3.6.1: Frequency of drinkers consuming at least one alcoholic drink during the thirty days prior to the survey (Q14a)



Base: Respondents who had at least one alcoholic drink during the thirty days prior to the survey excluding "don't know" and refusal = 620

3.6.2 Amount of alcoholic drinks consumed

The respondents who drank at least one alcoholic drink during the thirty days prior to the survey were further asked the average number of standard drinks[24] consumed on each drinking day. About seven-tenths of them (69.8%) consumed less than 3 standard drinks on each drinking day while about one-tenth (11.2%) consumed 5 or more standard drinks. On average, they consumed 2.5 standard drinks on each drinking day and the median was 1.5 standard drinks (Table 3.6.2).

Table 3.6.2: Average number of standard drinks consumed on the days respondents drank alcohol (Percentage, mean and median) (Q14b)

No. of standard drinks	No. of drinkers	
	Number	% of Total
Less than 3	436	69.8%
3 – <5	119	19.0%
5 or above	70	11.2%
Total	***625****	***100.0%***
Mean	2.5 standard drinks	
Median	1.5 standard drinks	

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

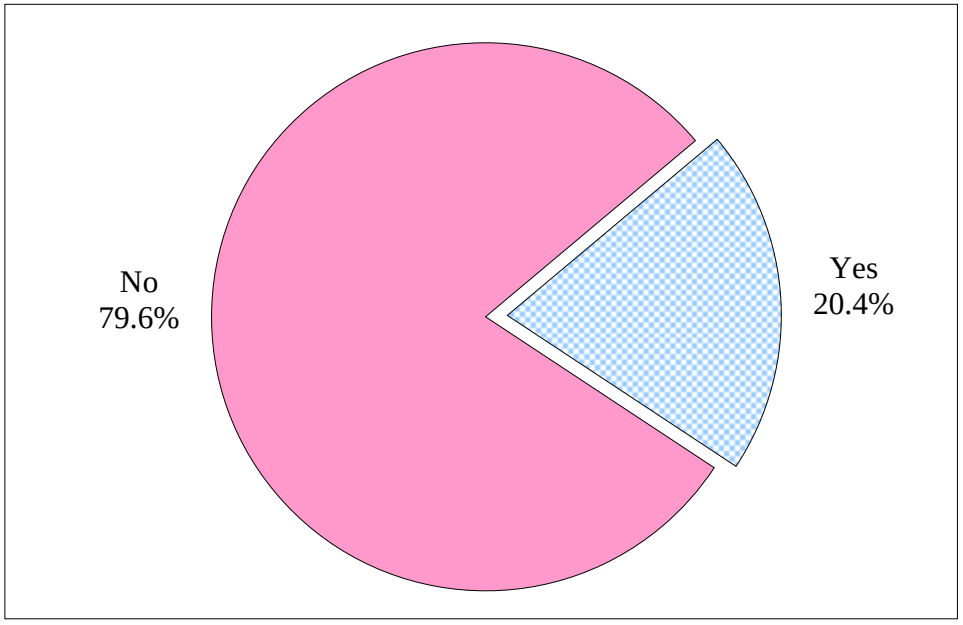
[24] The number of standard drinks consumed was estimated as follows: one can or a small bottle of beer is approximately equal to 1.5 standard drinks; one dining glass of wine, or one spirit nip of brandy/whisky, or one small glass of Chinese wine such as rice wine is approximately equal to 1 standard drink.

3.6.3 Drinking at least 5 glasses/ cans of alcohol on one occasion (Binge drinking)[25]

3.6.3.1 Binge drinking during the thirty days prior to survey

Among those respondents who had at least one alcoholic drink during the thirty days prior to the survey, about one-fifth (20.4%) had consumed at least 5 glasses/ cans of alcohol on one single occasion (binge drinking) during the thirty days prior to the survey (Fig. 3.6.3.1a).

Fig. 3.6.3.1a: Consumption of at least 5 glasses/ cans of alcohol on one single occasion during the thirty days prior to the survey (Q14c)

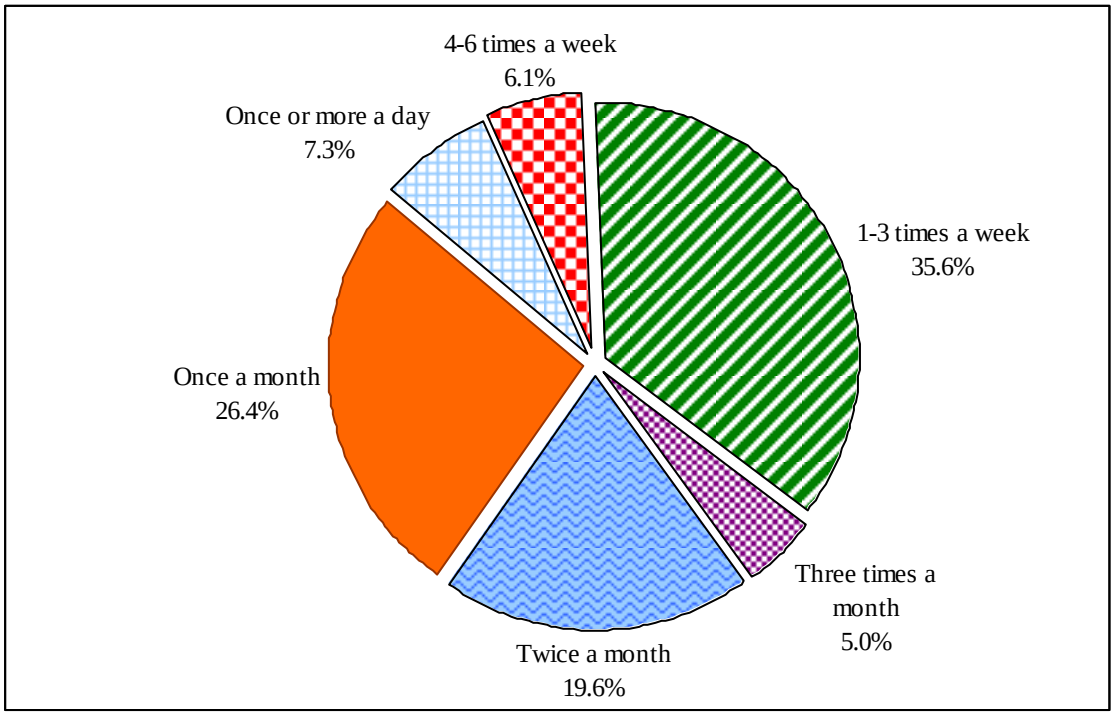


Base: Respondents who had at least one alcoholic drink during the thirty days prior to the survey = 627

[25] Refers to total number of glasses/ cans of any types of alcohol. One single occasion means a period of a few hours.

Among these binge drinking respondents, about a quarter (26.4%) had binge drinking once a month, another quarter (24.5%) had the experience 2-3 times a month, about two-fifths (41.7%) had the experience 1-6 times a week, and less than one-tenth (7.3%) had the experience once or more a day during the thirty days prior to the survey (Fig. 3.6.3.1b).

Fig. 3.6.3.1b: Frequency of binge drinking among those who had the experience during the thirty days prior to the survey (Q14d)

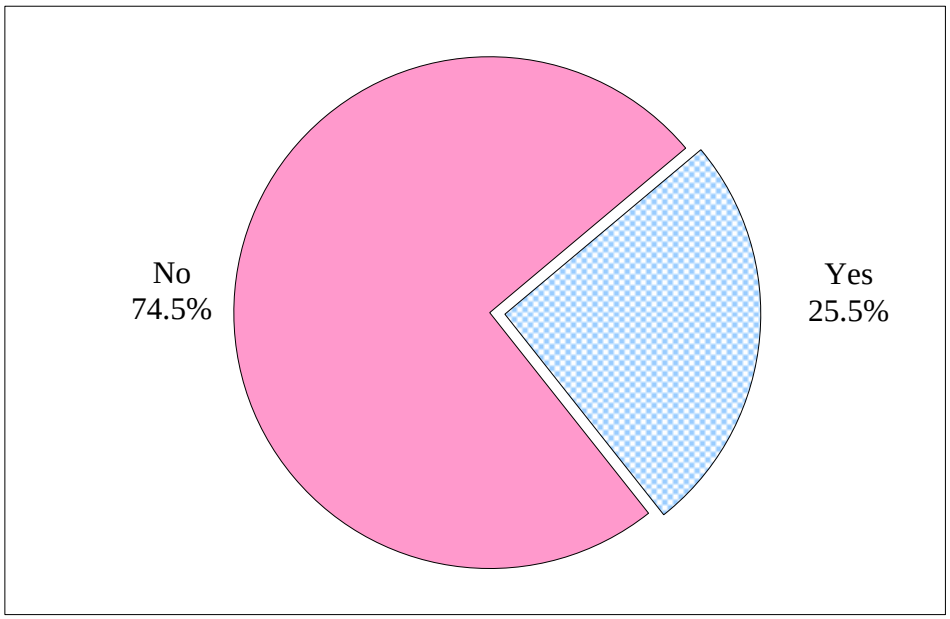


Base: Drinkers who had binge drinking during the thirty days prior to the survey excluding "don't know" and refusal = 126

3.6.3.2 Binge drinking during the two to twelve months prior to the survey

Among the respondents who had at least one alcoholic drink during the twelve months prior to the survey, about a quarter (25.5%) reported that they had consumed at least 5 glasses/ cans of alcohol on one single occasion during the two to twelve months prior to the survey (Fig.3.6.3.2a).

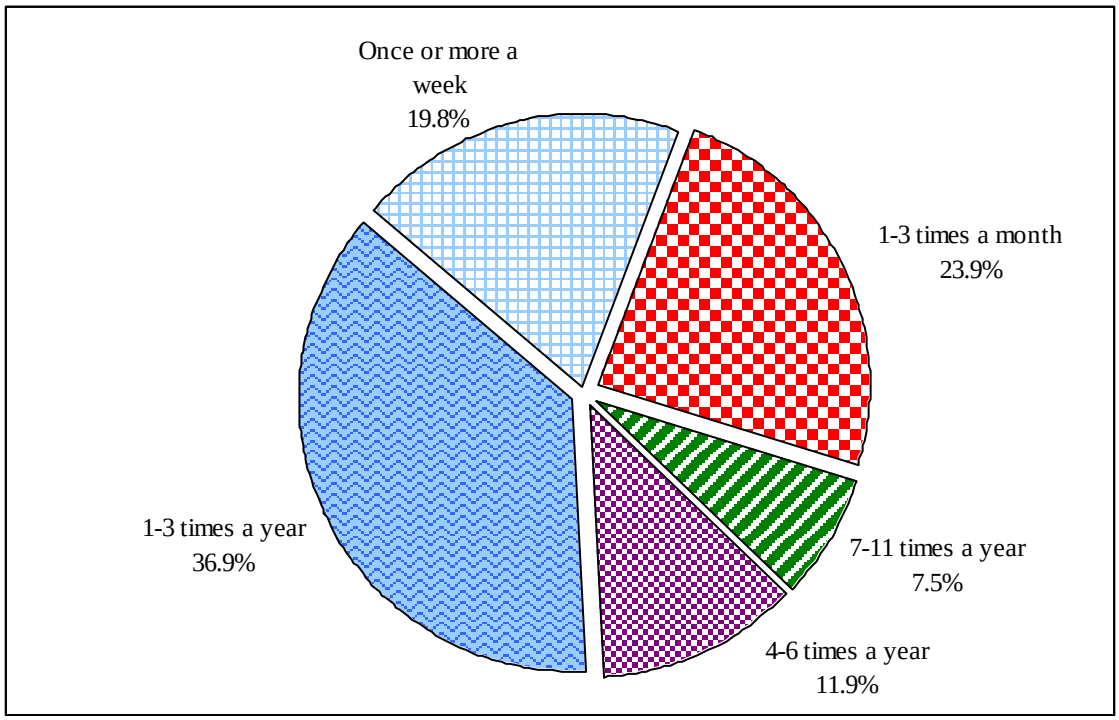
Fig. 3.6.3.2a: Consumption of at least 5 glasses/ cans of alcohol on one single occasion by drinkers during the two to twelve months prior to the survey (Q14g)



Base: Respondents who had at least one alcoholic drink during the twelve months prior to the survey excluding "don't know" = 1 007

Among these binge drinking respondents, more than one-third (36.9%) had binge drinking 1-3 times a year, about one-fifth (19.4%) had this experience 4-11 times a year, nearly a quarter (23.9%) had the experience 1-3 times a month, and about one-fifth (19.8%) had the experience once or more a week during the two to twelve months prior to the survey (Fig. 3.6.3.2b).

Fig. 3.6.3.2b: Frequency of binge drinking among those who had the experience during the two to twelve months prior to the survey (Q14h)

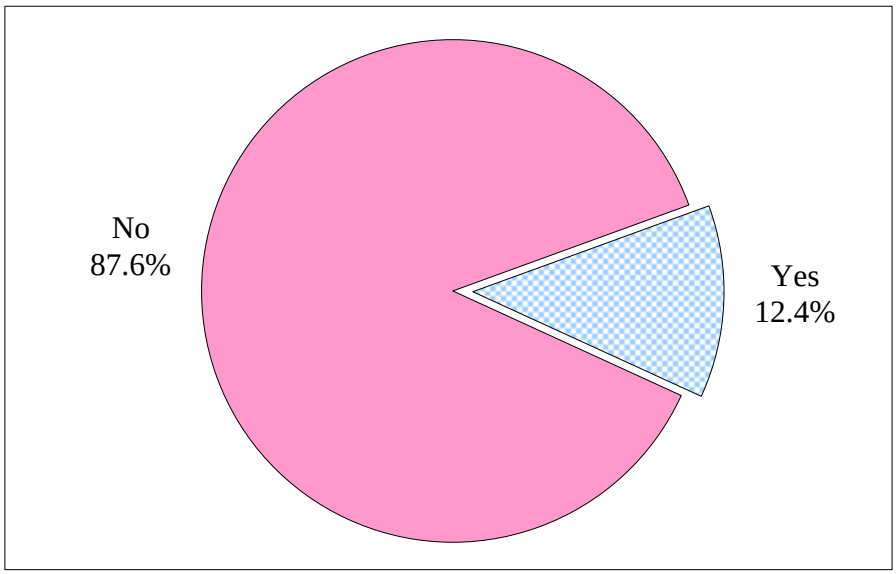


Base: Drinkers who had binge drinking during the two to twelve months prior to the survey excluding "don't know" = 253

3.6.4 Exhibiting signs of drunkenness[26]

Among the respondents who had at least one alcoholic drink during the thirty days prior to the survey, 12.4% reported that they had drunk so much that they exhibited signs of drunkenness (Fig.3.6.4a).

Fig. 3.6.4a: Having drunk so much that respondents exhibited signs of drunkenness during the thirty days prior to the survey (Q14e)

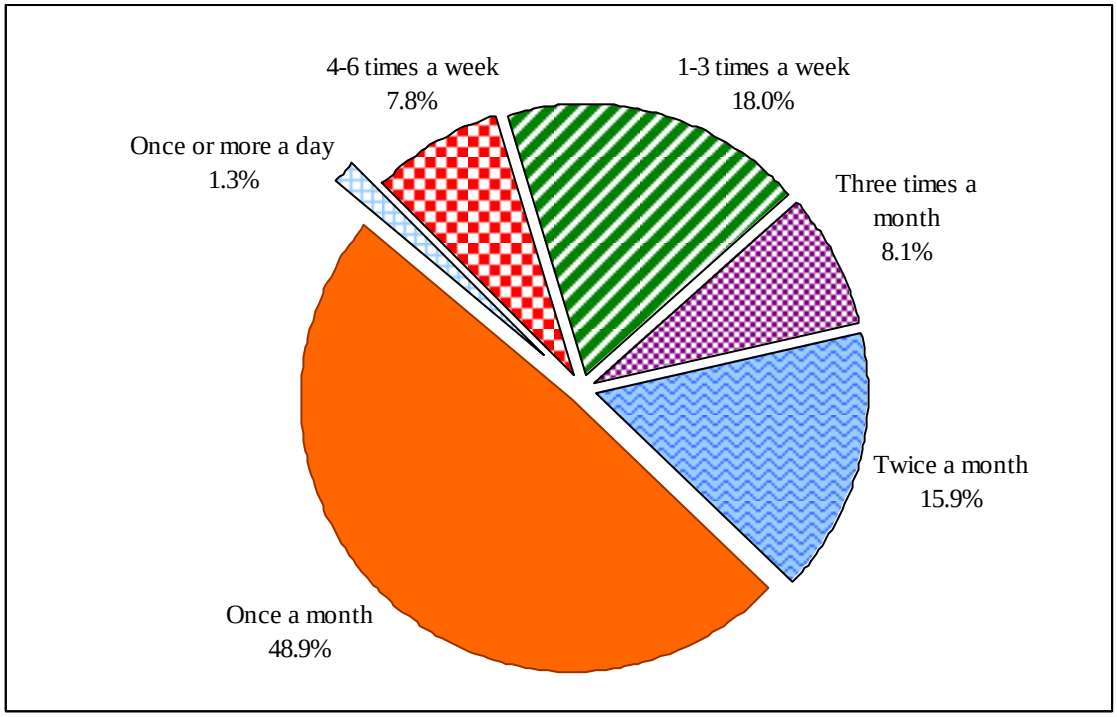


Base: Respondents who had at least one alcoholic drink during the thirty days prior to the survey excluding refusal = 626

[26] Respondents were given examples of signs of drunkenness, which include "flushed face or reddened eyes", "slurred or incoherent speech", "unsteady feet or staggering gait", "vomiting" and "hangover".

Among those respondents who had drunk so much that they exhibited signs of drunkenness, more than one-third (35.2%) had this experience three times or more while nearly two-thirds (64.8%) experienced it once or twice during the thirty days prior to the survey (Fig.3.6.4b).

Fig. 3.6.4b: Frequency of drinking among drinkers who had drunk so much that they exhibited signs of drunkenness during the thirty days prior to the survey (Q14f)

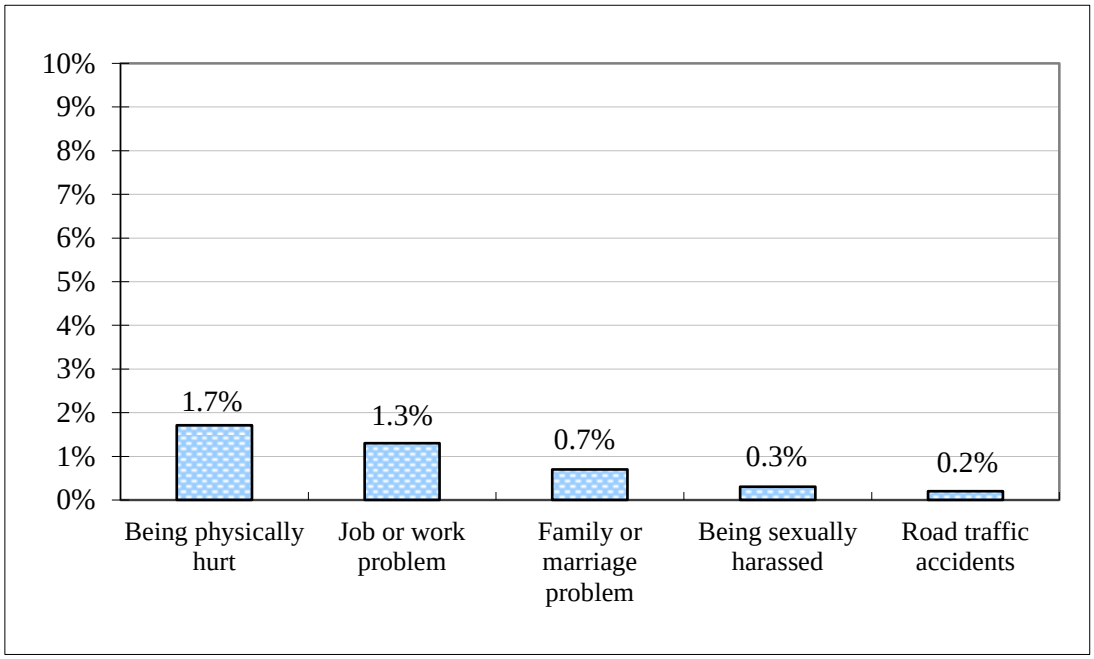


Base: Drinkers who had drunk so much that they exhibited signs of drunkenness = 78

3.6.5 Problems or conditions because of drinking

Among those respondents who had at least one alcoholic drink during the twelve months prior to the survey, only 1.7% reported that they had ever been physically hurt because of their own drinking while 1.3% reported having encountered job or work problems, 0.7% having had family or marriage problems, 0.3% having been sexually harassed, and 0.2% having had road traffic accidents because of their own drinking (Fig.3.6.5a).

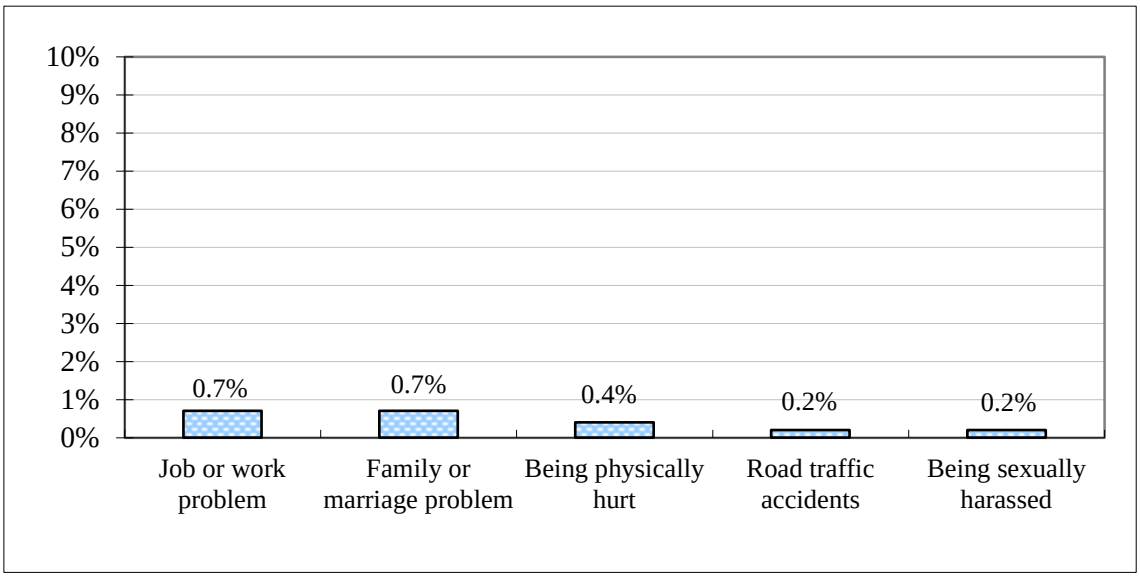
Fig. 3.6.5a: Problems or conditions because of respondents' own drinking (Q15a)



Base: Respondents who had at least one alcoholic drink during the twelve months prior to the survey = 1 009

Among all respondents, only 0.7% reported that they had ever encountered job or work problems because of someone else's drinking while another 0.7% reported having had family or marriage problems, 0.4% having been physically hurt, 0.2% having been sexually harassed, and 0.2% having had road traffic accidents because of someone else's drinking (Fig.3.6.5b).

