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Behavioural Risk Factor Survey (April 2016)

Main Report

Commissioned by

衞生署
Department of Health

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 (SSRC) of the University of Hong Kong to conduct a survey in April 2016 to collect information on health-related behaviours and other relevant issues among the adult Hong Kong population.

The scope of this survey covered the following 10 areas:

1. Weight Status, Control and Perception

2. Physical Activity and Leisure-time Exercise

3. Fruit and Vegetable Consumption

4. Meat Consumption

5. Smoking Pattern

6. Pattern of Alcohol Consumption

7. Cervical Cancer Screening (for female respondents only)

8. Awareness of Cancer Prevention and Screening

9. Use of Mobile Phone

10. Demographic Information: gender, age, education level, 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). The target respondents were Cantonese, Putonghua or English speaking residents in Hong Kong aged 18-64 (excluding foreign domestic helpers). A bilingual (Chinese and English) questionnaire with 60 questions was used. Fieldwork took place between 18th April and 29th July 2016. A sample size of 4 071 successful interviews was achieved with an overall response rate of 10.9%. To make the findings more representative of the Hong Kong general population, weighting was applied to age, gender and type of living quarters.

Key Findings of the Survey

Weight Status, Control and Perception

According to the locally adapted classification of weight status for Chinese adults in Hong Kong, about half (51.5%) of the respondents were classified as "normal", 18.5% as "overweight" and 21.1% as "obese", while the remaining 8.8% were classified as "underweight".

Regarding respondents' self-perceived current weight status, about half (50.3%) of the respondents perceived themselves as "just right", 41.9% considered themselves as "overweight", and 7.8% considered themselves as "underweight". Overall, 67.6% of the respondents perceived their weight status in a way consistent with the locally adapted classification, while 17.8% of the respondents overestimated and 14.5% underestimated their weight status.

Physical Activity and Leisure-time Exercise

During the seven days prior to the survey, more than half (55.4%) and over two-fifths (43.1%) of the respondents had not engaged in any vigorous and moderate physical activity for at least 10 minutes a day respectively. On the other hand, close to three-quarters (71.9%) of the respondents had spent at least 10 minutes on walking every day during the seven days prior to the survey.

Overall, more than two-fifths (43.8%) of the respondents' level of physical activity met the WHO's recommended physical activity level for adults. Over one-third (37.7%) of the respondents reported they exercised one to three times a week in their leisure-time.

Fruit and Vegetable Consumption

While about half (50.2%) of the respondents had eaten fruit every day, about four-fifths of the respondents (80.3%) had eaten vegetables daily. Regular fruit or vegetable juice consumption was found to be uncommon amongst respondents - 2.0% of the respondents drank fruit or vegetable juice daily.

Excluding fruit or vegetable juice, the average (mean) daily intake of fruit and vegetables by the respondents was 3.4 servings. About one-fifth (20.5%) of the respondents had a daily intake of 5 or more servings of fruit and vegetables.

Meat Consumption

During the thirty days prior to the survey, respondents on average consumed 2.7 taels of red meat and 2.1 taels of white meat per day. Overall, about a quarter (25.2%) of respondents consumed more than 6 taels of meat on average per day and 48.5% of respondents consumed less than 4 taels of meat per day. It was also found that 10.4% of respondents had consumed processed meat on four or more days per week on average during the thirty days prior to the survey.

Smoking Pattern

About one-tenth (10.9%) of the respondents were current smokers at the time of this survey. Among the current smokers, the vast majority (95.9%) were daily smokers and almost half (47.1%) of them reported smoking at least 11 cigarettes a day.

Pattern of Alcohol Consumption

During the past year prior to the survey, about seven-tenths (70.5%) of the respondents reported having drunk at least one alcoholic drink. While about two-fifths (40.0%) of these drinkers drank less than monthly, 4.0% drank daily.