Fig. 3.6.5b: Problems or conditions because of someone else's drinking (Q15b)



Base: All respondents excluding refusal (Job or work problem 2 041, family or marriage problem: 2 040, having been physically hurt: 2 041, having been sexually harassed 2 041, having had road traffic accidents: 2 041)

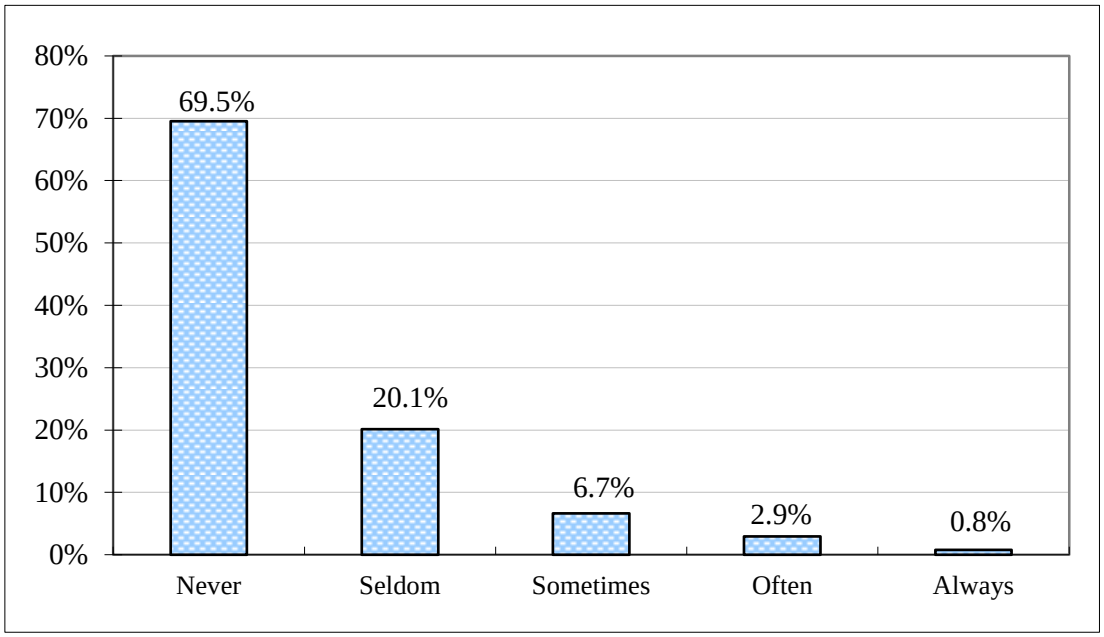
3.7 Salt consumption behaviours

In this survey, five questions were asked to assess the respondents' dietary habits and knowledge in relation to salt consumption.

3.7.1 Frequency of adding salt to cooked dishes

The respondents were asked about the frequency they added salt to cooked dishes at the table. 3.7% of respondents reported that they did it often (2.9%) or always (0.8%) (Fig. 3.7.1).

Fig.3.7.1: Frequency of adding salt to cooked dishes (Q16)

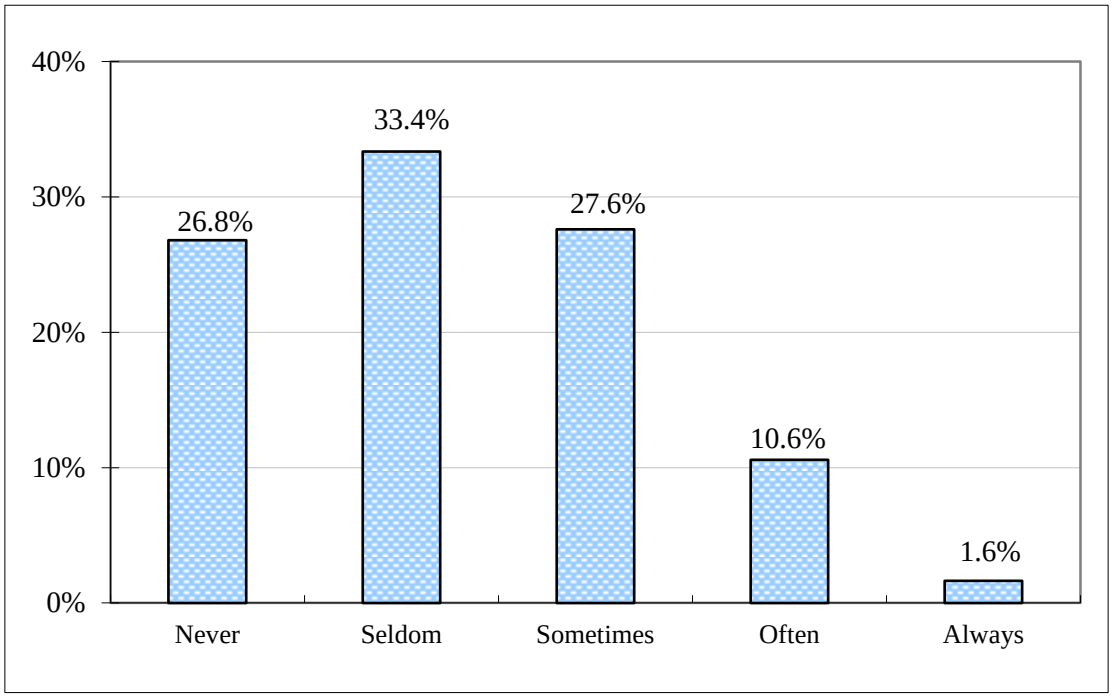


Base: All respondents excluding "don't remember" = 2 035

3.7.2 Frequency of adding sauces to cooked dishes

The respondents were asked about the frequency they added sauces to cooked dishes at the table. About one-tenth (12.2%) of respondents reported that they did it often (10.6%) or always (1.6%) (Fig. 3.7.2).

Fig.3.7.2: Frequency of adding sauces to cooked dishes at the table (Q17)

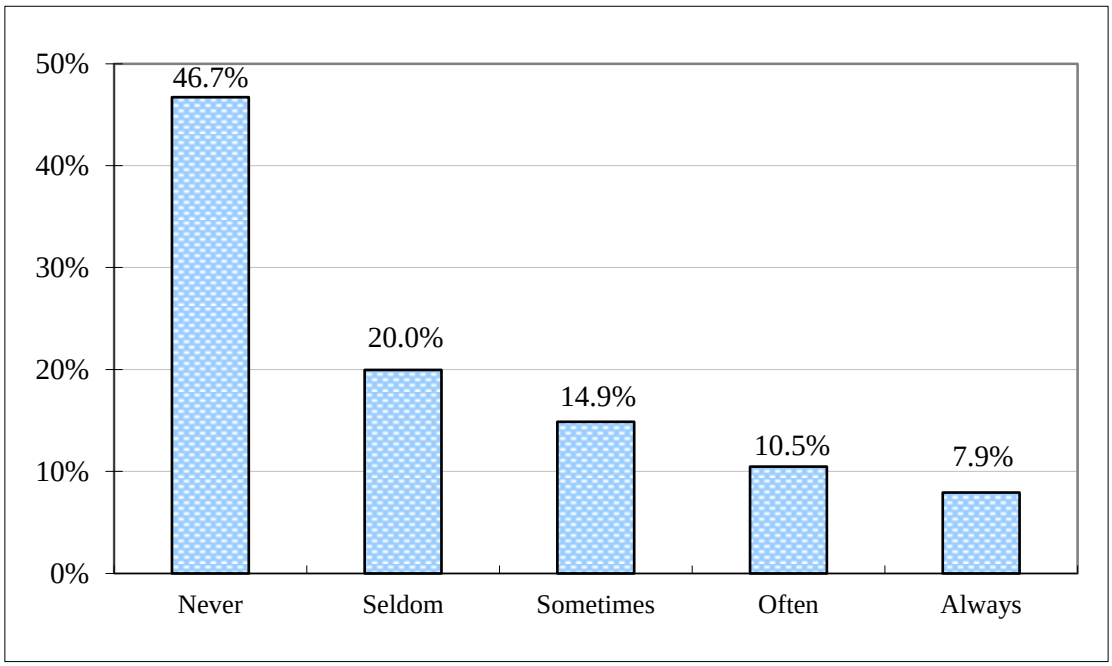


Base: All respondents excluding "don't remember" = 2 037

3.7.3 Frequency of checking food labels for salt content when purchasing pre-packaged food

The respondents were asked about the frequency of checking food labels for salt content when purchasing pre-packaged food. More than two-thirds (66.7%) of respondents reported that they never (46.7%) and seldom (20.0%) did so (Fig. 3.7.3).

Fig.3.7.3: Frequency of checking food labels for salt content when purchasing pre-packaged food (Q18)

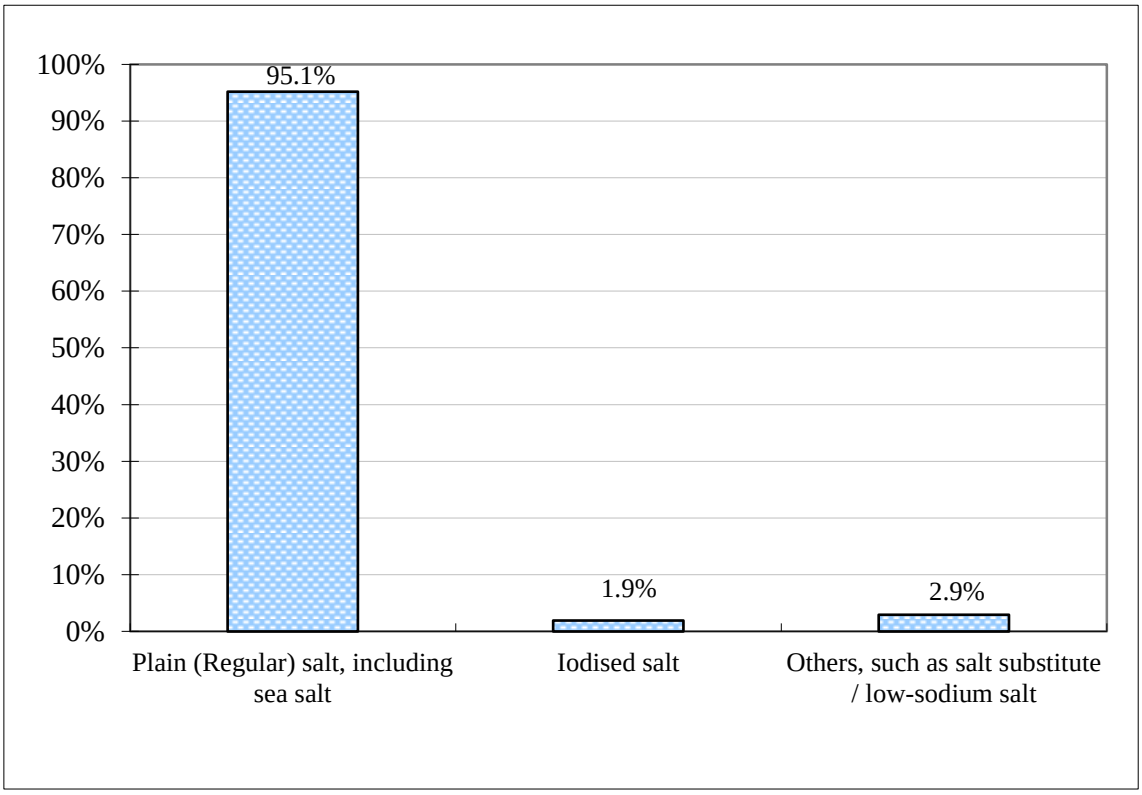


Base: All respondents excluding "don't remember" = 2 025

3.7.4 Salt used at home

The respondents were asked about the type of cooking or table salt used at home. The majority (95.1%) of respondents reported that they were using plain (regular) salt including sea salt (Fig. 3.7.4).

Fig.3.7.4: Cooking or table salt used at home (Q19)

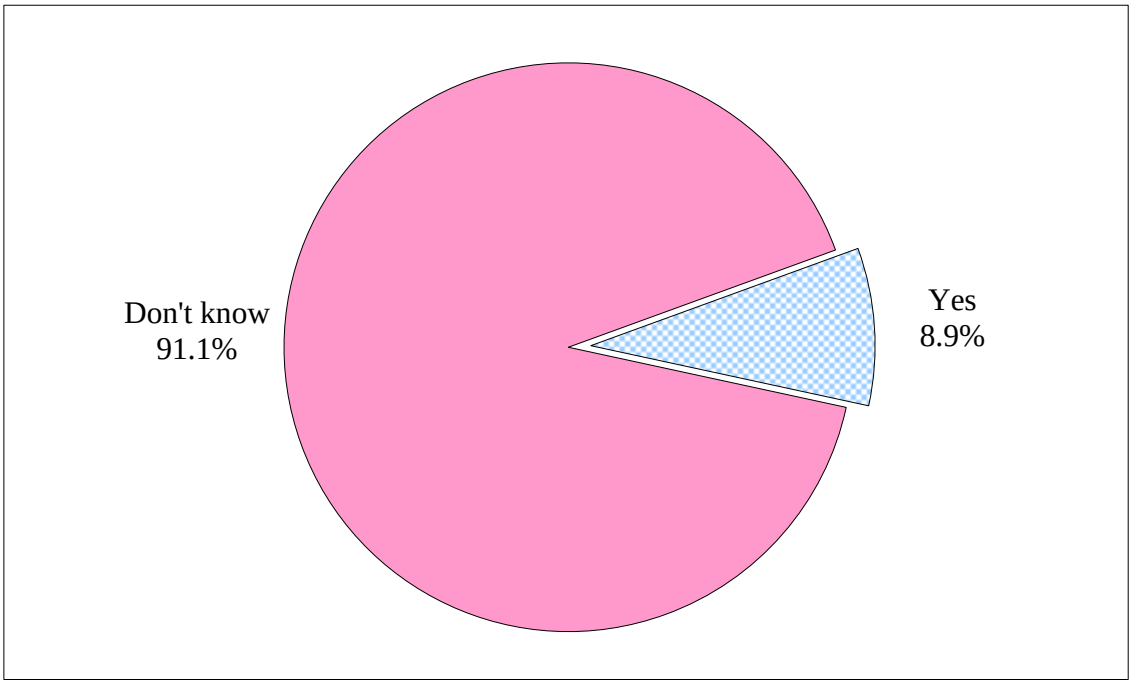


Base: All respondents excluding "don't know" = 1 922

3.7.5 Whether respondents knew the WHO's recommended maximum daily intake of salt

WHO recommends that the daily intake of salt for a healthy adult should not exceed 5 grams [27]. The respondents were asked whether they knew what the WHO's recommended maximum daily intake of salt was. Over nine-tenths (91.1%) of respondents reported that they did not know about that (Fig.3.7.5a).

Fig.3.7.5a: Whether respondents knew the WHO's recommended maximum daily intake of salt for a healthy adult (Q20)

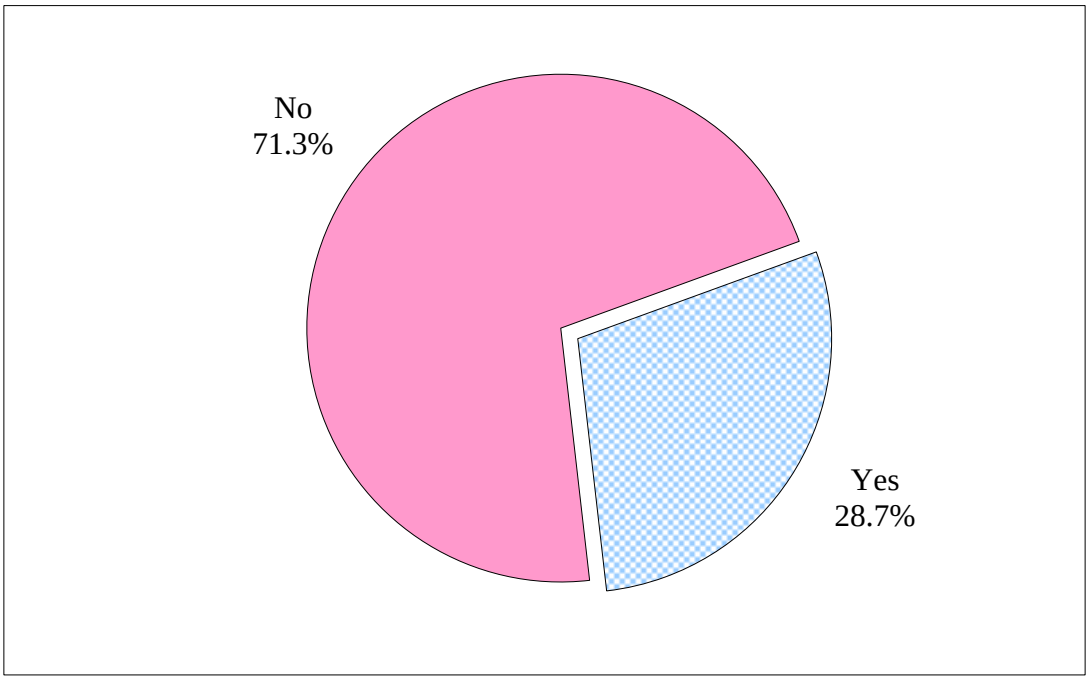


Base: All respondents = 2 041

Among those who reported that they knew, only 28.7% of them could correctly state that the WHO's recommended maximum daily intake of salt for a healthy adult is 5 g (Fig. 3.7.5b). Overall, only 2.6% of respondents could correctly state the WHO's recommended maximum daily intake of salt.

[27] http://www.change4health.gov.hk/en/healthy_diet/facts/calories_nutrients/salt/index.html

Fig.3.7.5b: Whether respondents who reported that they knew WHO's recommended maximum daily intake of salt for a healthy adult could correctly state the recommended intake is 5 g (Q20)



Base: Respondents who reported that they knew WHO's recommended maximum daily intake of salt for a healthy adult = 183

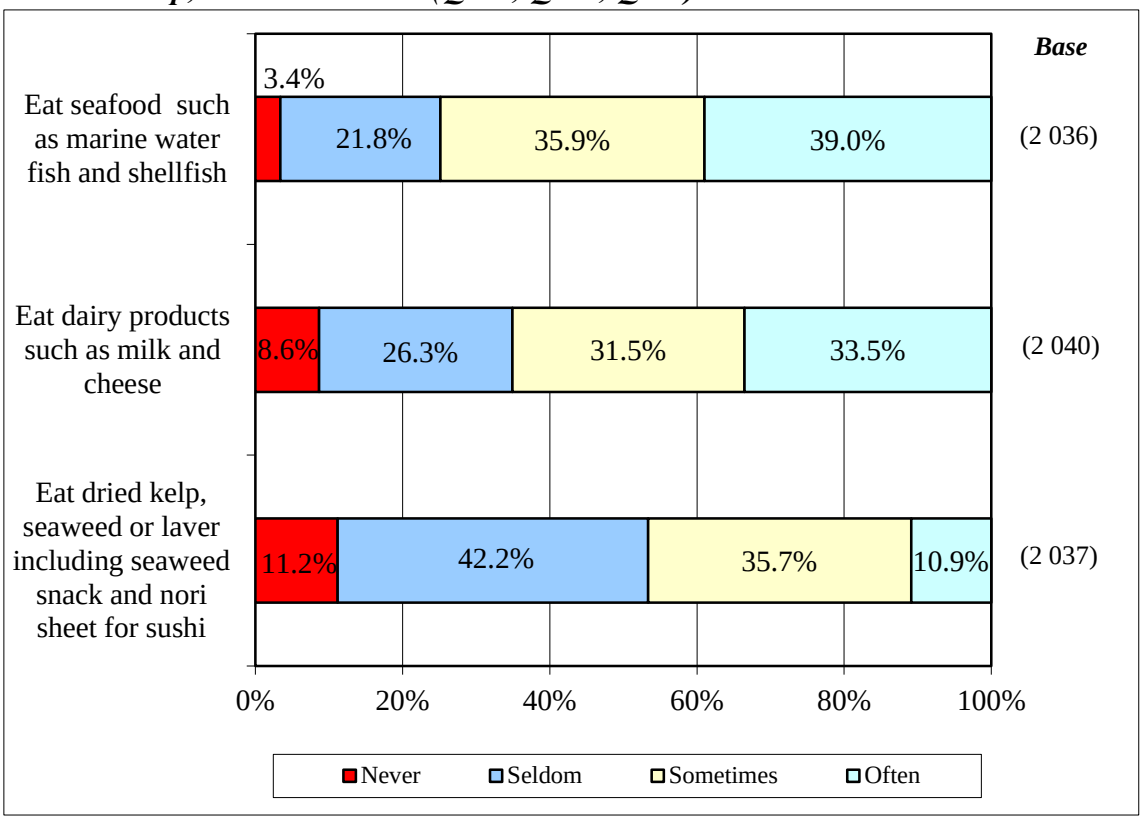
3.8 Consumption of iodine-rich foods

In this survey, three questions were asked to assess respondents' dietary habits in relation to consumption of iodine-rich foods.

3.8.1 Dietary habit in relation to consumption of iodine-rich foods

About two-fifths (39.0%) of respondents reported that they often ate seafood such as marine water fish and shellfish, one-third (33.5%) often ate dairy products such as milk and cheese, and one-tenth (10.9%) often ate dried kelp, seaweed or laver including seaweed snack and nori sheet for sushi, during the twelve months prior to the survey (Fig. 3.8.1a).

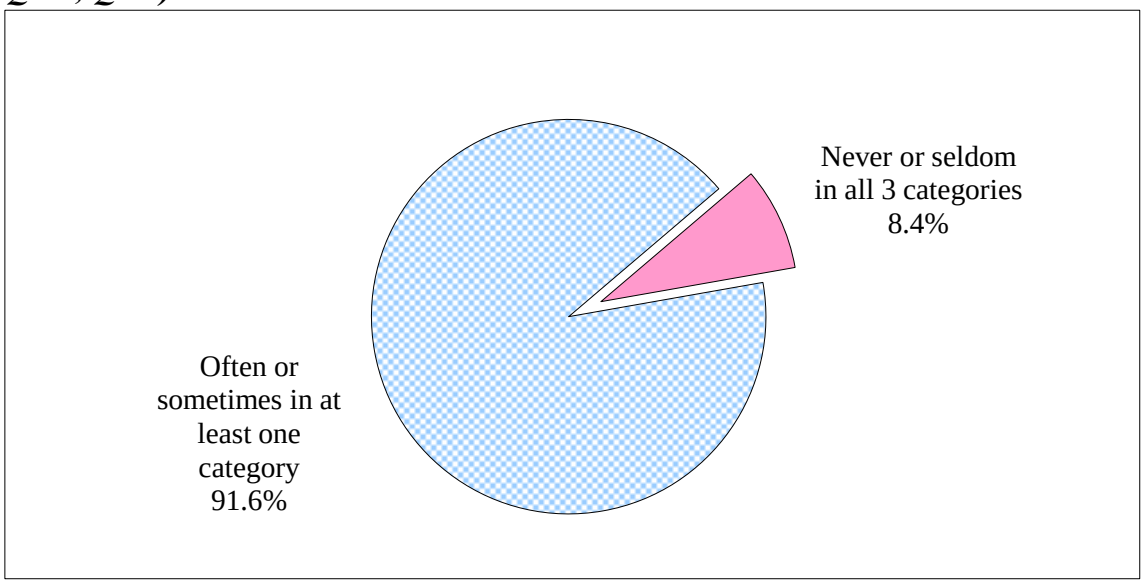
Fig. 3.8.1a Frequency of eating iodine-rich foods, including seafood, dairy products, and dried kelp, seaweed or laver (Q21a, Q21b, Q21c)



Base: All respondents excluding "do not remember"

Overall, about one-tenth (8.4%) of respondents reported that they never or seldom ate all of the above three categories of iodine-rich foods during the twelve months prior to the survey (Fig. 3.8.1b).

Fig. 3.8.1b Frequency of intake of the three categories of iodine-rich foods (Q21a, Q21b, Q21c)



Base: All respondents excluding "do not remember" = 2 038

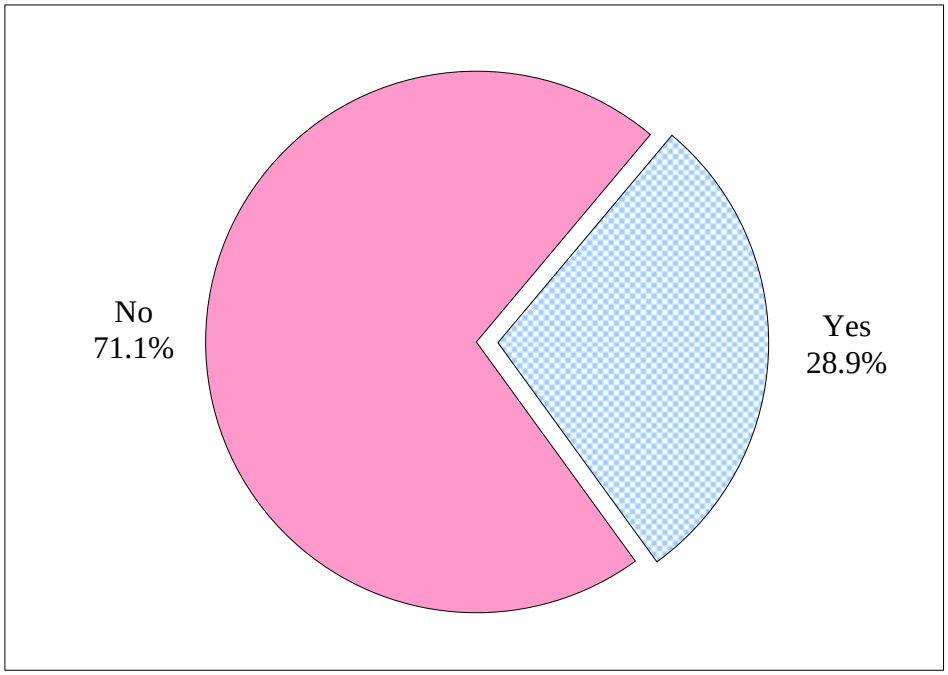
3.9 Cycling and walking habits

Six questions were asked to assess respondents' cycling and walking habits.