Among those who had drunk alcohol during the past year prior to the survey, more than a quarter (27.4%) reported that they had engaged in binge drinking (drinking 5 or more glasses/cans of alcohol on one occasion) during the past year prior to the survey.

Cervical Cancer Screening (for female respondents only)

Nearly two-thirds (63.4%) of the female respondents reported that they had a cervical smear before.

Among those female respondents who had a cervical smear before, about two-thirds (66.6%) had a cervical smear at a regular interval. Among those who had cervical smears regularly, 35.7% had the test once a year.

Awareness of Cancer Prevention and Screening

Over 90% of the respondents strongly agreed/agreed to the (correct) statements "Some cancer cases can be prevented by adopting healthy lifestyle" and "Processed meat can cause colorectal cancer". Over 60% of the respondents strongly agreed/agreed to the (correct) statements "Obesity is a risk factor for cancers" and "Cancer screening is to conduct test on people who have no symptom".

However, about two-fifths (41.6%) of them strongly disagreed/disagreed to the (correct) statement "Alcohol is a human cancer-causing agent (carcinogen)" Furthermore, less than one-fifth (17.1%) of them strongly disagreed/disagreed to the (correct) statement "Some cancer screening tests have potential risks".

Recommendations

Some recommendations based on the survey findings are suggested below:

1. The benefits of regular physical activity are well-known, such as improving cardiorespiratory and muscular fitness, bone health and reducing the risk of developing chronic diseases and depression. However, only about two-fifths of respondents (43.8%) achieved the recommended amount of physical activities suggested by the WHO. Thus, education about the health benefits and recommended level of physical activities would continue be reinforced to facilitate the public to engage in a more active lifestyle.

2. 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, the survey found that only about one-fifth (20.5%) of the respondents had a daily average intake of 5 or more servings of fruit and vegetables. Health promotion campaigns would continue be strengthened to educate the public about health benefits of at least 5 servings of fruit and vegetable intake a day and to encourage the public to consume more fruits or vegetables.

3. More than a quarter (27.4%) of the respondents who had drunk alcohol during the past year prior to the survey reported that they had engaged in binge drinking (drinking 5 or more glasses/cans of alcohol on one occasion). However, about two-fifths (41.6%) of respondents strongly disagreed/disagreed to the (correct) statement "Alcohol is a human cancer-causing agent (carcinogen)". Information of the harms of alcohol use, and in particular those of binge drinking, would continue be publicised and educate the public to quit drinking or drink less.

4. Regarding the awareness of cancer screening, about two-fifths (44.8%) of the respondents strongly disagreed/disagreed to the (incorrect) statement "Cancer screening results are 100% accurate" and less than one-fifth (17.1%) of them strongly disagreed/disagreed to the (correct) statement "Some cancer screening tests have potential risks". More education about cancer screening would continue be introduced to help the public understand about both strengths and limitations of cancer screening.

Chapter 1   Introduction

The Department of Health commissioned the Social Sciences Research Centre (SSRC) of the University of Hong Kong to conduct a survey in April 2016 to collect information on health-related behaviours and other relevant issues among the adult Hong Kong population. This will provide information to facilitate the planning, implementation and evaluation of health promotion programmes on the prevention of diseases related to lifestyle.

The scope of this survey encompasses the following areas:

- Weight Status, Control and Perception

- Physical Activity and Leisure-time Exercise

- Fruit and Vegetable Consumption

- Meat Consumption

- Smoking Pattern

- Pattern of Alcohol Consumption

- Cervical Cancer Screening (for female respondents only)

- Awareness of Cancer Prevention and Screening

- Use of Mobile Phone

- Demographic Information: gender, age, education level, 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 randomised 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 42 pre-coded questions and 18 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 the Annex.

2.4   Pilot Study

A pilot study comprising 52 successfully completed interviews was conducted on 30th and 31st March 2016 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.

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[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 two Saturdays (11th June 2016 and 18th June 2016) between 18th April and 29th July 2016, except 2nd May, 9th June and 1st July , which are public holidays (a total of 72 weekdays and 2 Saturdays).