3.9.1 Whether had ridden a bike

More than a quarter (28.9%) of respondents reported that they had ridden a bike (excluding stationary bike) during the twelve months prior to the survey (Fig. 3.9.1).

Fig. 3.9.1: Whether had ridden a bike in the last twelve months (Q22a)

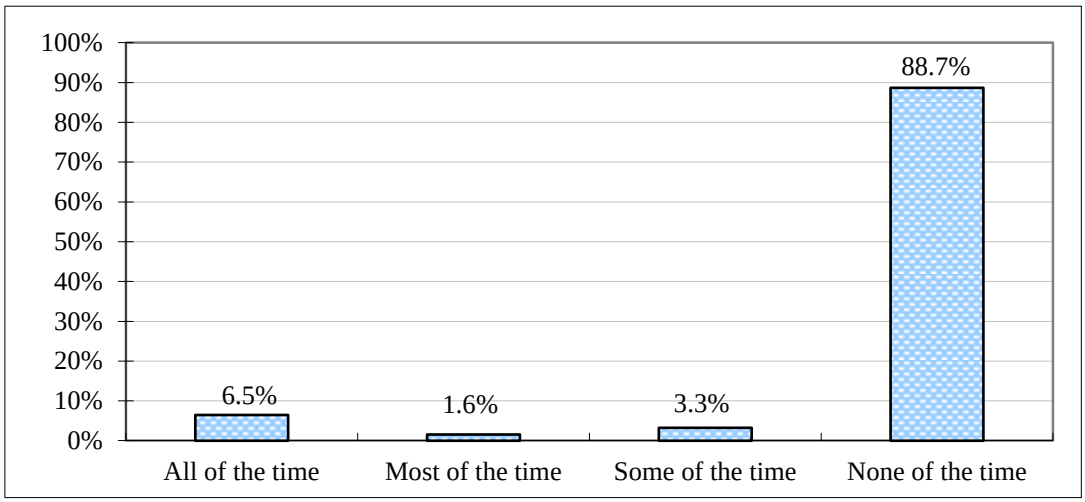


Base: All respondents = 2 041

3.9.2 Frequency of wearing a helmet whilst cycling

Among those respondents who had ridden a bike during the twelve months prior to the survey, only 6.5% of them wore a helmet all of the time whilst cycling while more than four-fifths (88.7%) of respondents never wore a helmet (Fig. 3.9.2a).

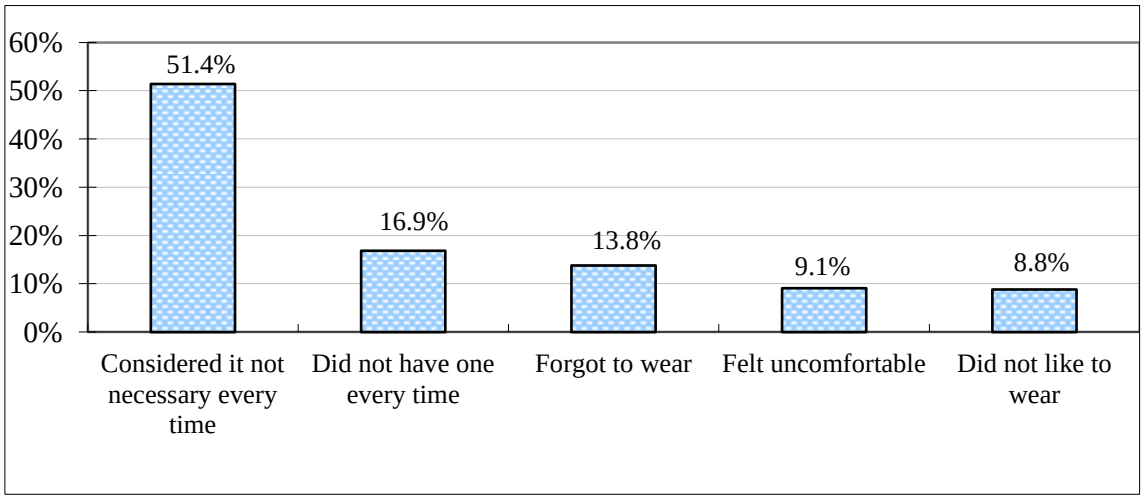
Fig. 3.9.2a: Frequency of wearing a helmet whilst cycling (Q22b)



Base: All respondents who had ridden a bike in the past twelve months = 589

Among those respondents who had ridden a bike in the past twelve months and wore a helmet most or some of the time, the most frequently reported reasons for not wearing a helmet all of the time whilst cycling was "considered it not necessary (to wear a helmet) every time" (51.4%), followed by "did not have one every time" (16.9%) (Fig. 3.9.2b).

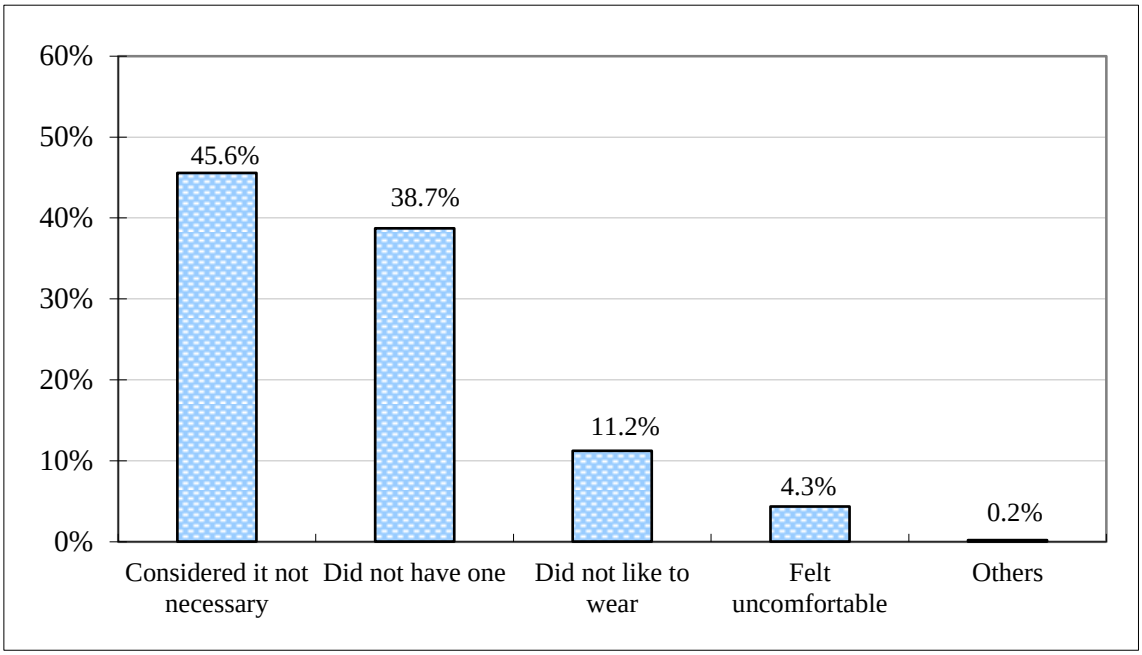
Fig. 3.9.2b: Reasons for not wearing a helmet all of the time whilst cycling (Q22ci)



Base: Respondents who had ridden a bike in the past twelve months and wore a helmet most or some of the time whist cycling, excluding "don't know" = 26

Among those respondents who had ridden a bike in the past twelve months and never wore a helmet, the most frequently reported reasons for not wearing a helmet whilst cycling was "considered it not necessary (to wear a helmet)" (45.6%), followed by "did not have one" (38.7%) (Fig. 3.9.2c).

Fig. 3.9.2c: Reasons for never wearing a helmet whilst cycling (Q22cii)

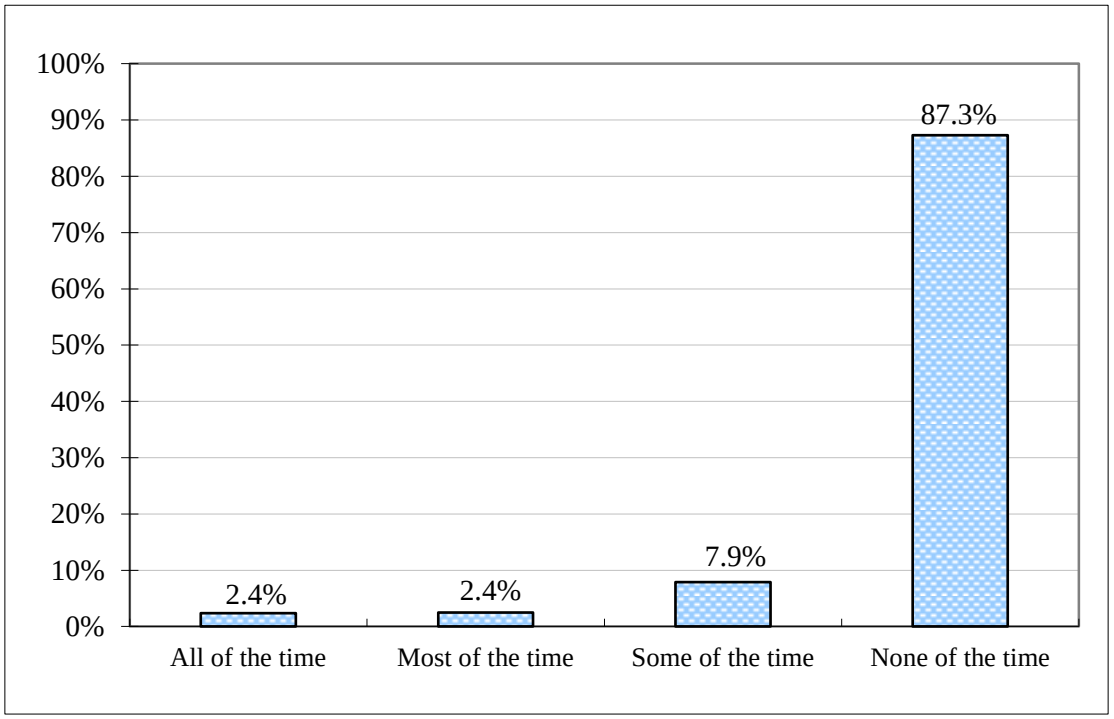


Base: Respondents who had ridden a bike in the past twelve months and never wore a helmet while cycling, excluding refusal = 520

3.9.3 Frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst cycling

Those respondents who had ridden a bike during the twelve months prior to the survey were asked about the frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst cycling. 4.8% of them claimed that they did so all of the time (2.4%) or most of the time (2.4%) (Fig. 3.9.3a).

Fig. 3.9.3a: Frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst cycling (Q23a)

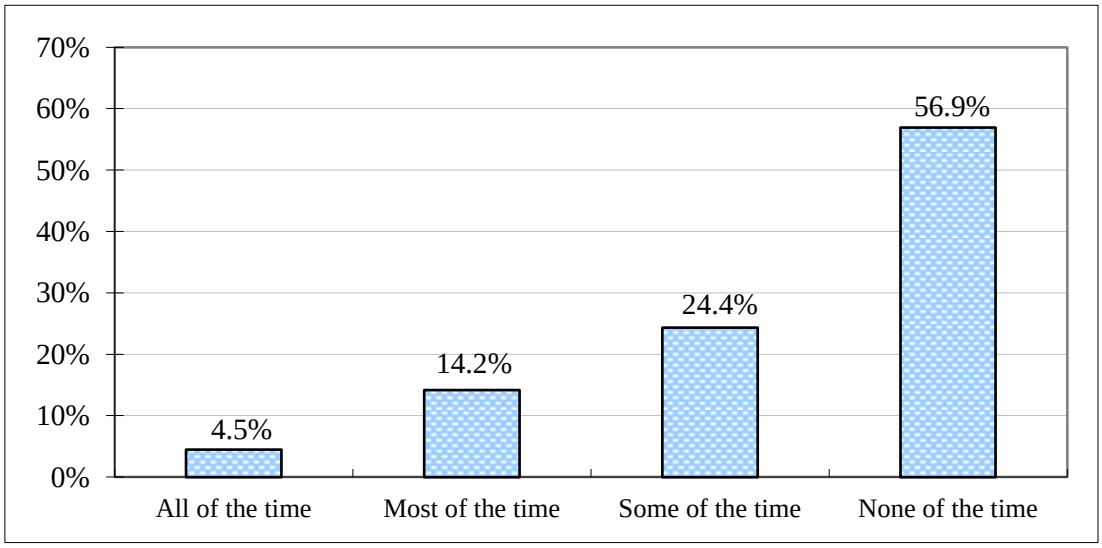


Base: Respondents who had ridden a bike during the twelve months prior to the survey = 589

3.9.4 Frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst walking on the street

All respondents were asked about the frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst walking on the street during the thirty days prior to the survey. 18.7% of them reported that they did so all of the time (4.5%) or most of the time (14.2%) (Fig. 3.9.3a).

Fig. 3.9.3b: Frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst walking (Q23b)



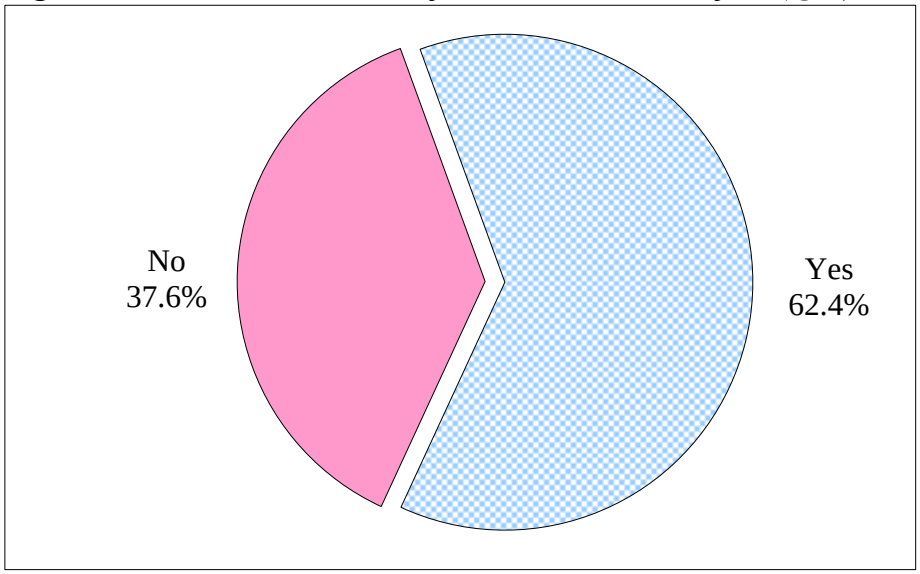
Base: All respondents = 2 041

3.10 Cervical screening (for female respondents only)

Five questions were asked to assess female respondents' behaviour regarding cervical screening.

Overall, less than two-thirds (62.4%) of the female respondents reported that they had a cervical smear before (Fig. 3.10).

Fig. 3.10 Whether had screened for cervical cancer before (Q24)

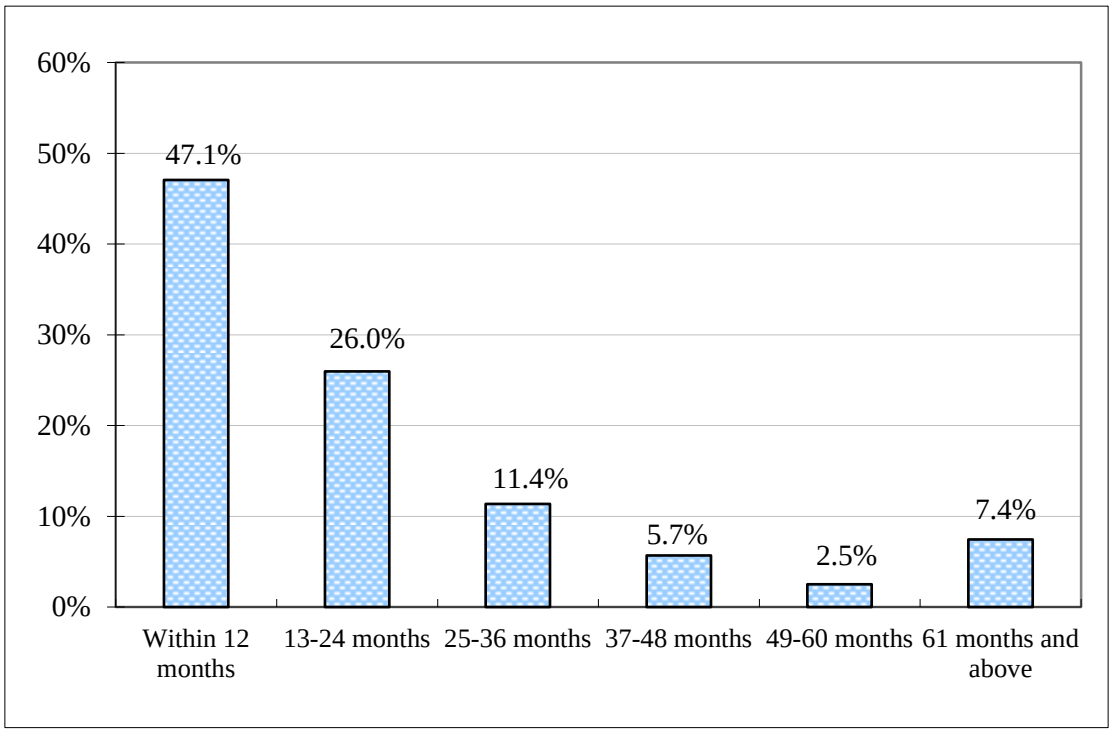


Base: All female respondents excluding "not sure" and refusal = 1 106

3.10.1 Length of time since last cervical smear

Of those female respondents who had had a cervical smear before, less than half (47.1%) had their last cervical smear taken within twelve months prior to the survey. More than one-third (37.3%) of them had the examination within 13-36 months, while 15.6% had their last cervical smear at least 37 months ago (Fig. 3.10.1).

Fig. 3.10.1 Length of time since last cervical smear if ever had a smear (Q25)

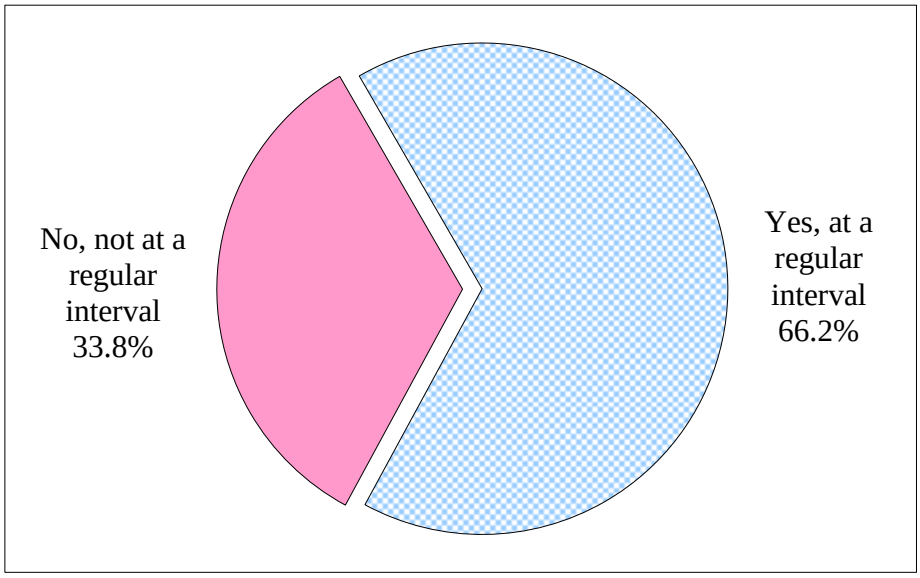


Base: Female respondents who ever had a cervical smear before, excluding "cannot remember" and refusal = 672

3.10.2 Cervical smear at a regular interval

About two-thirds (66.2%) of respondents who had a cervical smear before had the test at a regular interval (Fig. 3.10.2a).

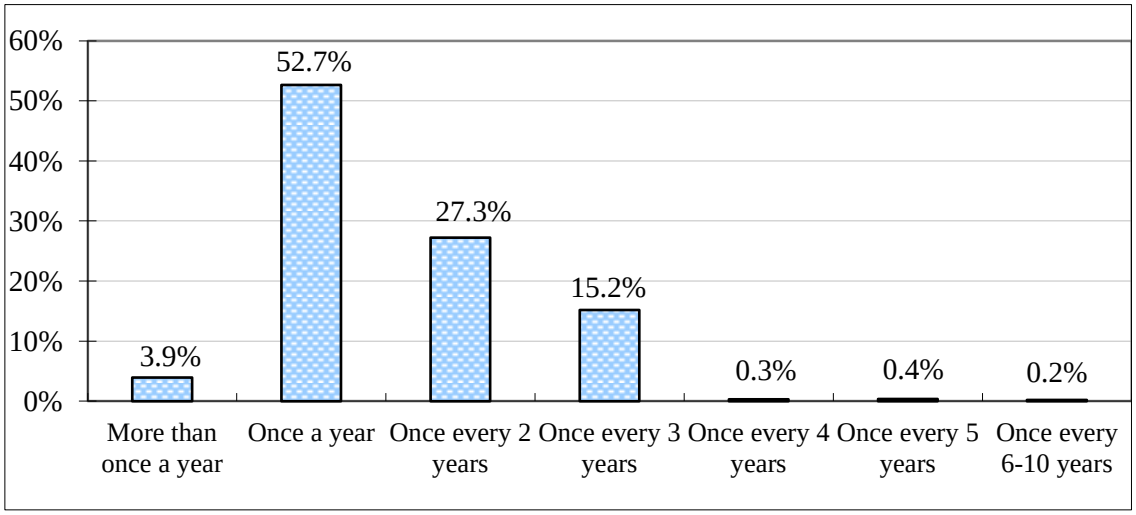
Fig. 3.10.2a: Whether had a cervical smear at a regular interval (Q26)



Base: Female respondents who ever had a cervical smear before, excluding refusal = 689

Among those female respondents who had a cervical smear at a regular interval, about half (52.7%) of them reported that they had a cervical smear once a year. More than one-third (42.5%) had it once every two or three years. Another 3.9% had the test more than once a year (Fig. 3.10.2b).