Because of the briefing on 18th April 2016, telephone calls were made between 5:30 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 89 691 telephone numbers were attempted. The number of successful interviews was 4 071. Refusal and mid-way termination cases amounted to 2 762. All "not available" (22 048), and "no answer" (10 854) cases were attempted at least seven times before being classified as non-contact cases. The contact rate was 41.2%[3] and the overall response rate was 10.9%[4].

Table 2.6: Final status of telephone numbers attempted

Final status of contacts[5]	Number of cases
(A) No. of telephone numbers sampled	89 691
(B) No. of ineligible cases	49 946
a) Valid working telephone numbers	8 056
i) Claimed wrong number	0
ii) Language problem	222
iii) Non-residential line	4 079
iv) No target respondent	3 755
b) Invalid telephone numbers	41 890
i) Fax / data line	3 784
ii) Non-working / out of service number	38 106

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[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 ((B)(a)(ii), (B)(a)(iii), (B)(a)(iv), (C)(a), (C)(b)(i), (C)(b)(ii) and (C)(b)(iii)) / (A) * 100% = (222 + 4 079 + 3 755 + 4 071 + 92 + 22 048 + 2 670) / 89 691 * 100% = 41.2%.

[4] Response rate = the number of completed interviews divided by the estimated total number of eligible cases, i.e. from Table 2.6, C(a) * (1 / (C + D * C / (B(a) + C))) * 100% = 4 071* (1 / (28 881 + 10 864 * 28 881 / (8 056 + 28 881))) * 100% =10.9%.

[5] "Language problem": eligible respondents who were not able to speak clearly in any of the specified languages such as Cantonese, Putonghua or English. "Non-working / out of service number": not a valid telephone line (because we used a random method to generate telephone numbers, see section 2.1). "Mid-way termination": eligible respondents who initially accepted the interview but failed to complete the interview due to some reasons. "Not available": eligible respondents who were busy at the time of telephone contact. "Refusal cases": eligible respondents who refused the interview.

(C) No. of eligible cases	28 881
a) Successfully completed interviews	4 071
b) Unsuccessful cases	24 810
i) Mid-way termination cases	92
ii) Non-contact cases such as selected eligible person not-at-home / not available	22 048
iii) Refusal cases	2 670
(D) No. of cases with unknown eligibility status[6]	10 864
a) Answering machine	4
b) Busy line	0
c) Call blocking, password needed	0
d) Immediate disconnection[7]	6
e) No answer	10 854

2.7   Sample Size and Sampling Error

A sample size of 4 071 successful interviews was achieved (the target sample size was 4 000). The width of a 95% confidence interval for this sample size is at most +/− 1.5%[8]. This means that we can have 95% confidence that the true population proportion falls within the sample proportion plus or minus 1.5%. For example, 70.5% of the respondents reported that they had consumed at least one alcoholic drink during the past year prior to the survey, and then the *conservative* 95% confidence interval for the true percentage of the population falls between 70.5% ± 1.5%, i.e. 69.0% and 72.0%.

2.8   Quality Control

All SSRC interviewers were well trained in a standardised 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.

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[6] Including only those telephone numbers with unknown eligibility status in all call attempts made so far. The breakdown of (D) shows only the latest / final call disposition of these cases.

[7] Including those cases which the calls disconnected before the cases could be classified as eligible.

[8] 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 then:

$$\pm 1.96 \times \sqrt{\frac{0.5 \times 0.5}{4071}} \times 100\% = \pm 1.5\%$$

2.9   Statistical Analysis and Weighting

This survey revealed some differences in the proportions of gender, age and type of living quarters when compared with the Hong Kong population data compiled by the Census and Statistics Department (C&SD) for the second quarter of 2016. The proportions of respondents among age groups of 50-64 were much higher than the population while the proportions of respondents aged 25-39 years old were much lower. Table 2.9a (i) and Table 2.9a (ii) show the differences in terms of age, gender and type of living quarters.