Fig. 3.10.2b: Frequency of having cervical smear at a regular interval (Q27)

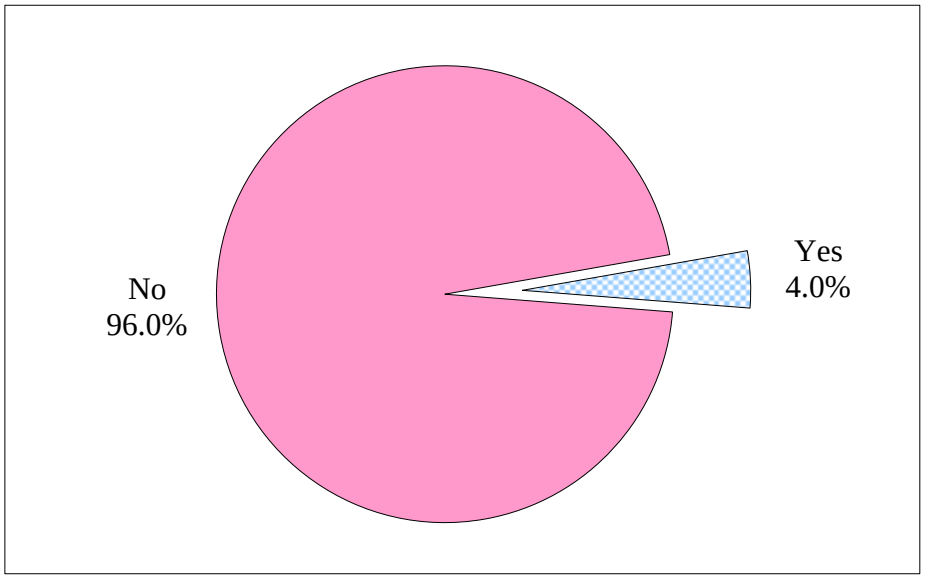


Base: Female respondents who had cervical smear at a regular interval, excluding "cannot say/ remember" and refusal = 442

3.10.3 Whether had a total hysterectomy

Among all female respondents, 4.0% of them had had a total hysterectomy (surgical removal of the entire uterus) (Fig. 3.10.3).

Fig. 3.10.3: Whether had a total hysterectomy (Q28)



Base: All female respondents excluding refusal = 1 109

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 on sub-groups broken down according to respondents' demographic information including gender, age, marital status, educational attainment, occupation, monthly household income and type of living quarters 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", "can't say", "not sure", "not applicable", "refuse to answer" and "outliers" have been excluded from all the sub-group analyses in this chapter.

Table 4.1a: Re-grouping the responses of demographic information (Gender, Q29 – Q35)

Demographic variable	Original level	Re-grouped level	Sample size (weighted)
Gender	Male	Male	926
	Female	Female	1 115
Age group	No grouping	18 – 24	247
		25 – 34	433
		35 – 44	454
		45 – 54	513
		55 – 64	377
Marital status	Never married	Never married	671
	Married with child(ren)	Married	1 274
	Married without child(ren)		
	Divorced/ Separated	Divorced/ Separated/ Widowed	79
	Widowed		
Educational attainment	Primary or below	Primary or below	195
	Had not completed secondary	Had not completed secondary	299
	Completed secondary (F.5)	Completed secondary (F.5)	610
	Matriculation	Matriculation	147
	Tertiary (non-degree, degree or above)	Tertiary or above	787

Table 4.1a: Re-grouping the responses of demographic information (Gender, Q29 – Q35)(Continued)

Demographic variable	Original level	Re-grouped level	Sample size (weighted)
Occupation	Employer/ Manager/ Administrator	Managerial/ Professional worker	450
	Professional		
	Associate professional		
	Clerk	Clerk	328
	Service worker	Service worker	245
	Shop sales worker		
	Skilled agricultural/ Fishery worker	Blue collar worker	273
	Craft and related worker		
	Plant and machine operator and assembler		
	Unskilled worker		
	Student	Non-working person	685
	Home-maker		
	Unemployed person		
	Retired person		
	Other non-working person		
Monthly household income	Less than $2,000	Below $8,000	96
	$2,000 - $3,999		
	$4,000 - $5,999		
	$6,000 - $7,999		
	$8,000 - $9,999	$8,000 - $13,999	191
	$10,000 - $11,999		
	$12,000 - $13,999		
	$14,000 - $15,999	$14,000 - $19,999	187
	$16,000 - $17,999		
	$18,000 - $19,999		
	$20,000 - $24,999	$20,000 - $39,999	522
	$25,000 - $29,999		
	$30,000 - $34,999		
	$35,000 - $39,999		
	$40,000 - $44,999	$40,000 or above	498
	$45,000 - $49,999		
	$50,000 - $54,999		
	$55,000 - $59,999		
	$60,000 or above		

Table 4.1a: Re-grouping the responses of demographic information (Gender, Q29 – Q35)(Continued)

Demographic variable	Original level	Re-grouped level	Sample size (weighted)
Type of living quarters	Public rental flats	Public rental flats	641
	Housing Authority subsidized sale flats	Subsidized sale flats	290
	Housing Society subsidized sale flats		
	Private residential flats	Private housing	1 069
	Villas/ Bungalows/ Modern village houses		
	Simple stone structures/ Traditional village houses		
	Staff quarters		
	Non-domestic quarter	Non-domestic quarter*	1

**As there is only one case which the respondent lived in a non-domestic quarter. The sub-group of non-domestic quarter is excluded from the sub-group analysis against type of living quarters.*

Table 4.1b: Re-grouping the responses of questions

Question No.	Question content	Original level	Re-grouped level
Q2	During the past 12 months, whether deliberately to control weight	Yes, to lose weight	Yes
		Yes, to maintain weight	
		Yes, to gain weight	
		No	No
Q5a, Q6a, Q7a	Average days per week spent on vigorous/ moderate physical activities and walking	0 day	0 - 1 day
		1 day	
		2 days	2 - 3 days
		3 days	
Q10a, Q11a, Q12	Average days per week that respondents drink fruit/ vegetable juice and eat fruit/ vegetable	4 days	4 - 5 days
		5 days	
		6 days	6 - 7 days
		7 days	
Q8	Average time spent on sitting on a weekday	No Groupings	10mins - <2hrs
			2 - <4hrs
			4 - <6hrs
			6 - <8hrs
			8 - <10hrs
			10hrs - 900mins
Q9	Frequency of doing exercise in the leisure-time	Once or more a day	At least 4 times per week
		4-6 times per week	
		2-3 times per week	1 - 3 times per week
		Once a week	
		2-3 times a month	1 - 3 times per month
		Once a month	
		Less than once a month	Less than once a month
Q14a	Weekly frequency of drinking at least one alcoholic drink during the thirty days prior to the survey	Daily	6 days or more per week
		6 days per week	
		5 days per week	4 - 5 days per week
		4 days per week	
		3 days per week	2 - 3 days per week
		2 days per week	
		1 day per week	1 day or less per week
		Less than 1 day per week	
Q14b	Average number of standard drinks consumed on the days drinking alcohol	No grouping	Less than 3 units
			3 - <5 units
			5 - 24 units

Table 4.1b: Re-grouping the responses of questions (Continued)

Question No.	Question content	Original level	Re-grouped level
Q25	Period of time since last cervical smear	1 - 12 months	1 - 12 months
		13 - 24 months	13 - 36 months
		25 - 36 months	
		37 - 48 months	37 or more months
		49 - 60 months	
		61 months or above	
Q27	Frequency of having cervical smear	More than once a year	At least once a year
		Once a year	
		Once every 2 years	Once every 2 years
		Once every 3 years	Less frequent than once every 2 years
		Once every 4 years	
		Once every 5 years	
		Once every 6 - 10 years	
		Less frequent than once every 10 years	

Three types of statistical tests are used for sub-group analysis in this report, namely Pearson's chi-square test, Kruskal-Wallis test and Spearman's rank correlation [28].

When both variables are *nominal*, Pearson's chi-square test is used. When one variable is

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

Pearson's Chi-square test:

$$\chi^2 = \sum_i \sum_j \frac{(Oij - eij)^2}{eij}$$

where O_{ij} is the observed value corresponding to the i[th] column and the j[th] row, e_{ij} is the expected value corresponding to the i[th] column and the j[th] row. The calculation of e_{ij} is as follow: expected value = (i[th] column total x j[th] 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 i[th] sample, n_i is the number of observations of the i[th] sample.

Spearman's rank correlation coefficient:

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

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 i[th] 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.

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

4.2.1 Weight status

When the WHO classification for adult Asians is used, weight status is associated significantly with six demographic variables: gender, age, educational attainment, marital status, occupation and monthly household income (Table 4.2.1).

More male respondents (26.3%) were classified as "obese" while more female respondents (14.7%) 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".

A relatively higher proportion of respondents with primary education level or below (29.7%) were classified as "obese". Never married respondents (19.1%) were more likely to be "underweight" than the married respondents (7.0%) and the divorced/ separated/ widowed respondents (3.4%). A relatively higher proportion of married respondents (24.2%) and the divorced/ separated/ widowed respondents (23.4%) than never married respondents (9.5%) were classified as "obese".

Regarding the respondents' occupation, a relatively higher proportion of blue collar workers (33.1%) were classified as "obese". Respondents with monthly household income below $8,000 (31.0%) were more likely to be classified as "obese".

Table 4.2.1: Weight status by BMI according to WHO classification for adult Asians

Variable	Level	Base	Under-weight	Normal	Over-weight	Obese	p-value	
							Kruskal-Wallis test	Rank Correlation
Gender	Male	907	6.4%	45.4%	21.9%	26.3%	0.000	
	Female	1 081	14.7%	56.6%	15.4%	13.3%		
Age	18-24	240	29.7%	54.9%	8.7%	6.7%		0.000
	25-34	423	16.3%	62.7%	11.6%	9.4%		
	35-44	440	9.7%	51.8%	18.8%	19.8%		
	45-54	503	3.6%	44.3%	24.7%	27.3%		
	55-64	369	4.0%	45.6%	22.9%	27.4%		

Table 4.2.1: Weight status by BMI according to WHO classification for adult Asians (Continued)

Variable	Level	Base	Under-weight	Normal	Over-weight	Obese	p-value	
							Kruskal-Wallis test	Rank Correlation
Educational attainment	Primary or below	186	8.1%	40.5%	21.7%	29.7%		0.000
	Had not completed secondary	289	6.8%	45.8%	21.2%	26.2%		
	Completed secondary (F5)	592	9.8%	52.2%	17.0%	21.0%		
	Matriculation	146	17.8%	56.5%	13.6%	12.1%		
	Tertiary (Non-degree, degree or above)	771	12.7%	54.7%	18.5%	14.1%		
Marital status	Never married	656	19.1%	56.6%	14.8%	9.5%	0.000	
	Married	1 242	7.0%	48.9%	19.9%	24.2%		
	Divorced/ Separated/ Widowed	76	3.4%	47.5%	25.7%	23.4%		
Occupation	Managerial/ Professional worker	445	6.9%	54.4%	22.6%	16.2%	0.000	
	Clerk	324	13.7%	56.3%	14.0%	16.0%		
	Service worker	236	9.3%	50.8%	17.3%	22.6%		
	Blue collar worker	266	5.1%	42.5%	19.3%	33.1%		
	Not working	663	15.0%	51.8%	17.3%	15.9%		
Monthly household income	Below $8,000	92	8.5%	39.6%	20.9%	31.0%		0.002
	$8,000-$13,999	185	12.1%	46.1%	19.4%	22.4%		
	$14,000-$19,999	187	8.3%	49.9%	19.2%	22.7%		
	$20,000-$39,999	509	11.1%	53.1%	15.4%	20.3%		
	$40,000 or above	496	9.2%	55.3%	18.6%	16.9%		

4.2.2 Perception about current weight status

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

A relatively higher proportion of female respondents (44.2%), respondents aged 35-64 (ranging from 44.5% to 51.3%), those with primary education or below (48.9%) and married (46.4%) or divorced/ separated/ widowed respondents (51.5%) considered themselves as "overweight".

Table 4.2.2a: Perception about current weight status (Q4)

Variable	Level	Base	Over-weight	Just right	Under-weight	p-value	
						Kruskal-Wallis test	Rank Correlation
Gender	Male	922	36.9%	49.8%	13.4%	0.000	
	Female	1 107	44.2%	49.1%	6.7%		
Age	18-24	245	25.5%	52.9%	21.7%		0.000
	25-34	427	29.1%	61.5%	9.4%		
	35-44	452	44.5%	47.6%	8.0%		
	45-54	512	51.3%	41.3%	7.4%		
	55-64	376	45.8%	46.1%	8.0%		
Educational attainment	Primary or below	194	48.9%	41.2%	9.9%		0.010
	Had not completed secondary	297	44.3%	45.6%	10.0%		
	Completed secondary (F5)	605	40.9%	49.8%	9.3%		
	Matriculation	147	34.1%	53.9%	12.0%		
	Tertiary (Non-degree, degree or above)	780	39.1%	51.6%	9.4%		
Marital status	Never married	665	29.1%	55.9%	15.0%	0.000	
	Married	1 269	46.4%	46.7%	6.9%		
	Divorced/ Separated/ Widowed	79	51.5%	35.8%	12.7%		

Analysis of the agreement between respondents' perception about their current weight and their weight status based on WHO classification for adult Asians revealed that there are significant association between perception of weight and weight status.

Those respondents who were "underweight" by WHO classification are *less* likely to perceive themselves in the *correct* weight status category than respondents who were "normal weight", "overweight" or "obese" by WHO classification. Only 38.8% of those who are "underweight" by WHO classification correctly perceived themselves as under-weight. On the other hand, 65.4% of those "normal weight" by WHO classification correctly perceived themselves as "just right", 58.1% of those "overweight" by WHO classification correctly perceived themselves as overweight, and 87.6% of those "obese" by WHO classification correctly perceived themselves as overweight (Table 4.2.2b).

Table 4.2.2b: Perception about current weight status by weight status based on WHO classification for adult Asians

Variable	Level	Base	Perception of current weight status				p-value
			Under-weight	Just right	Over-weight	Total	Rank Correlation
Weight status (WHO classification for adult Asians)	Underweight	215	38.8%	53.4%	7.7%	100%	0.000
	Normal	1 021	10.4%	65.4%	24.3%	100%	
	Overweight	364	0.8%	41.1%	58.1%	100%	
	Obese	383	0.3%	12.1%	87.6%	100%	

4.2.3 Weight control

Statistically significant associations exist between whether respondents had done something deliberately to control weight in the twelve months prior to the survey and their educational attainment, occupation, monthly household income, type of living quarters and weight status (based on WHO classification for adult Asians).

Comparatively speaking, those with tertiary education (35.7%), managerial/ professional workers (37.9%), those had monthly household income of $40,000 or above (35.5%), those living in private housing (32.6%) and those classified as "overweight" (37.9%) or "obese" (42.4%) were more likely than their respective counterparts to have done something deliberately to control their weight in the twelve months prior to the survey (Table 4.2.3a).

Table 4.2.3a: Whether had done something deliberately to control weight in the – twelve months prior to the survey (Q2)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Educational attainment	Primary or below	195	24.0%	76.0%		0.000
	Had not completed secondary	299	23.0%	77.0%		
	Completed secondary (F5)	610	28.8%	71.2%		
	Matriculation	147	31.7%	68.3%		
	Tertiary (Non-degree, degree or above)	787	35.7%	64.3%		
Occupation	Managerial/ Professional worker	450	37.9%	62.1%	0.000	
	Clerk	328	29.9%	70.1%		
	Service worker	245	31.0%	69.0%		
	Blue collar worker	273	23.2%	76.8%		
	Not working	685	28.2%	71.8%		

Table 4.2.3a: Whether had done something deliberately to control weight in the twelve months prior to the survey (Q2)(Continued)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Monthly household income	Below $8,000	96	17.9%	82.1%		0.002
	$8,000-$13,999	191	23.9%	76.1%		
	$14,000-$19,999	187	32.3%	67.7%		
	$20,000-$39,999	522	31.6%	68.4%		
	$40,000 or above	498	35.5%	64.5%		
Type of living quarters	Public rental flats	641	26.8%	73.2%	0.032	
	Subsidized sale flats	290	28.6%	71.4%		
	Private housing	1 069	32.6%	67.4%		
Weight status (WHO classification for adult Asians)	Underweight	217	15.5%	84.5%		0.000
	Normal	1 023	27.0%	73.0%		
	Overweight	365	37.9%	62.1%		
	Obese	383	42.4%	57.6%		

4.2.4 Methods adopted to control weight

4.2.4.1 Taking drugs or products

Taking drugs or products as the method for weight control is associated significantly with gender, age and occupation.

A relatively higher proportion of female respondents (15.2%), those aged between 25-44 (ranging from 15.9% to 17.7%) and clerks (21.7%) reported that they had taken drugs or products for weight control in the twelve months prior to the survey (Table 4.2.4.1).

Table 4.2.4.1: Taking drugs or products for weight control in the twelve months prior to the survey (Q3a)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	277	8.5%	91.5%	0.011	
	Female	342	15.2%	84.8%		
Age	18-24	70	11.5%	88.5%		0.003
	25-34	130	17.7%	82.3%		
	35-44	152	15.9%	84.1%		
	45-54	152	10.3%	89.7%		
	55-64	110	4.1%	95.9%		
Occupation	Managerial/ Professional worker	171	12.8%	87.2%	0.019	
	Clerk	98	21.7%	78.3%		
	Service worker	76	12.3%	87.7%		
	Blue collar worker	63	5.5%	94.5%		
	Not working	193	9.8%	90.2%		

4.2.4.2 Consulting doctors or dietitians

Consulting doctors or dietitians as the method for weight control is associated significantly with occupation.

Service workers (15.0%) and clerks (12.4%) were more likely to consult doctors or dietitians for weight control in the twelve months prior to the survey (Table 4.2.4.2).

Table 4.2.4.2: Consulting doctors or dietitians for weight control in the twelve months prior to the survey (Q3b)

Variable	Level	Base	Yes	No	p-value
					Chi-square test
Occupation	Managerial/ Professional worker	171	6.5%	93.5%	0.039
	Clerk	98	12.4%	87.6%	
	Service worker	76	15.0%	85.0%	
	Blue collar worker	63	2.2%	97.8%	
	Not working	193	8.1%	91.9%	

4.2.4.3 Going to weight control or beauty parlours

Going to weight control or beauty parlours as the method for weight control is associated significantly with educational attainment.

Respondents with tertiary education (4.1%) were more likely to control their weight by going to weight control or beauty parlours in the twelve months prior to the survey (Table 4.2.4.3).

Table 4.2.4.3: Going to weight control or beauty parlours to control weight in the twelve months prior to the survey (Q3c)

Variable	Level	Base	Yes	No	p-value Kruskal-Wallis test
Educational attainment	Primary or below	47	0.0%	100.0%	0.039
	Had not completed secondary	69	0.0%	100.0%	
	Completed secondary (F5)	176	1.9%	98.1%	
	Matriculation	47	0.0%	100.0%	
	Tertiary (Non-degree, degree or above)	281	4.1%	95.9%	

4.2.4.4 Doing exercise

Doing exercise as the method for weight control is associated significantly with gender, educational attainment, occupation and monthly household income.

Males (90.5%), those with tertiary education (88.5%), managerial/ professional workers (90.0%), non-working persons (86.2%) and those with monthly household income of $20,000 or above (ranging from 87.6% to 87.7%) were more likely to do exercise for weight control in the twelve months prior to the survey (Table 4.2.4.4).

Table 4.2.4.4: Doing exercise for weight control in the twelve months prior to the survey (Q3d)

Variable	Level	Base	Yes	No	p-value Chi-square test	p-value Kruskal-Wallis test
Gender	Male	277	90.5%	9.5%	0.000	
	Female	342	78.7%	21.3%		
Educational attainment	Primary or below	47	80.0%	20.0%		0.005
	Had not completed secondary	69	75.6%	24.4%		
	Completed secondary (F5)	176	81.7%	18.3%		
	Matriculation	47	82.1%	17.9%		
	Tertiary (Non-degree, degree or above)	281	88.5%	11.5%		

Table 4.2.4.4: Doing exercise (Q3d) (Continued)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Occupation	Managerial/ Professional worker	171	90.0%	10.0%	0.020	
	Clerk	98	77.7%	22.3%		
	Service worker	76	78.1%	21.9%		
	Blue collar worker	63	78.4%	21.6%		
	Not working	193	86.2%	13.8%		
Monthly household income	Below $8,000	17	85.6%	14.4%		0.018
	$8,000-$13,999	46	71.9%	28.1%		
	$14,000-$19,999	60	77.8%	22.2%		
	$20,000-$39,999	165	87.6%	12.4%		
	$40,000 or above	177	87.7%	12.3%		

4.2.4.5 Changing dietary habit

Changing dietary habit as the method for weight control is associated significantly with age and educational attainment.

Respondents aged 18-24 (84.2%) and respondents with tertiary education (79.8%) were more likely to control their weight by changing dietary habit in the twelve months prior to the survey (Table 4.2.4.5).

Table 4.2.4.5: Changing dietary habit for weight control in the twelve months prior to the survey (Q3e)

Variable	Level	Base	Yes	No	p-value
					Kruskal-Wallis test
Age	18-24	70	84.2%	15.8%	0.009
	25-34	130	80.6%	19.4%	
	35-44	152	75.3%	24.7%	
	45-54	152	76.2%	23.8%	
	55-64	110	68.0%	32.0%	
Educational attainment	Primary or below	47	68.9%	31.1%	0.038
	Had not completed secondary	69	70.2%	29.8%	
	Completed secondary (F5)	176	75.5%	24.5%	
	Matriculation	47	74.7%	25.3%	
	Tertiary (Non-degree, degree or above)	281	79.8%	20.2%	

4.3 Physical activities and leisure-time exercise

4.3.1 Vigorous physical activities

The number of days spent on doing vigorous physical activities for at least 10 minutes during the seven days prior to the survey is associated significantly with five of the respondents' demographic characteristics: gender, age, marital status, occupation and monthly household income.

Female respondents (78.6%), those aged 25-64 (ranging from 74.7% to 77.4%), those who were married (76.7%) or divorced/ separated/ widowed (79.3%), clerks (83.5%) and respondents with monthly household income below $8,000 (83.9%) were more likely than their respective counterparts to have engaged in vigorous physical activities for at least 10 minutes for one day or less only during the seven days before interview (Table 4.3.1).

Table 4.3.1: Number of days spent on doing vigorous physical activities for at least 10 minutes during the seven days prior to the survey (Q5a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value	
							Kruskal-Wallis test	Rank Correlation
Gender	Male	925	66.7%	20.1%	5.6%	7.7%	0.000	
	Female	1 115	78.6%	13.6%	3.8%	4.1%		
Age	18-24	247	54.2%	34.4%	7.4%	4.1%		0.006
	25-34	433	75.8%	19.3%	1.9%	3.0%		
	35-44	454	77.4%	14.8%	3.5%	4.3%		
	45-54	513	74.9%	12.1%	6.4%	6.6%		
	55-64	377	74.7%	9.9%	4.6%	10.7%		
Marital status	Never married	671	65.3%	24.8%	4.8%	5.1%	0.000	
	Married	1 274	76.7%	12.7%	4.6%	6.0%		
	Divorced/Separated/ Widowed	78	79.3%	10.0%	2.3%	8.4%		
Occupation	Managerial/ Professional worker	450	69.8%	20.2%	4.5%	5.4%	0.001	
	Clerk	328	83.5%	12.0%	2.7%	1.8%		
	Service worker	245	67.6%	19.8%	5.0%	7.6%		
	Blue collar worker	273	71.2%	13.1%	6.6%	9.1%		
	Not working	685	72.5%	16.8%	4.8%	6.0%		
Monthly household income	Below $8,000	95	83.9%	4.2%	4.5%	7.3%		0.032
	$8,000-$13,999	191	77.5%	10.4%	2.9%	9.2%		
	$14,000-$19,999	187	71.2%	15.8%	5.9%	7.1%		
	$20,000-$39,999	522	73.4%	17.6%	3.7%	5.4%		
	$40,000 or above	498	69.4%	20.3%	5.3%	4.9%		

4.3.2 Moderate physical activities

The number of days spent on doing moderate physical activities for at least 10 minutes during the seven days prior to the survey is associated significantly with respondents' occupation and monthly household income.

Clerks (63.7%) and respondents with monthly household income below $8,000 (60.7%) were more likely than their respective counterparts to have spent on moderate physical activities for at least 10 minutes for one day or less only during the seven days prior to the survey (Table 4.3.2).

Table 4.3.2: Number of days spent on doing moderate physical activities for at least 10 minutes during the seven days prior to the survey (Q6a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value	
							Kruskal-Wallis test	Rank Correlation
Occupation	Managerial/ Professional worker	450	59.3%	22.6%	7.4%	10.7%	0.010	
	Clerk	328	63.7%	22.0%	6.6%	7.7%		
	Service worker	245	60.4%	17.9%	6.5%	15.1%		
	Blue collar worker	273	52.0%	21.7%	8.3%	17.9%		
	Not working	685	58.3%	19.2%	7.8%	14.7%		
Monthly household income	Below $8,000	95	60.7%	14.1%	7.2%	17.9%		0.045
	$8,000-$13,999	191	50.4%	24.1%	8.8%	16.8%		
	$14,000-$19,999	187	56.1%	20.7%	8.8%	14.4%		
	$20,000-$39,999	522	58.9%	23.0%	5.9%	12.1%		
	$40,000 or above	498	58.8%	20.8%	10.3%	10.1%		

4.3.3 Walking

Significant associations exist between the number of days spent on walking for at least 10 minutes during the seven days prior to the survey and respondents' occupation and type of living quarters.

A relatively higher proportion of blue collar workers (77.9%) and service workers (76.2%) and respondents living in public rental flats (76.6%) reported that they walked for at least 10 minutes on 6-7 days within the seven days prior to the survey when compared with their respective counterparts (Table 4.3.3).

Table 4.3.3: Number of days spent on walking for at least 10 minutes during the seven days prior to the survey (Q7a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value Kruskal-Wallis test
Occupation	Managerial/ Professional worker	450	4.7%	11.6%	14.8%	68.9%	0.000
	Clerk	328	7.0%	9.0%	19.2%	64.8%	
	Service worker	245	9.5%	4.4%	9.9%	76.2%	
	Blue collar worker	273	5.2%	6.4%	10.6%	77.9%	
	Not working	685	4.0%	9.6%	11.5%	74.9%	
Type of living quarters	Public rental flats	641	5.2%	7.8%	10.4%	76.6%	0.018
	Subsidized sale flats	290	6.2%	8.6%	13.4%	71.7%	
	Private housing	1 069	5.9%	9.4%	14.9%	69.8%	

4.3.4 Whether attained the physical activity level recommended by WHO for adults

Whether respondents had attained the WHO's recommended levels of physical activity for adults is significantly associated with their gender, age, marital status and occupation.

A relatively higher proportion of male respondents (46.9%), those aged 18-24 (57.9%), never married respondents (45.8%), service workers and blue collar worker (both 45.0%) were found to have attained the physical activity level recommended by WHO for adults when compared with their respective counterparts (Table 4.3.4).

Table 4.3.4: Whether attained the physical activity level recommended by WHO for adults (Q5a, Q5b, Q6a, Q6b)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	925	46.9%	53.1%	0.000	
	Female	1 115	33.4%	66.6%		
Age	18-24	247	57.9%	42.1%		0.005
	25-34	433	35.1%	64.9%		
	35-44	454	37.2%	62.8%		
	45-54	513	36.1%	63.9%		
	55-64	376	40.0%	60.0%		
Marital status	Never married	671	45.8%	54.2%	0.000	
	Married	1 273	36.8%	63.2%		
	Divorced/ Separated/ Widowed	78	33.2%	66.8%		
Occupation	Managerial/ Professional worker	450	41.8%	58.2%	0.000	
	Clerk	328	29.0%	71.0%		
	Service worker	245	45.0%	55.0%		
	Blue collar worker	273	45.0%	55.0%		
	Not working	684	40.3%	59.7%		

4.3.5 Sitting

The average time spent on sitting on a weekday (Monday to Friday) during the seven days prior to the survey is associated significantly with respondents' gender, age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

Male respondents (19.4%), those aged 18-34 (ranging from 26.4% to 26.9%), those never married (30.3%), clerks (37.4%) and those living in subsidized sale flats (21.1%) were more likely than their respective counterparts to sit 10 hours or above on a weekday on average during the seven days prior to the survey. Also the higher the educational attainment and the monthly household income of the respondents, the more likely that they had sat 10 hours or above on a weekday (Table 4.3.5).

Table 4.3.5: Average time spent on sitting on a weekday during the seven days prior to the survey (Q8)

Variable	Level	Base	10mins-<2hrs	2-<4 hrs	4-<6 hrs	6-<8 hrs	8-<10hrs	10hrs - 900 mins	p-value	
									Kruskal-Wallis test	Rank Correlation
Gender	Male	917	3.3%	14.7%	24.2%	19.5%	18.9%	19.4%	0.000	
	Female	1 093	5.1%	20.5%	23.9%	17.5%	13.9%	19.1%		
Age	18-24	244	0.4%	9.8%	20.0%	27.4%	15.5%	26.9%		0.000
	25-34	423	3.4%	10.2%	21.9%	19.1%	19.1%	26.4%		
	35-44	447	3.8%	23.5%	22.7%	13.6%	19.1%	17.3%		
	45-54	507	5.8%	20.1%	26.1%	16.7%	13.9%	17.3%		
	55-64	374	6.1%	22.3%	28.3%	19.6%	12.8%	10.9%		
Educational attainment	Primary or below	188	11.7%	35.4%	23.7%	16.7%	7.1%	5.4%		0.000
	Had not completed secondary	298	6.7%	27.9%	30.7%	16.5%	5.8%	12.5%		
	Completed secondary (F5)	600	4.3%	19.0%	24.5%	18.9%	16.0%	17.2%		
	Matriculation	146	2.7%	13.9%	22.8%	23.3%	17.7%	19.6%		
	Tertiary (Non-degree, degree or above)	773	1.7%	9.7%	21.3%	18.4%	22.2%	26.8%		
Marital status	Never married	656	1.5%	9.6%	20.2%	19.8%	18.6%	30.3%	0.000	
	Married	1 260	5.6%	21.6%	25.4%	18.3%	15.1%	14.0%		
	Divorced/ Separated/ Widowed	79	1.9%	26.0%	33.3%	12.6%	10.8%	15.4%		
Occupation	Managerial/ Professional worker	442	1.1%	10.1%	22.2%	15.7%	22.3%	28.7%	0.000	
	Clerk	320	1.9%	6.0%	14.4%	13.8%	26.5%	37.4%		
	Service worker	245	9.2%	22.8%	29.0%	16.0%	12.2%	10.8%		
	Blue collar worker	269	7.3%	27.7%	23.7%	19.1%	11.4%	10.8%		
	Not working	676	4.5%	22.9%	27.9%	23.2%	10.9%	10.6%		
Monthly household income	Below $8,000	93	8.3%	18.8%	26.0%	23.4%	14.4%	9.1%		0.000
	$8,000-$13,999	190	4.3%	30.4%	26.5%	19.5%	6.4%	12.9%		
	$14,000-$19,999	185	3.9%	23.4%	19.7%	20.0%	17.5%	15.6%		
	$20,000-$39,999	519	2.7%	15.7%	26.7%	19.6%	16.3%	19.0%		
	$40,000 or above	490	3.8%	12.3%	21.6%	16.7%	21.0%	24.5%		
Type of living quarters	Public rental flats	625	4.4%	22.2%	23.3%	19.3%	12.6%	18.2%	0.001	
	Subsidized sale flats	289	4.7%	19.6%	20.6%	17.4%	16.6%	21.1%		
	Private housing	1 055	3.9%	15.0%	25.5%	18.3%	17.7%	19.5%		

4.3.6 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, marital status, occupation, monthly household income and type of living quarters.

Female respondents (44.1%), divorced/ separated/ widowed respondents (53.4%), blue collar workers (45.8%) and those living in public rental flats (45.8%) were more likely than their respective counterparts to have reported that they had leisure-time exercises less than once a month during the thirty days prior to the survey. Also, the older, the lower the educational attainment, and the lower the monthly household income of the respondents, the more likely that they had had leisure-time exercise less than once a month (Table 4.3.6).

Table 4.3.6: Frequency of doing exercise in leisure-time during the thirty days prior to the survey (Q9)

Variable	Level	Base	At least 4 times per week	1 - 3 times per week	1 - 3 times per month	Less than once a month	p-value	
							Kruskal-Wallis test	Rank Correlation
Gender	Male	921	19.3%	38.5%	11.7%	30.5%	0.000	
	Female	1 109	14.9%	30.9%	10.1%	44.1%		
Age	18-24	247	18.3%	52.5%	12.4%	16.8%		0.016
	25-34	433	9.2%	39.6%	15.2%	36.1%		
	35-44	451	14.3%	33.6%	13.3%	38.8%		
	45-54	507	19.7%	28.7%	8.1%	43.6%		
	55-64	376	24.7%	25.2%	4.2%	45.9%		
Educational attainment	Primary or below	192	25.1%	13.3%	4.0%	57.5%		0.000
	Had not completed secondary	298	19.9%	21.9%	7.1%	51.1%		
	Completed secondary (F5)	602	17.7%	29.9%	9.2%	43.1%		
	Matriculation	147	18.6%	44.9%	9.7%	26.8%		
	Tertiary (Non-degree, degree or above)	787	12.9%	45.6%	15.2%	26.3%		
Marital status	Never married	669	14.6%	44.2%	13.6%	27.6%	0.000	
	Married	1 268	18.2%	29.9%	9.5%	42.4%		
	Divorced/ Separated/ Widowed	78	17.1%	22.7%	6.8%	53.4%		
Occupation	Managerial/ Professional worker	450	12.2%	48.3%	14.8%	24.8%	0.005	
	Clerk	327	10.7%	35.3%	15.6%	38.4%		
	Service worker	243	16.9%	35.0%	8.5%	39.6%		
	Blue collar worker	272	21.5%	23.7%	8.9%	45.8%		
	Not working	680	22.0%	29.0%	6.9%	42.0%		

Table 4.3.6: Frequency of doing exercise in leisure-time during the thirty days prior to the survey (Q9)(Continued)

Variable	Level	Base	At least 4 times per week	1 - 3 times per week	1 - 3 times per month	Less than once a month	p-value	
							Kruskal-Wallis test	Rank Correlation
Monthly household income	Below $8,000	95	23.9%	10.7%	9.3%	56.1%		0.000
	$8,000-$13,999	191	18.1%	21.0%	10.2%	50.7%		
	$14,000-$19,999	185	19.0%	31.7%	5.0%	44.3%		
	$20,000-$39,999	519	15.3%	39.5%	9.9%	35.3%		
	$40,000 or above	497	15.1%	43.3%	15.2%	26.5%		
Type of living quarters	Public rental flats	638	17.0%	28.5%	8.7%	45.8%	0.000	
	Subsidized sale flats	288	17.3%	30.8%	12.5%	39.4%		
	Private housing	1 063	17.0%	38.9%	11.2%	32.9%		

4.4 Fruit and vegetable consumption

4.4.1 Frequency of drinking fruit or vegetable juice per week

The frequency of drinking fruit or vegetable juice is associated significantly with respondents' age, educational attainment, monthly household income and type of living quarters.

A relatively higher proportion of respondents aged 55-64 (93.4%), respondents who had not completed secondary education or below (ranged from 92.1% to 95.7%), those with monthly household income of $39,999 or below (ranged from 89.2% to 91.6%) and those living in public rental flats (91.6%) reported that they drank fruit or vegetable juice one day or less in a week on average when compared with their respective counterparts (Table 4.4.1).

Table 4.4.1: Number of days per week in which respondents drank fruit or vegetable juice (Q12)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value	
							Kruskal-Wallis test	Rank Correlation
Age	18-24	246	82.7%	13.7%	2.4%	1.2%		0.000
	25-34	433	89.6%	8.0%	0.9%	1.6%		
	35-44	454	89.5%	7.1%	1.1%	2.2%		
	45-54	513	90.3%	4.9%	2.5%	2.3%		
	55-64	377	93.4%	4.0%	0.4%	2.2%		
Educational attainment	Primary or below	195	95.7%	2.5%	0.0%	1.8%		0.000
	Had not completed secondary	299	92.1%	6.1%	1.3%	0.5%		
	Completed secondary (F5)	610	88.3%	8.1%	1.5%	2.1%		
	Matriculation	146	88.1%	10.2%	1.2%	0.5%		
	Tertiary (Non-degree, degree or above)	787	88.4%	6.9%	1.8%	2.8%		
Monthly household income	Below $8,000	96	89.2%	5.7%	1.3%	3.9%		0.009
	$8,000-$13,999	191	91.6%	7.5%	0.4%	0.5%		
	$14,000-$19,999	187	90.8%	6.0%	1.6%	1.7%		
	$20,000-$39,999	521	91.0%	5.7%	1.9%	1.4%		
	$40,000 or above	498	85.7%	9.5%	1.7%	3.0%		
Type of living quarters	Public rental flats	640	91.6%	6.8%	0.7%	0.8%	0.021	
	Subsidized sale flats	290	89.9%	7.9%	0.3%	1.8%		
	Private housing	1 069	88.2%	6.9%	2.0%	2.8%		

4.4.2 Frequency of consuming fruit per week

The frequency of fruit consumption (excluding fruit juice) is associated significantly with respondents' gender, age, educational attainment, marital status and occupation.

The proportion of people consuming fruit one day or less a week was higher among male respondents (16.2%), those aged 25-34 (13.3%), never married respondents (13.6%), those who had not completed secondary education or below (ranging from 12.1% to 12.9%) and blue collar worker (15.5 %). However, the older the respondents, the more likely that they consumed fruit 6-7 days a week (Table 4.4.2).

Table 4.4.2: Number of days per week in which respondents consumed fruit (not including fruit juice) (Q10a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value	
							Kruskal-Wallis test	Rank Correlation
Gender	Male	924	16.2%	26.4%	16.2%	41.1%	0.000	
	Female	1 112	6.2%	17.6%	15.5%	60.7%		
Age	18-24	247	11.0%	29.5%	21.0%	38.6%		0.000
	25-34	433	13.3%	28.0%	17.4%	41.3%		
	35-44	452	10.6%	23.8%	17.2%	48.3%		
	45-54	512	9.9%	16.0%	15.5%	58.5%		
	55-64	376	8.8%	13.9%	9.8%	67.5%		
Educational attainment	Primary or below	194	12.9%	11.3%	9.1%	66.7%		0.000
	Had not completed secondary	297	12.1%	20.4%	15.8%	51.8%		
	Completed secondary (F5)	608	11.7%	21.5%	13.7%	53.2%		
	Matriculation	147	7.0%	21.2%	20.1%	51.6%		
	Tertiary (Non-degree, degree or above)	787	9.8%	24.8%	18.4%	47.0%		
Marital status	Never married	671	13.6%	28.8%	19.8%	37.9%	0.000	
	Married	1 270	9.6%	17.9%	13.9%	58.6%		
	Divorced/Separated/ Widowed	79	7.5%	18.0%	14.9%	59.5%		
Occupation	Managerial/ Professional worker	449	11.9%	24.0%	18.2%	45.9%	0.000	
	Clerk	327	10.2%	24.7%	17.2%	47.9%		
	Service worker	245	9.1%	29.2%	14.3%	47.5%		
	Blue collar worker	271	15.5%	19.5%	17.5%	47.5%		
	Not working	684	9.2%	16.3%	13.7%	60.8%		

4.4.3 Frequency of consuming vegetables per week

The frequency of vegetable consumption (excluding vegetable juice) is associated significantly with respondents' gender and marital status.

A relatively higher proportion of female respondents (87.8%) and married respondents (86.4%) had consumed vegetables 6-7 days a week when compared with their respective counterparts (Table 4.4.3).

Table 4.4.3: Number of days per week in which respondents consumed vegetables (not including vegetable juice) (Q11a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value Kruskal-Wallis test
Gender	Male	926	2.2%	7.5%	11.1%	79.2%	0.000
	Female	1 114	1.3%	2.9%	8.0%	87.8%	
Marital status	Never married	671	2.1%	5.5%	12.1%	80.3%	0.001
	Married	1 274	1.4%	4.7%	7.6%	86.4%	
	Divorced/ Separated/ Widowed	79	1.8%	7.5%	15.8%	74.9%	

4.4.4 Amount of fruit and vegetables consumed per day

In this survey, the average number of servings of fruit and vegetables consumed per day is associated significantly with respondents' gender, age, marital status and occupation.

4.4.4.1 Number of servings of fruit and vegetables consumed per day (excluding fruit/vegetable juice consumption)[29]

Male respondents (87.7%), never married respondents (87.2%) and clerks (88.7%) were more likely than their respective counterparts to have consumed less than 5 servings of fruit and vegetables per day (excluding fruit/vegetable juice consumption). Also, the younger the respondents, the more likely that they consumed less than 5 servings of fruit and vegetables per day (excluding fruit/vegetable juice consumption) (Table 4.4.4.1).

Table 4.4.4.1: Number of servings of fruit and vegetables consumed per day (excluding fruit and vegetable juice) (Q10a, Q10b, Q11a & Q11b)

Variable	Level	Base	Less than 5 servings	5 servings or more	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	918	87.7%	12.3%	0.000	
	Female	1 104	78.6%	21.4%		
Age	18-24	247	88.7%	11.3%		0.000
	25-34	429	86.0%	14.0%		
	35-44	451	83.3%	16.7%		
	45-54	508	81.3%	18.7%		
	55-64	371	76.8%	23.2%		
Marital status	Never married	670	87.2%	12.8%	0.001	
	Married	1 256	80.6%	19.4%		
	Divorced/Separated/ Widowed	79	79.2%	20.8%		
Occupation	Managerial/ Professional worker	447	83.4%	16.6%	0.020	
	Clerk	326	88.7%	11.3%		
	Service worker	245	82.3%	17.7%		
	Blue collar worker	269	83.1%	16.9%		
	Not working	675	80.0%	20.0%		

[29] Total average number of servings: average no. of fruit eaten per day + (average no. of bowls of vegetables eaten per day x 2)

4.4.4.2 Number of servings of fruit and vegetables consumed per day (including fruit/vegetable juice consumption)[30]

Male respondents (87.1%), never married respondents (86.4%) and clerks (87.4%) were more likely than their respective counterparts to have consumed less than 5 servings of fruit and vegetables per day (including fruit/vegetable juice consumption). Also, the younger the respondents, the more likely that they consumed less than 5 servings of fruit and vegetables per day (including fruit/vegetable juice consumption) (Table 4.4.4.2).

Table 4.4.4.2: Number of servings of fruit and vegetables consumed per day (including fruit and vegetable juice) (Q10a, Q10b, Q11a, Q11b & Q12)

Variable	Level	Base	Less than 5 servings	5 servings or more	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	917	87.1%	12.9%	0.000	
	Female	1 104	77.8%	22.2%		
Age	18-24	246	86.7%	13.3%		0.000
	25-34	429	85.5%	14.5%		
	35-44	451	82.8%	17.2%		
	45-54	508	80.7%	19.3%		
	55-64	371	76.5%	23.5%		
Marital status	Never married	669	86.4%	13.6%	0.002	
	Married	1 256	80.0%	20.0%		
	Divorced/ Separated/ Widowed	79	78.2%	21.8%		
Occupation	Managerial/ Professional worker	447	82.9%	17.1%	0.034	
	Clerk	326	87.4%	12.6%		
	Service worker	245	81.2%	18.8%		
	Blue collar worker	269	83.1%	16.9%		
	Not working	674	79.3%	20.7%		

[30] Total average number of servings: average no. of fruit eaten per day + (average no. of bowls of vegetables eaten per day x 2) + (average no. of days per week having drunk one cups or more of fruit or vegetable juice divided by 7)

4.5 Smoking habits

4.5.1 Smoking habits

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

A relatively higher proportion of male respondents (19.3%), those aged 35-44 (15.4%), those who had not completed secondary education (22.6%), divorced / separated / widowed respondents (16.9%), blue collar workers (24.6%) and those living in public rental flats (14.5%) were current smokers when compared with their respective counterparts (Table 4.5.1).

Table 4.5.1: Smoking habits (Q13a)

Variable	Level	Base	Yes, but not now	Yes, and still smoking	Never	p-value	
						Chi-square test	Kruskal-Wallis test
Gender	Male	926	15.4%	19.3%	65.3%	0.000	
	Female	1 115	4.0%	4.2%	91.8%		
Age	18-24	247	2.4%	7.7%	89.8%		0.004
	25-34	433	9.2%	9.8%	80.9%		
	35-44	454	8.5%	15.4%	76.1%		
	45-54	513	10.0%	10.8%	79.2%		
	55-64	377	13.6%	10.2%	76.2%		
Educational attainment	Primary or below	195	10.6%	10.1%	79.2%		0.002
	Had not completed secondary	299	9.8%	22.6%	67.6%		
	Completed secondary (F5)	610	10.9%	13.0%	76.1%		
	Matriculation	147	4.1%	7.4%	88.5%		
	Tertiary (Non-degree, degree or above)	787	8.2%	6.2%	85.6%		
Marital status	Never married	671	7.6%	9.2%	83.3%	0.042	
	Married	1 274	9.8%	11.7%	78.5%		
	Divorced/Separated/ Widowed	79	11.3%	16.9%	71.8%		
Occupation	Managerial/ Professional worker	450	8.2%	10.5%	81.3%	0.000	
	Clerk	328	7.9%	5.0%	87.1%		
	Service worker	245	10.4%	16.0%	73.6%		
	Blue collar worker	273	14.1%	24.6%	61.3%		
	Not working	685	7.9%	6.5%	85.6%		
Type of living quarters	Public rental flats	641	7.7%	14.5%	77.7%	0.000	
	Subsidized sale flats	290	11.7%	13.7%	74.7%		
	Private housing	1 069	9.4%	8.2%	82.5%		

4.5.2 Number of cigarettes consumed

The number of cigarettes consumed is associated significantly with current smokers' age, educational attainment, monthly household income and type of living quarters.

A relatively higher proportion of respondents aged 45-64 (ranging from 9.2% to 9.8%), those with primary education or below (16.5%), those with monthly household income below $14,000 (ranging from 11.7% to 15.7%) and those living in public rental flats (7.0%) reported that they smoked more than 20 cigarettes per day when compared with their respective counterparts (Table 4.5.2).

Table 4.5.2: Average number of cigarettes respondents smoked per day (Q13c)

Variable	Level	Base	Less than 1 per day	1-10 per day	11-20 per day	More than 20 per day	p-value	
							Kruskal-Wallis test	Rank Correlation
Age	18-24	19	5.3%	84.1%	10.6%	0.0%		0.000
	25-34	43	5.2%	79.0%	15.8%	0.0%		
	35-44	70	3.3%	59.0%	33.9%	3.8%		
	45-54	56	5.0%	43.0%	42.2%	9.8%		
	55-64	39	0.0%	47.2%	43.5%	9.2%		
Educational attainment	Primary or below	20	0.0%	25.5%	58.0%	16.5%		0.000
	Had not completed secondary	67	2.3%	47.4%	46.2%	4.1%		
	Completed secondary (F5)	79	3.7%	66.8%	25.1%	4.4%		
	Matriculation	11	0.0%	71.6%	28.4%	0.0%		
	Tertiary (Non-degree, degree or above)	49	7.8%	72.9%	14.9%	4.4%		
Monthly household income	Below $8,000	14	0.0%	45.1%	39.2%	15.7%		0.010
	$8,000-$13,999	25	0.0%	51.8%	36.5%	11.7%		
	$14,000-$19,999	25	0.0%	57.6%	37.8%	4.5%		
	$20,000-$39,999	56	6.6%	60.1%	31.0%	2.3%		
	$40,000 or above	51	2.0%	70.2%	24.0%	3.9%		
Type of living quarters	Public rental flats	93	2.6%	49.6%	40.9%	7.0%	0.013	
	Subsidized sale flats	40	7.5%	75.6%	14.9%	2.1%		
	Private housing	87	3.3%	63.0%	28.7%	5.0%		

4.6 Pattern of alcohol consumption

4.6.1 Consumption of alcohol

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

Male respondents (44.5%), those aged 18-24 (33.6%), those with tertiary education or above (35.5%), never married respondents (34.4%), service workers (42.1%), those with monthly household income of $40,000 or above (39.2%) and those living private housing (33.7%) were more likely than their respective counterparts to have consumed at least one alcoholic drink during the month prior to the survey (Table 4.6.1).

Table 4.6.1: Ever had at least one alcoholic drink (Q14)

Variable	Level	Base	Yes, during the last month	Yes, during the previous 2 to 12 months	Yes, more than 12 months ago	Never	p-value	
							Chi-square test	Kruskal-Wallis test
Gender	Male	925	44.5%	21.2%	8.7%	25.6%	0.000	
	Female	1 114	19.3%	16.6%	10.5%	53.6%		
Age	18-24	247	33.6%	28.7%	6.4%	31.3%		0.000
	25-34	433	31.8%	22.7%	10.8%	34.7%		
	35-44	453	32.6%	20.3%	11.3%	35.9%		
	45-54	513	28.8%	13.2%	9.7%	48.3%		
	55-64	377	28.7%	13.8%	8.6%	48.9%		
Educational attainment	Primary or below	194	21.1%	14.4%	6.0%	58.5%		0.000
	Had not completed secondary	297	26.4%	14.9%	12.5%	46.2%		
	Completed secondary (F5)	610	30.8%	14.0%	10.3%	45.0%		
	Matriculation	147	27.0%	16.5%	9.2%	47.3%		
	Tertiary (Non-degree, degree or above)	787	35.5%	25.4%	9.2%	29.9%		

Table 4.6.1: Ever had at least one alcoholic drink (Q14)(Continued)

Variable	Level	Base	Yes, during the last month	Yes, during the previous 2 to 12 months	Yes, more than 12 months ago	Never	p-value	
							Chi-square test	Kruskal-Wallis test
Marital status	Never married	671	34.4%	24.4%	8.5%	32.7%	0.000	
	Married	1 272	29.1%	16.2%	9.6%	45.1%		
	Divorced/ Separated/ Widowed	79	26.6%	9.3%	18.8%	45.3%		
Occupation	Managerial/ Professional worker	450	38.6%	23.1%	10.6%	27.8%	0.000	
	Clerk	328	28.5%	19.6%	8.9%	42.9%		
	Service worker	245	42.1%	13.9%	8.6%	35.5%		
	Blue collar worker	272	36.1%	14.4%	6.9%	42.6%		
	Not working	685	20.6%	17.2%	11.2%	50.9%		
Monthly household income	Below $8,000	96	19.1%	16.1%	11.1%	53.7%		0.000
	$8,000-$13,999	190	26.4%	16.4%	7.9%	49.2%		
	$14,000-$19,999	187	25.4%	14.7%	13.2%	46.8%		
	$20,000-$39,999	522	32.8%	21.0%	8.9%	37.4%		
	$40,000 or above	498	39.2%	19.2%	9.9%	31.7%		
Type of living quarters	Public rental flats	639	25.6%	17.9%	10.1%	46.4%	0.009	
	Subsidized sale flats	290	33.1%	20.7%	8.8%	37.5%		
	Private housing	1 069	33.7%	17.9%	9.6%	38.8%		

4.6.2 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 is associated significantly with the drinkers' gender, age, educational attainment and marital status.

A relatively higher proportion of male respondents (9.7%), those aged 55-64 (12.1%), those who had not completed secondary education or below (ranging from 18.7% to 21.6%) and divorced/ separated/ widowed respondents (18.0%) reported that they drank 6 days or more per week when compared with their respective counterparts (Table 4.6.2).

Table 4.6.2: Frequency of consuming alcohol per week among those respondents who had at least one alcoholic drink during the last thirty days prior to the survey (Q14a)

Variable	Level	Base	6 or more days per week	4-5 days per week	2-3 days per week	1 day or less per week	p-value	
							Kruskal-Wallis test	Rank Correlation
Gender	Male	407	9.7%	4.8%	20.0%	65.5%	0.003	
	Female	212	4.9%	2.6%	13.7%	78.8%		
Age	18-24	82	4.9%	3.7%	11.1%	80.4%		0.002
	25-34	135	4.5%	0.0%	24.5%	71.1%		
	35-44	148	7.5%	5.2%	15.8%	71.6%		
	45-54	147	11.0%	5.6%	14.3%	69.2%		
	55-64	104	12.1%	5.8%	22.3%	59.8%		
Educational attainment	Primary or below	39	18.7%	6.7%	15.7%	58.9%		0.015
	Had not completed secondary	78	21.6%	5.9%	17.7%	54.8%		
	Completed secondary (F5)	188	7.0%	1.6%	19.7%	71.8%		
	Matriculation	40	2.6%	0.0%	10.5%	86.9%		
	Tertiary (Non-degree, degree or above)	274	4.2%	5.4%	18.1%	72.2%		
Marital status	Never married	229	5.5%	3.6%	15.7%	75.2%	0.037	
	Married	365	9.1%	3.9%	19.9%	67.0%		
	Divorced/ Separated/ Widowed	21	18.0%	10.4%	5.8%	65.9%		

4.6.3 Amount of alcoholic drinks consumed

The average number of standard drinks consumed on the days the respondents drank alcohol during the thirty days prior to the survey is associated significantly with their gender, age, educational attainment, marital status, occupation and type of living quarters.

A relatively higher proportion of male respondents (13.4%), those who were aged 18-24 (20.6%), those with primary education or below (16.2%), never married respondents (16.3%), divorced/ separated/ widowed respondents (18.8%), service workers (18.7%), those living in public rental flats (15.5%), and those living in subsidized sale flats (16.9%) reported that they drank on average 5-24 units on the days they drank alcohol during the thirty days prior to the survey when compared with their respective counterparts (Table 4.6.3).

Table 4.6.3: Average number of standard drinks consumed on the days respondents drank alcohol (Q14b)

Variable	Level	Base	Less than 3 standard drinks	3-<5 standard drinks	5 -24 standard drinks-	p-value	
						Kruskal-Wallis test	Rank Correlation
Gender	Male	410	64.1%	22.6%	13.4%	0.000	
	Female	214	80.8%	12.2%	7.0%		
Age	18-24	83	67.3%	12.1%	20.6%		0.000
	25-34	138	59.0%	29.0%	12.1%		
	35-44	148	69.1%	17.5%	13.4%		
	45-54	146	72.3%	18.7%	9.0%		
	55-64	108	82.2%	14.6%	3.2%		
Educational attainment	Primary or below	40	63.3%	20.5%	16.2%		0.047
	Had not completed secondary	78	63.6%	24.6%	11.8%		
	Completed secondary (F5)	188	66.0%	19.1%	14.9%		
	Matriculation	40	67.3%	24.1%	8.6%		
	Tertiary (Non-degree, degree or above)	278	75.3%	16.5%	8.2%		
Marital status	Never married	230	64.1%	19.6%	16.3%	0.010	
	Married	367	73.8%	18.7%	7.5%		
	Divorced/ Separated/ Widowed	21	64.7%	16.5%	18.8%		
Occupation	Managerial/ Professional worker	174	70.0%	21.2%	8.8%	0.005	
	Clerk	93	78.1%	17.2%	4.7%		
	Service worker	102	58.8%	22.5%	18.7%		
	Blue collar worker	98	61.6%	24.2%	14.1%		
	Not working	141	76.7%	12.7%	10.6%		

Table 4.6.3: Average number of standard drinks consumed on the days respondents drank alcohol (Q14b)(Continued)

Variable	Level	Base	Less than 3 standard drinks	3-<5 standard drinks	5 -24 standard drinks or above	p-value	
						Kruskal-Wallis test	Rank Correlation
Type of living quarters	Public rental flats	162	62.7%	21.8%	15.5%	0.016	
	Subsidized sale flats	95	61.9%	21.3%	16.9%		
	Private housing	361	75.6%	16.9%	7.5%		

4.6.4 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 their gender, age, occupation and type of living quarters.

A relatively higher proportion of male respondents (26.0%), service workers (27.9%), blue collar workers (28.3%) and those living in subsidized sale flats (27.3%) reported that they had engaged in binge drinking during the thirty days prior to the survey when compared with their respective counterparts. Also, the younger the respondents were, the more likely that they had engaged in binge drinking during the thirty days prior to the survey (Table 4.6.4a).

Table 4.6.4a: Consumption of at least 5 glasses/ cans of alcohol on one single occasion by drinkers during the thirty days prior to the survey (Q14c)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	412	26.0%	74.0%	0.000	
	Female	215	9.7%	90.3%		
Age	18-24	83	29.1%	70.9%		0.000
	25-34	138	22.1%	77.9%		
	35-44	148	21.6%	78.4%		
	45-54	147	20.5%	79.5%		
	55-64	108	10.4%	89.6%		
Occupation	Managerial/ Professional worker	174	18.3%	81.7%	0.020	
	Clerk	94	14.2%	85.8%		
	Service worker	103	27.9%	72.1%		
	Blue collar worker	98	28.3%	71.7%		
	Not working	141	16.1%	83.9%		
Type of living quarters	Public rental flats	164	23.7%	76.3%	0.021	
	Subsidized sale flats	96	27.3%	72.7%		
	Private housing	361	16.3%	83.7%		

Among the respondents who had at least one alcoholic drink during the twelve months prior to the survey, binge drinking during the two to twelve months prior to the survey is associated significantly with their gender, age, marital status, occupation and monthly household income.

A relatively higher proportion of male respondents (31.6%), those aged 25-34 (34.0%), never married respondents (31.4%), service workers (38.3%) and those with monthly household income below $8,000 (31.7%) reported that they had engaged in binge drinking during the two to twelve months prior to the survey when compared with their respective counterparts (Table 4.6.4b).

Table 4.6.4b: Consumption of at least 5 glasses/ cans of alcohol on one single occasion by drinkers during the two to twelve prior to the survey (Q14g)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	606	31.6%	68.4%	0.000	
	Female	401	16.1%	83.9%		
Age	18-24	153	30.2%	69.8%		0.000
	25-34	236	34.0%	66.0%		
	35-44	238	28.3%	71.7%		
	45-54	215	19.5%	80.5%		
	55-64	160	12.8%	87.2%		
Marital status	Never married	393	31.4%	68.6%	0.003	
	Married	575	21.8%	78.2%		
	Divorced/ Separated/ Widowed	28	22.7%	77.3%		
Occupation	Managerial/ Professional worker	276	28.3%	71.7%	0.001	
	Clerk	158	20.6%	79.4%		
	Service worker	137	38.3%	61.7%		
	Blue collar worker	137	27.9%	72.1%		
	Not working	258	19.7%	80.3%		
Monthly household income	Below $8,000	34	31.7%	68.3%		0.035
	$8,000-$13,999	81	19.9%	80.1%		
	$14,000-$19,999	75	22.3%	77.7%		
	$20,000-$39,999	280	24.2%	75.8%		
	$40,000 or above	291	29.1%	70.9%		

4.6.5 Frequency of binge drinking

The frequency of binge drinking among those who had the experience during the two to twelve months prior to the survey is associated significantly with their educational attainment and monthly household income.

Respondents who had not completed secondary education (50.6%) and those with monthly household income below $8,000 (24.6%) were more likely to have engaged in binge drinking once or more a week during the two to twelve months prior to the survey when compared with their respective counterparts (Table 4.6.5).

Table 4.6.5: Frequency of binge drinking among those who had the experience during the two to twelve months prior to the survey (Q14h)

Variable	Level	Base	Once or more a week	1-3 times a month	7-11 times a year	4-6 times a year	1-3 times a year	p-value Rank Correlation
Educational attainment	Primary or below	12	21.1%	18.4%	10.5%	27.6%	22.4%	0.000
	Had not completed secondary	29	50.6%	18.4%	15.9%	8.3%	6.8%	
	Completed secondary (F5)	80	16.9%	25.0%	12.0%	22.4%	23.7%	
	Matriculation	15	24.2%	47.0%	0.0%	0.0%	28.8%	
	Tertiary (Non-degree, degree or above)	117	13.4%	22.1%	3.0%	5.4%	56.1%	
Monthly household income	Below $8,000	11	24.6%	32.4%	0.0%	12.2%	30.8%	0.028
	$8,000-$13,999	16	8.1%	56.2%	0.0%	0.0%	35.7%	
	$14,000-$19,999	17	14.7%	35.8%	30.3%	12.5%	6.7%	
	$20,000-$39,999	67	21.8%	18.7%	7.8%	16.6%	35.1%	
	$40,000 or above	83	16.5%	22.1%	2.5%	14.5%	44.4%	

4.6.6 Having drunk so much that they exhibited signs of drunkenness

Having drunk so much that the respondents exhibited signs of drunkenness during the thirty days prior to the survey is associated significantly with the drinkers' gender, age and marital status.

A relatively higher proportion of male respondents (14.9%), those aged 18-24 (23.0%) and never married respondents (17.0%) reported that they had drunk so much that they exhibited signs of drunkenness during the thirty days prior to the survey when compared with their respective counterparts (Table 4.6.6).

Table 4.6.6: Having drunk so much that respondents exhibited signs of drunkenness during the thirty days prior to the survey (Q14e)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	411	14.9%	85.1%	0.008	
	Female	215	7.6%	92.4%		
Age	18-24	83	23.0%	77.0%		0.000
	25-34	138	12.8%	87.2%		
	35-44	147	15.1%	84.9%		
	45-54	147	10.4%	89.6%		
	55-64	108	3.2%	96.8%		
Marital status	Never married	230	17.0%	83.0%	0.031	
	Married	369	9.7%	90.3%		
	Divorced/ Separated/ Widowed	21	11.7%	88.3%		

4.6.7 Problems or conditions caused by respondents' own drinking

Among the respondents who had drunk during the twelve months prior to the survey, whether having been physically hurt because of the respondents' own drinking is associated significantly with their age.

Those aged 18-24 and 25-34 (both 2.6%) were more likely to report that they had been physically hurt because of their own drinking during the twelve months prior to the survey (Table 4.6.7a).

Table 4.6.7a: Being physically hurt because of respondents' own drinking (Q15a_i)

Variable	Level	Base	Yes	No	p-value Kruskal-Wallis test
Age	18-24	154	2.6%	97.4%	0.031
	25-34	236	2.6%	97.4%	
	35-44	240	2.1%	97.9%	
	45-54	215	0.6%	99.4%	
	55-64	160	0.4%	99.6%	

Among the respondents who had drunk during the twelve months prior to the survey, whether having had road traffic accidents because of the respondents' own drinking is associated significantly with their educational attainment.

Those who had not completed secondary (1.1%) were more likely to report that they had had road traffic accidents because of their own drinking during the twelve months prior to the survey (Table 4.6.7b).

Table 4.6.7b: Having road traffic accidents because of respondents' own drinking (Q15a_ii)

Variable	Level	Base	Yes	No	p-value Kruskal-Wallis test
Educational attainment	Primary or below	69	0.7%	99.3%	0.039
	Had not completed secondary	123	1.1%	98.9%	
	Completed secondary (F5)	273	0.0%	100.0%	
	Matriculation	64	0.0%	100.0%	
	Tertiary (Non-degree, degree or above)	479	0.0%	100.0%	

Among the respondents who had drunk during the twelve months prior to the survey, whether having had job or work problems because of the respondents' own drinking is associated significantly with their gender.

Male respondents (2.2%) were more likely to report that they had encountered job or work problems because of their own drinking during the twelve months prior to the survey (Table 4.6.7c).

Table 4.6.7c: Encountering job or work problem because of respondents' own drinking (Q15a_iv)

Variable	Level	Base	Yes	No	p-value Chi-square test
Gender	Male	608	2.2%	97.8%	0.003
	Female	401	0.0%	100.0%	

4.6.8 Problems or conditions caused by someone else's drinking

Whether respondents had encountered family or marriage problems because of someone else's drinking is associated significantly with their gender and age.

Female respondents (1.1%) and those aged 18-24 (1.6%) were more likely to report that they had encountered family or marriage problems because of someone else's drinking during the twelve months prior to the survey when compared with their respective counterparts (Table 4.6.8a).

Table 4.6.8a: Encountering family or marriage problems because of someone else's drinking (Q15b_iii)

Variable	Level	Base	Yes	No	p-value Chi-square test	p-value Kruskal-Wallis test
Gender	Male	925	0.3%	99.7%	0.028	
	Female	1 115	1.1%	98.9%		
Age	18-24	247	1.6%	98.4%		0.049
	25-34	433	1.1%	98.9%		
	35-44	454	0.2%	99.8%		
	45-54	512	0.8%	99.2%		
	55-64	377	0.1%	99.9%		

During the twelve months prior to the survey, whether respondents had encountered job or work problems because of someone else's drinking is associated significantly with their monthly household income.

The respondents with monthly household income below $14,000 (ranging from 1.5% to 1.6%) were more likely to report that they had encountered job or work problems because of someone else's drinking during the twelve months prior to the survey (Table 4.6.8b).

Table 4.6.8b: Encountering job or work problems because of someone else's drinking (Q15b_iv)

Variable	Level	Base	Yes	No	p-value Kruskal-Wallis test
Monthly household income	Below $8,000	96	1.5%	98.5%	0.045
	$8,000-$13,999	191	1.6%	98.4%	
	$14,000-$19,999	187	0.6%	99.4%	
	$20,000-$39,999	522	0.8%	99.2%	
	$40,000 or above	498	0.3%	99.7%	

4.7 Salt consumption behaviours

4.7.1 Adding salt to cooked dishes at the table

The respondents' behaviour of adding salt to cooked dishes at the table is significantly associated with their gender, age and educational attainment.

A higher proportion of female respondents (71.1%) reported that they had never added salt to cooked dishes at the table than male respondents. On the other hand, respondents aged 25-34 (5.5%) and those who had completed secondary education (4.5%) were more likely to have always or often added salt to cooked dishes at the table when compared with their respective counterparts (Table 4.7.1).

Table 4.7.1: Frequency of adding salt to cooked dishes at the table (Q16)

Variable	Level	Base	Never	Seldom	Sometimes	Often	Always	p-value	
								Kruskal-Wallis test	Rank Correlation
Gender	Male	920	67.6%	21.3%	7.5%	2.9%	0.7%	0.017	
	Female	1 115	71.1%	19.1%	6.0%	3.0%	0.8%		
Age	18-24	246	61.1%	26.7%	8.1%	3.7%	0.4%		0.000
	25-34	433	68.9%	21.5%	4.1%	5.0%	0.5%		
	35-44	452	66.8%	21.0%	8.9%	2.3%	1.0%		
	45-54	512	70.8%	19.8%	6.2%	2.2%	1.0%		
	55-64	376	76.6%	14.1%	6.8%	1.9%	0.6%		
Educational attainment	Primary or below	194	76.4%	15.0%	5.9%	1.2%	1.5%		0.013
	Had not completed secondary	297	68.5%	19.8%	7.8%	2.1%	1.8%		
	Completed secondary (F5)	610	70.6%	18.9%	6.0%	4.3%	0.2%		
	Matriculation	146	68.2%	23.1%	6.5%	2.2%	0.0%		
	Tertiary (Non-degree, degree or above)	784	67.5%	22.0%	7.0%	2.8%	0.8%		

4.7.2 Adding sauces to cooked dishes at the table

The respondents' behaviour of adding sauces to cooked dishes at the table, including soy sauce, oyster sauce, ketchup, chili sauce, bean chili paste or other seasonings containing salt is significantly associated with their gender, age, educational attainment and marital status.

Male respondents (13.5%), those who had completed secondary education (14.4%) and never married respondents (14.6%) were more likely to have always or often added sauces to cooked dishes when compared with their respective counterparts. Also, the younger the respondents, the more likely that they have always or often added sauces to cooked dishes (Table 4.7.2).

Table 4.7.2: Frequency of adding sauces to cooked dishes at the table (Q17)

Variable	Level	Base	Never	Seldom	Sometimes	Often	Always	p-value	
								Kruskal-Wallis test	Rank Correlation
Gender	Male	924	24.8%	31.5%	30.2%	11.4%	2.1%	0.000	
	Female	1 113	28.4%	34.9%	25.5%	9.9%	1.2%		
Age	18-24	246	15.4%	37.2%	32.0%	13.0%	2.5%		0.000
	25-34	433	21.7%	31.9%	31.8%	12.7%	1.9%		
	35-44	453	24.1%	34.4%	29.1%	11.2%	1.2%		
	45-54	513	31.0%	31.8%	25.0%	10.7%	1.5%		
	55-64	376	36.7%	33.4%	22.6%	5.6%	1.6%		
Educational attainment	Primary or below	195	36.5%	29.2%	24.1%	8.0%	2.2%		0.002
	Had not completed secondary	298	28.0%	34.4%	27.1%	9.2%	1.3%		
	Completed secondary (F5)	609	28.3%	28.5%	28.7%	12.6%	1.8%		
	Matriculation	147	22.4%	35.8%	29.2%	9.9%	2.6%		
	Tertiary (Non-degree, degree or above)	784	23.4%	37.2%	27.7%	10.4%	1.3%		
Marital status	Never married	670	20.6%	34.9%	29.9%	12.5%	2.1%	0.000	
	Married	1 272	28.9%	33.3%	26.7%	9.6%	1.5%		
	Divorced/ Separated/ Widowed	78	40.4%	23.1%	26.3%	10.2%	0.0%		

4.7.3 Checking food labels for salt content when purchasing pre-packaged food

The respondents' behaviour of checking food labels for salt content when purchasing pre-packaged food is significantly associated with their gender, educational attainment, occupation, monthly household income and type of living quarters.

Male respondents (53.8%), those who had not completed secondary education or those with primary education or below (ranging from 57.0% to 57.9%), blue collar workers (60.1%), those with monthly household income of $8,000 - $13,999 (54.4%) and those living in public rental flats (51.0%) were more likely to have never checked food labels for salt content when purchasing pre-packaged food than their respective counterparts (Table 4.7.3)

Table 4.7.3: Frequency of checking food labels for salt content when purchasing pre-packaged food (Q18)

Variable	Level	Base	Never	Seldom	Sometimes	Often	Always	p-value	
								Kruskal-Wallis test	Rank Correlation
Gender	Male	918	53.8%	20.4%	11.8%	7.8%	6.1%	0.000	
	Female	1 107	40.9%	19.7%	17.4%	12.7%	9.4%		
Educational attainment	Primary or below	185	57.9%	19.9%	10.3%	5.2%	6.7%		0.000
	Had not completed secondary	296	57.0%	17.6%	10.1%	8.3%	6.9%		
	Completed secondary (F5)	607	49.0%	18.5%	15.0%	10.0%	7.5%		
	Matriculation	147	33.8%	17.2%	25.9%	11.8%	11.2%		
	Tertiary (Non-degree, degree or above)	786	41.0%	22.7%	15.5%	12.5%	8.3%		
Occupation	Managerial/ Professional worker	449	43.6%	21.9%	15.0%	11.8%	7.7%	0.000	
	Clerk	328	44.3%	18.0%	17.6%	11.4%	8.7%		
	Service worker	243	49.5%	19.1%	12.8%	8.8%	9.9%		
	Blue collar worker	268	60.1%	20.6%	8.6%	6.7%	3.9%		
	Not working	677	43.4%	20.1%	16.3%	11.5%	8.6%		

Table 4.7.3: Frequency of checking food labels for salt content when purchasing pre-packaged food (Q18) (Continued)

Variable	Level	Base	Never	Seldom	Sometimes	Often	Always	p-value	
								Kruskal-Wallis test	Rank Correlation
Monthly household income	Below $8,000	93	49.5%	18.3%	13.8%	10.9%	7.5%		0.030
	$8,000-$13,999	189	54.4%	17.1%	9.3%	12.1%	7.1%		
	$14,000-$19,999	186	48.5%	21.2%	16.7%	7.2%	6.5%		
	$20,000-$39,999	519	46.3%	17.9%	15.4%	11.9%	8.6%		
	$40,000 or above	498	43.4%	21.6%	16.4%	11.2%	7.5%		
Type of living quarters	Public rental flats	638	51.0%	19.4%	12.3%	9.6%	7.7%	0.032	
	Subsidized sale flats	284	48.0%	17.5%	18.1%	9.6%	6.9%		
	Private housing	1 061	44.2%	21.1%	15.2%	11.4%	8.2%		

4.8 Consumption of iodine-rich foods

4.8.1 Frequency of eating seafood

The respondents' habit of eating seafood such as marine water fish and shellfish is significantly associated with their age, marital status, monthly household income and type of living quarters.

Respondents aged 55-64 (44.4%), married respondents (44.1%), those with monthly household income of $40,000 or above (43.7%), those living in private housing (40.7%) were more likely to have often eaten seafood, such as marine water fish and shellfish in the past twelve months prior to the survey when compared with their respective counterparts (Table 4.8.1).

Table 4.8.1: Frequency of eating seafood in the past twelve months prior to the survey (Q21a)

Variable	Level	Base	Never	Seldom	Sometimes	Often	p-value	
							Kruskal-Wallis test	Rank Correlation
Age	18-24	245	4.1%	30.4%	38.2%	27.3%		0.013
	25-34	432	5.4%	18.4%	36.1%	40.1%		
	35-44	454	2.7%	17.7%	39.6%	39.9%		
	45-54	512	2.4%	23.4%	36.0%	38.3%		
	55-64	377	2.9%	23.2%	29.5%	44.4%		
Marital status	Never married	667	4.1%	25.2%	41.1%	29.6%	0.000	
	Married	1 273	3.1%	19.8%	33.1%	44.1%		
	Divorced/ Separated/ Widowed	79	2.1%	26.8%	38.8%	32.3%		
Monthly household income	Below $8,000	96	5.5%	27.9%	35.4%	31.2%		0.001
	$8,000-$13,999	191	2.7%	27.3%	32.2%	37.9%		
	$14,000-$19,999	186	5.6%	20.5%	33.5%	40.5%		
	$20,000-$39,999	521	3.1%	23.6%	35.8%	37.5%		
	$40,000 or above	498	1.9%	15.8%	38.6%	43.7%		
Type of living quarters	Public rental flats	641	4.3%	26.4%	32.6%	36.7%	0.010	
	Subsidized sale flats	290	2.5%	24.0%	35.4%	38.1%		
	Private housing	1 065	3.0%	18.5%	37.9%	40.7%		

4.8.2 Frequency of eating dried kelp, seaweed or laver

The respondents' habit of eating dried kelp, seaweed or laver including seaweed snack and nori sheet for sushi is significantly associated with their gender, age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

Female respondents (12.8%), respondents aged 25-34 (15.8%), those with tertiary education (12.3%), never married respondents (11.5%), service workers (16.7%), those with monthly household income of $40,000 or above (14.2%), those living in private housing (11.4%) were more likely to have often eaten dried kelp, seaweed or laver in the past twelve months prior to the survey when compared with their respective counterparts (Table 4.8.2).

Table 4.8.2: Frequency of eating dried kelp, seaweed or laver in the past twelve months prior to the survey (Q21b)

Variable	Level	Base	Never	Seldom	Sometimes	Often	p-value	
							Kruskal-Wallis test	Rank Correlation
Gender	Male	925	12.3%	45.4%	33.7%	8.7%	0.002	
	Female	1 112	10.3%	39.6%	37.4%	12.8%		
Age	18-24	247	7.7%	38.4%	43.5%	10.4%		0.000
	25-34	432	11.8%	38.1%	34.2%	15.8%		
	35-44	452	6.6%	39.9%	40.5%	13.0%		
	45-54	513	11.7%	46.1%	34.2%	8.1%		
	55-64	377	18.0%	46.7%	28.6%	6.6%		
Educational attainment	Primary or below	195	19.1%	47.9%	24.9%	8.0%		0.000
	Had not completed secondary	299	17.4%	47.8%	24.6%	10.1%		
	Completed secondary (F5)	610	11.5%	41.2%	36.0%	11.3%		
	Matriculation	147	10.1%	40.5%	42.5%	6.8%		
	Tertiary (Non-degree, degree or above)	783	6.9%	39.9%	40.9%	12.3%		
Marital status	Never married	669	9.0%	40.8%	38.6%	11.5%	0.040	
	Married	1 272	11.9%	43.0%	34.4%	10.7%		
	Divorced/Separated/ Widowed	79	17.3%	40.0%	34.0%	8.6%		
Occupation	Managerial/ Professional worker	448	8.7%	39.9%	41.1%	10.4%	0.000	
	Clerk	328	7.2%	42.0%	40.7%	10.1%		
	Service worker	245	8.0%	44.1%	31.3%	16.7%		
	Blue collar worker	273	15.3%	46.8%	29.4%	8.5%		
	Not working	684	13.7%	40.9%	35.0%	10.4%		

Table 4.8.2: Frequency of eating dried kelp, seaweed or laver in the past twelve months prior to the survey (Q21b)(Continued)

Variable	Level	Base	Never	Seldom	Sometimes	Often	p-value	
							Kruskal-Wallis test	Rank Correlation
Monthly household income	Below $8,000	96	20.8%	35.4%	33.8%	10.0%		0.000
	$8,000-$13,999	191	14.2%	47.0%	30.6%	8.2%		
	$14,000-$19,999	187	11.8%	42.4%	34.5%	11.4%		
	$20,000-$39,999	522	9.8%	44.4%	35.0%	10.8%		
	$40,000 or above	496	7.3%	37.9%	40.7%	14.2%		
Type of living quarters	Public rental flats	641	13.4%	44.6%	31.0%	10.9%	0.010	
	Subsidized sale flats	290	11.8%	41.1%	37.6%	9.5%		
	Private housing	1 065	9.4%	41.2%	38.0%	11.4%		

4.8.3 Frequency of eating dairy products

The respondents' habit of eating dairy products, such as milk and cheese is significantly associated with their age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

Respondents aged 18-24 (43.5%), those with tertiary education (42.3%), never married respondents (38.3%), managerial/professional workers (38.3%), those with monthly household income of $40,000 or above (42.3%), those living in private housing (37.0%) were more likely to have often eaten dairy products, such as milk and cheese in the past twelve months prior to the survey when compared with their respective counterparts (Table 4.8.3).

Table 4.8.3: Frequency of eating eat dairy products in the past twelve months prior to the survey (Q21c)

Variable	Level	Base	Never	Seldom	Sometimes	Often	p-value	
							Kruskal-Wallis test	Rank Correlation
Age	18-24	247	2.0%	17.3%	37.1%	43.5%		0.000
	25-34	433	5.8%	18.8%	35.8%	39.6%		
	35-44	454	7.5%	29.6%	31.0%	31.9%		
	45-54	513	12.2%	27.4%	30.9%	29.5%		
	55-64	376	13.0%	35.0%	24.8%	27.3%		

Table 4.8.3: Frequency of eating dairy products in the past twelve months prior to the survey (Q21c)(Continued)

Variable	Level	Base	Never	Seldom	Sometimes	Often	p-value	
							Kruskal-Wallis test	Rank Correlation
Educational attainment	Primary or below	194	19.7%	34.8%	22.9%	22.5%		0.000
	Had not completed secondary	299	13.7%	35.0%	27.6%	23.7%		
	Completed secondary (F5)	610	9.0%	29.7%	31.9%	29.4%		
	Matriculation	147	2.6%	22.6%	36.9%	38.0%		
	Tertiary (Non-degree, degree or above)	786	4.9%	18.9%	34.0%	42.3%		
Marital status	Never married	671	5.1%	21.0%	35.6%	38.3%	0.000	
	Married	1 273	10.1%	29.3%	29.4%	31.2%		
	Divorced/ Separated/ Widowed	79	13.6%	23.3%	30.8%	32.3%		
Occupation	Managerial/ Professional worker	450	5.6%	20.5%	35.6%	38.3%	0.000	
	Clerk	328	7.7%	24.7%	37.8%	29.8%		
	Service worker	245	6.9%	23.5%	31.8%	37.8%		
	Blue collar worker	273	9.9%	38.9%	26.2%	25.0%		
	Not working	684	10.9%	27.6%	28.1%	33.3%		
Monthly household income	Below $8,000	96	16.4%	29.4%	32.2%	22.0%		0.000
	$8,000-$13,999	190	8.9%	32.1%	28.2%	30.7%		
	$14,000-$19,999	187	9.0%	35.1%	33.0%	22.8%		
	$20,000-$39,999	522	7.8%	24.6%	33.2%	34.4%		
	$40,000 or above	498	5.2%	21.2%	31.3%	42.3%		
Type of living quarters	Public rental flats	641	10.0%	28.3%	31.3%	30.4%	0.000	
	Subsidized sale flats	289	11.2%	27.4%	33.5%	28.0%		
	Private housing	1 068	7.2%	24.4%	31.4%	37.0%		

4.8.4 Frequency of eating all three categories of iodine-rich foods

The respondents' habit of eating all three categories of iodine-rich foods, i.e. seafood; dried kelp, seaweed or laver; and dairy products, is significantly associated with their age, educational attainment, occupation, monthly household income and type of living quarters.

Respondents who had not completed secondary education and those with primary education or below (ranging from 15.4% to 16.6%), blue collar workers (14.3%), those with monthly household income below $8,000 (14.0%) and those living in public rental flats (11.6%) were more likely to have never or seldom eaten the three categories of iodine-rich foods in the past twelve months prior to the survey when compared with their respective counterparts. Also, the older the respondents, the more likely that they had never or seldom eaten these iodine-rich foods in the past twelve months prior to the survey (Table 4.8.4).

Table 4.8.4: Frequency of eating all three categories of iodine-rich foods in the past twelve months prior to the survey (Q21a, Q21b & Q21c)

Variable	Level	Base	Often or sometimes in at least one category	Never or seldom in all 3 categories	p-value	
					Chi-square test	Kruskal-Wallis test
Age	18-24	247	94.0%	6.0%		0.000
	25-34	432	93.0%	7.0%		
	35-44	453	93.0%	7.0%		
	45-54	512	90.5%	9.5%		
	55-64	377	87.6%	12.4%		
Educational attainment	Primary or below	194	83.4%	16.6%		0.000
	Had not completed secondary	299	84.6%	15.4%		
	Completed secondary (F5)	610	91.8%	8.2%		
	Matriculation	147	95.3%	4.7%		
	Tertiary (Non-degree, degree or above)	784	95.3%	4.7%		
Occupation	Managerial/ Professional worker	448	96.4%	3.6%	0.000	
	Clerk	328	91.2%	8.8%		
	Service worker	245	92.4%	7.6%		
	Blue collar worker	273	85.7%	14.3%		
	Not working	685	90.6%	9.4%		
Monthly household income	Below $8,000	96	86.0%	14.0%		0.000
	$8,000-$13,999	191	90.0%	10.0%		
	$14,000-$19,999	186	89.8%	10.2%		
	$20,000-$39,999	522	93.1%	6.9%		
	$40,000 or above	497	96.7%	3.3%		
Type of living quarters	Public rental flats	641	88.4%	11.6%	0.000	
	Subsidized sale flats	290	90.1%	9.9%		
	Private housing	1065	94.1%	5.9%		

4.9 Cycling and walking habits

4.9.1 Whether had ridden a bike

Whether the respondents had ridden a bike (excluding stationary bike) in the last twelve months prior to the survey is significantly associated with their gender, age, educational attainment, marital status, occupation and monthly household income.

Male respondents (35.5%), never married respondents (40.9%), managerial/professional workers (34.3%), service workers (34.5%) and those with monthly household income of $40,000 or above (34.0%) were more likely to have ridden a bike in the last twelve months prior to the survey when compared with their respective counterparts. Also, the younger the respondents and the higher the educational attainment of the respondents, the more likely that they had ridden a bike in the last twelve months prior to the survey (Table 4.9.1).

Table 4.9.1: Whether had ridden a bike in the last twelve months (Q22a)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	926	35.5%	64.5%	0.000	
	Female	1 115	23.3%	76.7%		
Age	18-24	247	51.0%	49.0%		0.000
	25-34	433	38.2%	61.8%		
	35-44	454	28.0%	72.0%		
	45-54	513	23.0%	77.0%		
	55-64	377	13.2%	86.8%		
Educational attainment	Primary or below	195	12.3%	87.7%		0.000
	Had not completed secondary	299	20.5%	79.5%		
	Completed secondary (F5)	610	26.2%	73.8%		
	Matriculation	147	35.5%	64.5%		
	Tertiary (Non-degree, degree or above)	787	36.9%	63.1%		
Marital status	Never married	671	40.9%	59.1%	0.000	
	Married	1 274	23.4%	76.6%		
	Divorced/ Separated/ Widowed	79	17.0%	83.0%		
Occupation	Managerial/ Professional worker	450	34.3%	65.7%	0.003	
	Clerk	328	28.1%	71.9%		
	Service worker	245	34.5%	65.5%		
	Blue collar worker	273	24.5%	75.5%		
	Not working	685	25.8%	74.2%		

Table 4.9.1: Whether had ridden a bike in the last 12 months (Q22a)(Continued)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Monthly household income	Below $8,000	96	16.4%	83.6%		0.000
	$8,000-$13,999	191	19.7%	80.3%		
	$14,000-$19,999	187	25.4%	74.6%		
	$20,000-$39,999	522	32.7%	67.3%		
	$40,000 or above	498	34.0%	66.0%		

4.9.2 Frequency of wearing a helmet whilst cycling

Among the respondents who had ridden a bike in the last twelve months prior to the survey, the frequency of wearing a helmet whilst cycling is significantly associated with their educational attainment.

A higher proportion of respondents with educational attainment of primary or below (95.3%) wore a helmet none of the time whilst cycling (Table 4.9.2).

Table 4.9.2: Frequency of wearing a helmet whilst cycling (Q22b)

Variable	Level	Base	All of the time	Most of the time	Some of the time	None of the time	p-value
							Rank Correlation
Educational attainment	Primary or below	24	0.0%	4.7%	0.0%	95.3%	0.030
	Had not completed secondary	61	2.3%	0.0%	4.2%	93.5%	
	Completed secondary (F5)	160	6.3%	1.0%	3.5%	89.2%	
	Matriculation	52	3.8%	0.0%	3.8%	92.4%	
	Tertiary (Non-degree, degree or above)	291	8.4%	2.3%	3.2%	86.1%	

4.9.3 Frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst cycling

Among the respondents who had ridden a bike in the last twelve months prior to the survey, the frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst cycling is significantly associated with their gender, age, marital status and type of living quarters.

Male respondents (5.2%), respondents aged 18-24 (9.6%), never married respondents (6.3%) and those living in the public rental flats (5.5%) were more likely to wear headphones to listen to the radio, music or phone calls, etc. all or most of the time whilst cycling when compared with their respective counterparts (Table 4.9.3).

Table 4.9.3: Frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst cycling (Q23a)

Variable	Level	Base	All of the time	Most of the time	Some of the time	None of the time	p-value	
							Kruskal-Wallis test	Rank Correlation
Gender	Male	329	2.9%	2.2%	9.7%	85.1%	0.030	
	Female	260	1.7%	2.7%	5.6%	90.0%		
Age	18-24	126	3.2%	6.4%	8.8%	81.6%		0.001
	25-34	165	3.6%	3.6%	10.0%	82.8%		
	35-44	127	1.5%	0.0%	6.9%	91.7%		
	45-54	118	1.2%	0.0%	5.8%	93.0%		
	55-64	50	1.7%	0.9%	6.5%	90.9%		
Marital status	Never married	274	2.5%	3.7%	11.4%	82.4%	0.003	
	Married	299	2.4%	1.4%	4.8%	91.4%		
	Divorced/ Separated/ Widowed	13	0.0%	0.0%	5.8%	94.2%		
Type of living quarters	Public rental flats	164	2.1%	3.3%	11.3%	83.2%	0.029	
	Subsidized sale flats	91	2.7%	0.0%	5.4%	92.0%		
	Private housing	328	2.5%	2.7%	7.0%	87.8%		

4.9.4 Frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst walking on the street

The frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst walking on the street is significantly associated with respondents' gender, age, educational attainment, marital status, occupation and monthly household income.

Never married respondents (33.2%), service workers (28.7%) were more likely to wear headphones to listen to the radio, music or phone calls, etc. all or most of the time whilst walking on the street when compared with their respective counterparts. Also, the younger the respondents, the higher the educational attainment and the monthly household income of the respondents, the more likely that they wore headphones to listen to the radio, music or phone calls, etc. all or most of the time whilst walking when compared with their respective counterparts.

Moreover, female respondents (58.9%) were more likely to wear headphones to listen to the radio, music or phone calls, etc. none of the time whilst walking on the street than their male respondents (Table 4.9.4).

Table 4.9.4: Frequency of wearing headphones to listen to the radio, music or phone calls, etc. whilst walking on the street (Q23b)

Variable	Level	Base	All of the time	Most of the time	Some of the time	None of the time	p-value	
							Kruskal-Wallis test	Rank Correlation
Gender	Male	926	3.9%	14.5%	27.0%	54.6%	0.000	
	Female	1 115	4.9%	14.0%	22.2%	58.9%		
Age	18-24	247	7.6%	33.5%	31.9%	27.0%		0.000
	25-34	433	8.3%	19.6%	29.2%	42.9%		
	35-44	454	3.3%	13.2%	25.2%	58.3%		
	45-54	513	2.8%	8.4%	21.7%	67.1%		
	55-64	377	2.1%	5.0%	16.4%	76.5%		
Educational attainment	Primary or below	195	2.5%	2.0%	15.8%	79.8%		0.000
	Had not completed secondary	299	3.2%	10.5%	19.5%	66.9%		
	Completed secondary (F5)	610	4.0%	13.3%	24.1%	58.6%		
	Matriculation	147	6.6%	16.8%	30.3%	46.4%		
	Tertiary (Non-degree, degree or above)	787	5.5%	19.0%	27.3%	48.2%		
Marital status	Never married	671	7.8%	25.5%	30.5%	36.2%	0.000	
	Married	1 274	2.9%	9.0%	21.8%	66.3%		
	Divorced/ Separated/ Widowed	79	2.3%	5.2%	14.5%	78.0%		
Occupation	Managerial/ Professional worker	450	5.6%	12.6%	31.5%	50.3%	0.000	
	Clerk	328	4.2%	22.0%	27.1%	46.7%		
	Service worker	245	7.1%	21.6%	22.9%	48.4%		
	Blue collar worker	273	1.7%	10.3%	19.5%	68.5%		
	Not working	685	4.2%	11.0%	20.5%	64.3%		
Monthly household income	Below $8,000	96	1.8%	6.8%	15.2%	76.1%		0.000
	$8,000-$13,999	191	2.2%	9.5%	20.8%	67.6%		
	$14,000-$19,999	187	2.1%	15.7%	22.0%	60.2%		
	$20,000-$39,999	522	4.5%	16.1%	27.2%	52.2%		
	$40,000 or above	498	6.5%	14.7%	26.8%	51.9%		

4.10 Cervical screening (for female respondents only)

4.10.1 Experience of cervical screening

Whether female respondents have ever had cervical screening is associated significantly with their age, educational attainment, marital status, monthly household income and type of living quarters.

Women aged 18-34 (ranging from 50.5% to 95.3%), those who have completed matriculation (53.8%), never married respondents (76.9%), those with monthly household income below $40,000 (ranging from 38.7% to 42.2%), those living in public rental flats (49.5%) and those living in subsidized sale flats (41.9%) were more likely to have not had a cervical smear when compared with than their respective counterparts (Table 4.10.1).

Table 4.10.1: Ever had cervical smear before (Q24)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Age	18-24	124	4.7%	95.3%		0.000
	25-34	248	49.5%	50.5%		
	35-44	264	78.1%	21.9%		
	45-54	271	77.3%	22.7%		
	55-64	188	73.5%	26.5%		
Educational attainment	Primary or below	133	72.8%	27.2%		0.000
	Had not completed secondary	142	64.8%	35.2%		
	Completed secondary (F5)	358	69.1%	30.9%		
	Matriculation	85	46.2%	53.8%		
	Tertiary (Non-degree, degree or above)	387	55.4%	44.6%		
Marital status	Never married	331	23.1%	76.9%	0.000	
	Married	713	79.5%	20.5%		
	Divorced/ Separated/ Widowed	54	77.5%	22.5%		
Monthly household income	Below $8,000	55	58.7%	41.3%		0.000
	$8,000-$13,999	109	61.3%	38.7%		
	$14,000-$19,999	111	60.7%	39.3%		
	$20,000-$39,999	273	57.8%	42.2%		
	$40,000 or above	241	77.2%	22.8%		
Type of living quarters	Public rental flats	354	50.5%	49.5%	0.000	
	Subsidized sale flats	150	58.1%	41.9%		
	Private housing	583	70.6%	29.4%		

4.10.2 Time since last cervical smear

Among those females who have had a cervical smear before, the time since their last cervical smear is significantly associated with their age, educational attainment, occupation and monthly household income.

A relatively higher proportion of respondents aged 55-64 (32.7%), those who had not completed secondary education (27.6%), blue collar workers (21.2%) and those with monthly household income of $8,000 - $13,999 (26.2%) reported that they had their last smear at least 37 months ago when compared with their respective counterparts (Table 4.10.2).

Table 4.10.2: Length of time since last cervical smear (Q25)

Variable	Level	Base	1-12 months	13-36 months	37 months and above	p-value	
						Kruskal-Wallis test	Rank Correlation
Age	18-24	6	66.7%	33.3%	0.0%		0.000
	25-34	121	53.4%	35.9%	10.6%		
	35-44	203	52.2%	38.1%	9.7%		
	45-54	204	46.4%	39.1%	14.5%		
	55-64	130	32.0%	35.3%	32.7%		
Educational attainment	Primary or below	92	46.1%	37.4%	16.5%		0.001
	Had not completed secondary	89	29.6%	42.8%	27.6%		
	Completed secondary (F5)	240	45.9%	39.7%	14.4%		
	Matriculation	39	64.5%	29.6%	5.9%		
	Tertiary (Non-degree, degree or above)	211	53.2%	33.4%	13.5%		
Occupation	Managerial/ Professional worker	109	65.2%	25.5%	9.3%	0.000	
	Clerk	140	43.8%	42.5%	13.7%		
	Service worker	74	48.8%	36.5%	14.6%		
	Blue collar worker	35	31.8%	47.1%	21.2%		
	Not working	299	43.2%	38.2%	18.6%		
Monthly household income	Below $8,000	31	24.4%	53.5%	22.0%		0.000
	$8,000-$13,999	65	36.9%	36.9%	26.2%		
	$14,000-$19,999	65	36.7%	45.8%	17.6%		
	$20,000-$39,999	155	47.3%	38.1%	14.7%		
	$40,000 or above	184	55.3%	33.6%	11.2%		

4.10.3 Regular cervical smear test

Among those females who have had a cervical smear before, whether they had the cervical smear at a regular interval is associated significantly with their age, educational attainment, marital status and monthly household income.

Respondents aged 18-24 (66.7%) and 55-64 (50.1%), those who had not completed secondary education or below (ranging from 40.2% to 41.8%), never married respondents (44.6%) and divorced / separated / widowed respondents (44.0%) were more likely to report that they did not have the smear at a regular interval when compared with their respective counterparts. Also, the lower the monthly household income of respondents, the more likely that they did not have cervical smear at a regular interval when compared with their respective counterparts (Table 4.10.3).

Table 4.10.3: Whether had had cervical smear at a regular interval (Q26)

Variable	Level	Base	Yes, at a regular interval	No, not at a regular interval	p-value	
					Chi-square test	Kruskal-Wallis test
Age	18-24	6	33.3%	66.7%		0.000
	25-34	123	66.9%	33.1%		
	35-44	207	73.1%	26.9%		
	45-54	210	70.7%	29.3%		
	55-64	138	49.9%	50.1%		
Educational attainment	Primary or below	96	58.2%	41.8%		0.004
	Had not completed secondary	92	59.8%	40.2%		
	Completed secondary (F5)	247	68.2%	31.8%		
	Matriculation	39	74.7%	25.3%		
	Tertiary (Non-degree, degree or above)	213	68.6%	31.4%		
Marital status	Never married	77	55.4%	44.6%	0.025	
	Married	565	68.6%	31.4%		
	Divorced/ Separated/ Widowed	42	56.0%	44.0%		
Monthly household income	Below $8,000	32	58.1%	41.9%		0.001
	$8,000-$13,999	67	59.0%	41.0%		
	$14,000-$19,999	67	62.9%	37.1%		
	$20,000-$39,999	158	63.4%	36.6%		
	$40,000 or above	186	74.3%	25.7%		

4.10.4 Frequency of having cervical smear

Among those females who have had a cervical smear at a regular interval, the frequency of having a cervical smear is associated significantly with their age, educational attainment, marital status, monthly household income and type of living quarters.

Those had not completed secondary education or below (ranging from 28.1% to 30.8%), divorced / separated / widowed respondents (30.5%), those with monthly household income below $8,000 (41.8%), those living in public rental flats (25.3%), and those living in subsidized sale flats (24.4%) were more likely to report that they had cervical smear less frequent than once every 2 years when compared with their respective counterparts. Also, the older the respondents, the more likely that they had the cervical smear test less frequent than once every 2 years (Table 4.10.4).

Table 4.10.4: Frequency of having cervical smear (Q27)

Variable	Level	Base	At least once a year	Once every 2 years	Less frequent than once every 2 years	p-value	
						Kruskal-Wallis test	Rank Correlation
Age	18-24	2	50.0%	50.0%	0.0%		0.002
	25-34	79	65.7%	26.6%	7.7%		
	35-44	148	56.8%	30.8%	12.4%		
	45-54	144	55.9%	23.9%	20.2%		
	55-64	66	46.0%	28.4%	25.6%		
Educational attainment	Primary or below	55	50.6%	21.3%	28.1%		0.002
	Had not completed secondary	52	42.9%	26.4%	30.8%		
	Completed secondary (F5)	159	59.0%	25.5%	15.5%		
	Matriculation	29	70.1%	24.1%	5.8%		
	Tertiary (Non-degree, degree or above)	146	58.9%	32.6%	8.6%		
Marital status	Never married	40	72.1%	24.5%	3.4%	0.033	
	Married	378	55.9%	27.8%	16.3%		
	Divorced/ Separated/ Widowed	22	44.4%	25.0%	30.5%		

Table 4.10.4: Frequency of having cervical smear (Q27) (Continued)

Variable	Level	Base	At least once a year	Once every 2 years	Less frequent than once every 2 years	p-value	
						Kruskal-Wallis test	Rank Correlation
Monthly household income	Below $8,000	18	41.9%	16.3%	41.8%		0.000
	$8,000-$13,999	39	43.6%	24.6%	31.8%		
	$14,000-$19,999	39	47.3%	23.2%	29.5%		
	$20,000-$39,999	100	58.7%	28.7%	12.6%		
	$40,000 or above	135	63.4%	27.4%	9.2%		
Type of living quarters	Public rental flats	106	52.8%	21.9%	25.3%	0.024	
	Subsidized sale flats	57	44.4%	31.2%	24.4%		
	Private housing	269	59.0%	29.6%	11.4%		

Chapter 5 Conclusion and Recommendations

5.1 Conclusion

5.1.1 Weight status, control and perception

When the WHO's classification of weight status by BMI for adult Asians was used, about half (51.5%) of the respondents were classified as "normal", 18.4% as "overweight" and 19.3% as "obese", while the remaining 10.9% were classified as "underweight".

Regarding respondents' self-perceived current weight status, close to half (49.4%) of the respondents perceived themselves as "just right", 40.9% considered themselves as "overweight", and 9.7% considered themselves as "underweight". A relatively higher proportion of female respondents, respondents aged 35-64, married or divorced/ separated/ widowed respondents and those with primary education or below considered themselves as "overweight". Overall, 65.4% of the respondents perceived their weight status in a way consistent with the WHO's classification of weight status for adult Asians, while 19.1% of the respondents overestimated and 15.4% underestimated their weight status.

During the twelve months prior to the survey, about three-tenths (30.3%) of the respondents had done something deliberately to control their weight, of which 61.6% aimed to lose weight. Among those respondents who had done something deliberately to control their weight, the most commonly used methods to control weight were "doing physical exercise" (84.0%) and "changing dietary habit" (76.3%).

5.1.2 Physical activities and leisure-time exercise

During the seven days prior to the survey, about half (50.1%) of the respondents had not engaged in any moderate physical activity for at least 10 minutes a day and over three-fifths (62.2%) of respondents had not engaged in any vigorous physical activity for at least 10 minutes a day.

Walking was the most common form of physical activity - 68.3% of the respondents had spent at least 10 minutes on walking every day during the seven days prior to the survey. On the other hand, about one-fifth (19.2%) of the respondents sat 10 or more hours per day during weekdays (Monday to Friday) in the seven days prior to the survey.

Concerning leisure-time exercise, more than one-third (37.9%) of the respondents reported that they exercised less than once a month in their leisure-time.

Overall, only about two-fifths (39.5%) of the respondents' level of physical activity met the WHO's recommended physical activity level for adults[31]. Males, those aged 18-24,

[31] Global Recommendations on Physical activity for Health, WHO.

never married respondents, service workers and blue collar workers were more likely to meet the physical activity level as WHO recommended.

5.1.3 Fruit and vegetable consumption

While around half (49.9%) of the respondents had eaten fruit every day, about four-fifths of respondents (81.0%) had eaten vegetables daily. Regular fruit or vegetable juice consumption was found to be uncommon amongst respondents - only 1.8% of the respondents drank fruit or vegetable juice daily.

Excluding fruit/ vegetable juice, the average (mean) daily intake of fruit and vegetables by the respondents was only 3.2 servings. Less than one-fifth (17.3%) of the respondents had a daily intake of 5 or more servings of fruit and vegetables per day. Males, never married respondents and clerks were more likely to have consumed less than 5 servings of fruit and vegetables per day. Also, the younger the respondents, the more likely that they consumed less than 5 servings of fruit and vegetables per day.

5.1.4 Smoking habits

About one-tenth (11.1%) of the respondents were current smokers at the time of this survey. Among the current smokers, the vast majority (96.3%) were daily smokers and more than one-third (37.4%) of them reported smoking 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 respondents aged 45-64, those with primary education or below, those with monthly household income below $14,000 and those living in public rental flats.

5.1.5 Pattern of alcohol consumption

About three-tenths (30.8%) of the respondents reported having drunk at least one alcoholic drink during the thirty days prior to the survey. More than two-fifths (44.9%) of these drinkers drank less than one day per week while only 6.2% drank daily. About seven-tenths (69.8%) of these drinkers consumed fewer than 3 standard drinks on each drinking day. On average, they consumed 2.5 standard drinks per day during the thirty days prior to the survey.

On the whole, drinking during the thirty days prior to the survey was more prevalent among males, those aged 18-24, never married respondents, those attained tertiary education or above, service workers, those living in private housing and those with higher monthly household income.

Among those who had drunk alcohol during the thirty days prior to the survey, about one-fifth (20.4%) 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

(http://www.who.int/dietphysicalactivity/factsheet_recommendations/en/index.html)

survey.

On the other hand, among the respondents who had at least one alcoholic drink in the last twelve months, about a quarter (25.5%) reported that they had engaged in binge drinking at least once during the two to twelve months prior to the survey. Binge drinking once or more a week during the two to twelve months prior to the survey was more common among respondents who had not completed secondary education and those with monthly household income below $8,000.

Among those who had drunk alcohol during the thirty days prior to the survey, 12.4% reported that they had drunk so much that they exhibited signs of drunkenness. Drunkenness was more common among male respondents, those aged 18-24 and never married respondents.

Only a small percentage (ranging from 0.2% to 1.7%) of respondents reported that they had encountered problems or conditions because of their own or someone else's drinking, such as having been physically hurt and having had job or work problems.

5.1.6 Salt consumption behaviours

WHO recommends that the daily intake of salt for a healthy adult should not exceed 5 grams. Over nine-tenths (91.1%) of respondents reported that they did not know about the WHO's recommended maximum daily intake of salt. Among those who reported that they knew, only 28.7% could correctly state that the WHO's recommended maximum daily intake of salt for a healthy adult is 5g. Overall, only 2.6% of respondents could correctly state the recommended level.

3.7% of respondents reported that they had always or often added salt to cooked dishes at the table, and about one-tenth (12.2%) reported that they had always or often added sauces to cooked dishes at the table. In addition, more than two-thirds (66.7%) of respondents reported that they had never or seldom checked food labels for salt content when purchasing pre-packaged food.

5.1.7 Consumption of iodine-rich foods

About two-fifths (39.0%) of respondents reported that they often ate seafood such as marine water fish and shellfish, one-third (33.5%) often ate dairy products such as milk and cheese, and one-tenth (10.9%) often ate dried kelp, seaweed or laver including seaweed snack and nori sheet for sushi during the twelve months prior to the survey. Overall, less than one-tenth (8.4%) of respondents reported that they had never or seldom eaten any of the above three categories of iodine-rich foods during the twelve months prior to the survey.

5.1.8 Cycling and walking habits

More than a quarter (28.9%) of respondents reported that they had ridden a bike during the twelve months prior to the survey. Among these bikers, more than four-fifths

(88.7%) never wore a helmet whilst cycling. The most frequently reported reason for never wearing a helmet whilst cycling was "considered it not necessary" (45.6%), followed by "did not have one" (38.7%).

Among those respondents who had ridden a bike during the twelve months prior to the survey, 4.8% claimed that they wore headphones to listen to the radio, music or phone calls, etc. whilst cycling all of the time (2.4%) or most of the time (2.4%).

Besides, 4.5% of all respondents reported that they always wore headphones to listen to the radio, music or phone calls, etc. whilst walking on the street during the thirty days prior to the survey.

5.1.9 Cervical screening

Less than two-thirds (62.4%) of the female respondents reported that they had had a cervical smear before. Women aged 18-34, those who have completed matriculation, never married respondents, those with monthly household income below $40,000, those living in public rental flats, and those living in subsidized sale flats were more likely not to have had a cervical smear.

Among those female respondents who had a cervical smear before, less than half (47.1%) had their last cervical smear taken within twelve months prior to the survey and about two-thirds (66.2%) had a cervical smear at a regular interval. Among those who had cervical smears regularly, 52.7% had the test once a year.

5.2 Recommendations

Some recommendations based on the survey findings are made below:

1. The benefits of having adequate levels of physical activity regularly are well-established, such as improving cardio-respiratory and muscular fitness, bone health and reducing the risk of developing chronic diseases and depression. However, about three-fifths of the respondents (60.5%) did not meet the recommended amount of physical activity suggested by the WHO. Health promotion programmes could therefore focus on educating the community about the WHO's recommended level of physical activity and some practical tips for being more active. In addition, barriers to participating in physical activities need to be identified and measures to overcome the barriers need to be devised.

2. The survey results showed that 11.1% of the respondents were current smokers and almost all (96.3%) of them were daily smokers. 20.4% 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). Health promotion programmes should focus on educating the high-risk groups about the health benefits of having a smoke-free and alcohol-free lifestyle. Moreover, barriers to quitting smoking need to be assessed.

3. Diet rich in fruit and vegetables is associated with a reduced risk of developing major non-communicable diseases, including cardiovascular diseases, type 2 diabetes and certain cancers. However, less than one-fifth of the respondents reported that they had a daily average intake of 5 or more servings of fruit and vegetables. Therefore, the benefits of having at least 5 servings of fruit and vegetables a day should be further promoted.

4. Excess salt intake is associated with an increased risk of hypertension, heart disease and stroke. Overall, only 2.6% of respondents knew the WHO's recommended maximum daily intake of 5 grams of salt for a healthy adult. Also, more than two-thirds of the respondents reported that they had never or seldom checked food labels for salt content when purchasing pre-packaged food. Future educational campaigns could be focused on empowering the public in reading food labels when shopping pre-packaged foods and making healthier food choices.

5. To reduce the risk of head and facial injuries to cyclists in the event of a crash, cyclists should wear a helmet while cycling at all times. However, the survey results showed that 88.7% of cyclists never wore a helmet whilst cycling. Educational campaigns on safe cycling should be continued and promoted, especially the importance of wearing a properly fitted helmet that meets international standards.

5.3 Limitations

1. The data were only 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 by respondents' other demographic information, the number of eligible respondents in a household, the number of phones in a household, and non-response.
2. The use of the "Next Birthday" rule to select a 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 evenings 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 fixed line telephones still cover around 80% of households in Hong Kong, 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 may deliberately under-report the behaviours that are socially undesirable or that are considered 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 short in this survey to reduce such bias.
5. 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 2012 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 questionnaire survey to assess the public's awareness of healthy living. This survey will take approximately 15 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 of Hong Kong 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 are there 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?
Could you pass the phone to him or her?
(Interviewer: if respondent questions, explain the "Next Birthday" rule: a method to select respondent)

Record the gender

1. Male
2. Female

Weight Status, Control and Perception

Q1a. What is your height without wearing shoes?

_____ cm

Q1b. What is your weight wearing simple clothes?

_____ Kg

Q1c. What is your waist circumference?

_____ cm

Q2. During the past 12 months, have you tried to do something deliberately to control your weight, for example, to lose, maintain or gain weight?

1. Yes, to lose weight
2. Yes, to maintain weight
3. Yes, to gain weight
4. No (skip to Q4)

Q3. During the past 12 months, have you used the following methods to control your weight?

a. Taking medications or products for weight control, including health food?
   1. Yes
   2. No

b. Consulting doctors or dietitians?
   1. Yes
   2. No

c. Going to weight control or beauty parlours?
   1. Yes
   2. No

d. Doing exercise?
   1. Yes
   2. No

e. Changing dietary habit?
   1. Yes
   2. No

f. Other methods?
   1. Yes, please specify:_____
   2. No

Q4. What do you think about your current weight; is it overweight, just right, or underweight?
   1. Overweight
   2. Just right
   3. Underweight

Physical Activity and Leisure-time Exercise

Q5a. During the last 7 days, on how many days did you do vigorous physical activities? Vigorous physical activities are those that make you breathe much harder than normal, e.g., aerobics, football, swimming, heavy physical work, jogging, etc., and you did these activities for at least 10 minutes at a time.

_____ Days

Q5b. [Only ask those whose answers in Q5a are greater than or equal to "1"]
On those days that you have performed vigorous physical activities for at least 10 minutes, how much time on average per day did you usually spend doing vigorous physical activities?

_____ Minutes

Q6a. During the last 7 days, on how many days did you do moderate physical activities? Moderate physical activities are those that make you breathe somewhat harder than normal, e.g., bicycling, washing cars/polishing, fast walking, cleaning windows, etc. and you did these activities for at least 10 minutes at a time.

_____ Days

Q6b. [Only ask those whose answers in Q6a are greater than or equal to "1"]
On those days that you have performed moderate physical activities for at least 10 minutes, how much time on average per day did you usually spend doing moderate physical activities?

_____ Minutes

Q7a. During the last 7 days, on how many days did you walk for at least 10 minutes at a time? This includes walking to offices/schools, walking to travel from place to place, and walking for leisure.

_____ Days

Q7b. [Ask those whose answers in Q7a are greater than or equal to "1"]
On those days that you have walked for at least 10 minutes at a time, how much time on average did you usually spend walking in one of those days?

_____ Hours _____ Minutes

Q8. During the last 7 days, how much time on average did you usually spend sitting on a weekday? This includes time spent sitting at work, at home, visiting friends, reading, travelling on public transport, and lying down to watch television. [If the respondent cannot answer the daily average time, then say: Please try to make an estimate as accurate as possible.]

_____ Hours _____ Minutes

Q9. During the past 30 days，how often did 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/week
3. 2-3 times/week
4. Once a week
5. 2-3 times a month
6. Once a month
7. Less than once a month

Fruit and Vegetables Consumption

Q10a. On average, how many days do you eat fruit each week? (excluding fruit juice)

1. 1 Day
2. 2 Days
3. 3 Days
4. 4 Days
5. 5 Days
6. 6 Days
7. 7 Days
8. None (skip to Q11a)

Q10b. [Ask those whose answers in Q10a are from "1" to "7"]

On average, how many fruit did you eat on one of those days?

(Interviewer: One fruit equals to 1 medium-sized apple or orange, 1 medium sized banana, or 2 kiwi fruits or plums, or half bowl of small fruits like grapes or strawberries. Ask exactly what they ate and then convert using table. The numbers can be recorded as half such as 0.5 or 1.5).

_____ Fruits

Q11a. On average, how many days do you eat vegetables each week? (excluding vegetable juice)

1. 1 Day
2. 2 Days
3. 3 Days
4. 4 Days
5. 5 Days
6. 6 Days
7. 7 Days
8. None (skip to Q12)

Q11b. [Ask those whose answers in Q11a are from "1" to "7"]

On average, how many bowls of cooked vegetables did you eat on one of those days? (Interviewer's prompts: one bowl refers to the size of a rice bowl. The numbers can be recorded as half such as 0.5 or 1.5. For uncooked leafy vegetables, half the total)

_____ Bowls

Q12. On average, how many days do you drink at least one cup of fruit or vegetable juice each week? "Juice" refers to freshly squeezed juice or those are labelled 100% or pure fruit/vegetable juice. A cup means 250 ml in volume or a standard-sized tetra pack of juice drink.

1. 1 Day
2. 2 Days
3. 3 Days
4. 4 Days
5. 5 Days
6. 6 Days
7. 7 Days
8. None

Smoking Pattern

Q13a. Have you ever smoked before? (Interviewer: read out the answers one by one)

1. Yes, but not now
2. Yes, and still smoking (skip to Q13c)
3. Never (skip to Q14)

Q13b. How long have you abstained from smoking? (Interviewer: read out the answers one by one)

1. Less than 1 month (skip to Q14)
2. 1 month to 1 year (skip to Q14)
3. More than 1 year (skip to Q14)

Q13c. How many cigarettes do you smoke on average per day? (Interviewer: Do not read out the answers)

1. Less than 1 per day
2. 1-10 per day
3. 11-20 per day
4. More than 20 per day

Pattern of Alcohol Consumption

Q14. Have you ever had at least one alcoholic drink? (Interviewer: read out the answers one by one)

1. Yes, during the last month (30 days)
2. Yes, during the previous 2 – 12 months (skip to Q14g)
3. Yes, more than 12 months ago (skip to Q15b)
4. Never (skip to Q15b)

Q14a. 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

Q14b. During the last 30 days which you have ever had at least one alcoholic drink, how many standard units of drinks on average per day 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 drinks; or 1 standard drink is approximately equal to one dining glass of wine; or 1 spirit nip of brandy/whisky; or one small glass of Chinese wine such as rice wine) [Interviewer please refer to the standard drink information sheet- the illustrated guide to typical standard drinks- for other examples if needed]

_____ Unit of drinks

Q14c. In the last 30 days, 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 alcohol, and one occasion means period of a few hours.

1. Yes
2. No (skip to Q14e)

Q14d. How often did you do this in the last 30 days? (Interviewer: Do not read out the answers)

1. Once or more a day
2. 4-6 times a week
3. 1-3 times a week
4. Three times a month
5. Twice a month
6. Once a month

Q14e. In the last 30 days, did you drink so much that you exhibited signs of drunkenness, such as flushed face or reddened eyes, slurred or incoherent speech, unsteady or staggering gait, vomiting and hangover in the next day?

1. Yes
2. No (skip to Q14g)

Q14f. How often did you do this in the last 30 days? (Interviewer: Do not read out the answers)

1. Once or more a day
2. 4-6 times a week
3. 1-3 times a week
4. Three times a month
5. Twice a month
6. Once a month

Q14g. In the last 12 months, but excluding the last 30 days, when you drink, 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 alcohol, and one occasion means period of a few hours.

1. Yes
2. No (skip to 15a)

Q14h. In the last 12 months, but excluding the last 30 days, how often did you do this? (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

Q15a. In the last 12 months, did you have the following problem(s) or condition(s) which was/were caused by your own drinking?

i) Being physically hurt
1. Yes
2. No

ii) Road traffic accidents
1. Yes
2. No

iii) Family or marriage problem
1. Yes
2. No

iv) Job or work problem
1. Yes
2. No

v) Being sexually harassed
1. Yes
2. No

Q15b. In the last 12 months, did you have the following problem(s) or condition(s) because of someone else's drinking?

i) Being physically hurt
1. Yes
2. No

ii) Road traffic accidents
1. Yes
2. No

iii) Family or marriage problem
1. Yes
2. No

iv) Job or work problem

1. Yes
2. No

v) Being sexually harassed

1. Yes
2. No

Salt Consumption Behaviours

Q16. How often do you add salt to cooked dishes at the table?
(Interviewer: Read out 1-5 answers. Numbers in the brackets are for reference only, no need to read out)

1. Never
2. Seldom
3. Sometimes
4. Often
5. Always
6. Do not remember

Q17. How often do you add sauces to cooked dishes at the table, including soy sauce, oyster sauce, ketchup, chili sauce, bean chili paste or other seasonings containing salt? (Interviewer: Read out 1-5 answers. Numbers in the brackets are for reference only, no need to read out)

1. Never
2. Seldom
3. Sometimes
4. Often
5. Always
6. Do not remember

Q18. How often do you check food labels for salt content when purchasing pre-packaged food?
(Interviewer: Read out 1-5 answers. Numbers in the brackets are for reference only, no need to read out)

1. Never
2. Seldom
3. Sometimes
4. Often
5. Always
6. Do not remember

Q19. The cooking or table salt you are using at home is:

1. Plain (Regular) salt, including sea salt
2. Iodised salt
3. Others, such as salt substitute / low-sodium salt
4. Don't know

Q20. Do you know what the World Health Organization's recommended maximum daily intake of salt (in grams) for a healthy adult is?

1. Yes, please specify: ___ grams
2. Don't know

Consumption of iodine-rich foods

Q21. In the past 12 months, how often do you eat following foods:

a) Seafood, such as marine water fish and shellfish? (Interviewer: Read out 1-5 answers. Numbers in the brackets are for reference only, no need to read out)

1. Never
2. Seldom
3. Sometimes
4. Often
5. Do not remember

b) Dried kelp, seaweed or laver, including seaweed snack and nori sheet for sushi? (Interviewer: Read out 1-5 answers. Numbers in the brackets are for reference only, no need to read out)
   1. Never
   2. Seldom
   3. Sometimes
   4. Often
   5. Do not remember

c) Dairy products, such as milk and cheese? (Interviewer: Read out 1-5 answers. Numbers in the brackets are for reference only, no need to read out)
   1. Never
   2. Seldom
   3. Sometimes
   4. Often
   5. Do not remember

Cycling and walking habits

Q22a. In the last 12 months, did you ride a bike (excluding stationary bike)?
   1. Yes
   2. No (skip to Q23b)

Q22b. In the last 12 months, how often did you wear a helmet whilst cycling?
(Interviewer: Do not read out the answers)
   1. All of the time (skip to 23a)
   2. Most of the time (skip to 22ci)
   3. Some of the time (skip to 22ci)
   4. None of the time (skip to 22cii)

Q22ci. Why didn't you wear a helmet every time whilst cycling? (Interviewer: Do not read out the answers)

1. Considered it not necessary every time
2. Forgot to wear
3. Felt uncomfortable
4. Helmet not fit
5. Did not have one every time
6. Did not like to wear
7. Others, please specify: _____

(Skip to Q23a)

Q22cii. Why didn't you ever wear a helmet whilst cycling? (Interviewer: Do not read out the answers)

1. Considered it not necessary
2. Forgot to wear
3. Felt uncomfortable
4. Helmet not fit
5. Did not have one
6. Did not like to wear
7. Others, please specify: _____

Q23a. In the last 12 months, how often did you wear headphones for listening to the radio, music or phone calls, etc. whilst cycling? (Interviewer: Do not read out the answers)

1. All of the time
2. Most of the time
3. Some of the time
4. None of the time

Q23b. In the last 30 days, how often did you wear headphones for listening to the radio, music or phone calls, etc. whilst walking on the street? (Interviewer: Do not read out the answers)

1. All of the time
2. Most of the time
3. Some of the time
4. None of the time

Cervical Screening (For female respondents only)

Q24. Have you ever had a cervical smear before?

1. Yes
2. No (skip to Q28)
3. Not sure (skip to Q28)

Q25. About how long ago did you have the last cervical smear? (Interviewer: Do not read out the answers)

1. Within 12 months
2. 13-24 months
3. 25-36 months
4. 37-48 months
5. 49-60 months
6. 61 months and above
7. Cannot remember

Q26. Do you have your cervical smear at a regular interval?

1. Yes, at a regular interval
2. No, not at a regular interval (skip Q28)

Q27. If regular, how often do you have cervical smear?

1. More than once a year
2. Once a year
3. Once every 2 years
4. Once every 3 years
5. Once every 4 years
6. Once every 5 years
7. Once every 6-10 years
8. Less frequent than once every 10 years
9. Cannot say/remember

Q28. Have you had a total hysterectomy (surgical removal of the entire uterus) before?

1. Yes
2. No

Demographics

Q29. What is your age?

_____ Years

Q30. 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

Q31. 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

Q32a. Are you currently engaged in a job?

1. Yes
2. No (skip to Q32c)

Q32b. What is your occupation? (Interviewer: record the details of occupation)

1. Employers/Managers/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

Other: _____

(skip to Q33)

Q32c. You are a … (Interviewer: read out the answers one by one)

1. Student
2. Home-maker
3. Unemployed person
4. Retired person
5. Others（Please specify_____）

(skip to Q34)

Q33. How much is your monthly personal income, including all sources of 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

Q34. How much is your monthly household income, including all sources of 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

Q35. What is your type of living quarter?

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

END