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

Table 2.9a (i): Data of age, gender and type of living quarters of this survey

Gender/ Age group		This survey			
		Public rental flats	**Subsidised sale flats**	**Private housing**	**Total**
		% of Total	*% of Total*	*% of Total*	*% of Total*
Male	18-24	2.07%	1.02%	2.96%	6.05%
	25-29	0.99%	0.51%	1.15%	2.65%
	30-34	0.82%	0.33%	1.22%	2.37%
	35-39	0.61%	0.28%	1.40%	2.30%
	40-44	0.77%	0.41%	2.02%	3.19%
	45-49	0.69%	0.77%	2.58%	4.03%
	50-54	1.25%	0.99%	3.14%	5.38%
	55-59	1.43%	1.02%	3.80%	6.25%
	60-64	1.76%	1.15%	4.21%	7.12%
	Total	10.38%	6.48%	22.47%	39.34%
Female	18-24	2.81%	1.25%	3.11%	7.17%
	25-29	1.51%	0.48%	1.35%	3.34%
	30-34	1.17%	0.43%	1.61%	3.21%
	35-39	0.89%	0.77%	2.70%	4.36%
	40-44	1.12%	0.77%	4.34%	6.22%
	45-49	1.79%	0.82%	3.85%	6.45%
	50-54	3.11%	1.58%	5.79%	10.48%
	55-59	2.30%	1.58%	4.54%	8.42%
	60-64	3.44%	1.58%	5.97%	10.99%
	Total	18.14%	9.26%	33.27%	60.66%
Overall	18-24	4.87%	2.27%	6.07%	13.21%
	25-29	2.50%	0.99%	2.50%	5.99%
	30-34	1.99%	0.77%	2.83%	5.59%
	35-39	1.51%	1.05%	4.11%	6.66%
	40-44	1.89%	1.17%	6.35%	9.41%
	45-49	2.47%	1.58%	6.43%	10.48%
	50-54	4.36%	2.58%	8.93%	15.87%
	55-59	3.72%	2.60%	8.34%	14.67%
	60-64	5.20%	2.73%	10.18%	18.11%
	Total	28.52%	15.74%	55.74%	100.00%

Table 2.9a (ii): Age, gender and type of housing from the Hong Kong land-based non-institutional population data (excluding foreign domestic helpers) compiled by the C&SD for the second quarter of 2016

Gender/ Age group		Hong Kong population data- from the C&SD (2nd quarter of 2016)			
		Public rental housing	Subsidised home ownership housing	Private housing	Total
		% of Total	*% of Total*	*% of Total*	*% of Total*
Male	18 - 24	2.25%	1.00%	2.64%	5.89%
	25 - 29	1.60%	0.85%	2.23%	4.67%
	30 - 34	1.25%	0.88%	2.68%	4.81%
	35 - 39	1.10%	0.67%	2.95%	4.71%
	40 - 44	1.14%	0.56%	3.21%	4.91%
	45 - 49	1.29%	0.79%	2.97%	5.04%
	50 - 54	1.62%	0.98%	3.50%	6.10%
	55 - 59	1.94%	1.23%	3.18%	6.35%
	60 - 64	1.63%	1.08%	2.25%	4.96%
	Total	13.82%	8.03%	25.60%	47.45%
Female	18 - 24	2.12%	0.95%	2.69%	5.77%
	25 - 29	1.57%	0.83%	2.52%	4.93%
	30 - 34	1.39%	0.82%	3.39%	5.60%
	35 - 39	1.26%	0.73%	3.55%	5.54%
	40 - 44	1.63%	0.78%	3.63%	6.03%
	45 - 49	1.78%	1.02%	3.50%	6.29%
	50 - 54	2.13%	1.20%	3.61%	6.94%
	55 - 59	2.00%	1.43%	2.96%	6.39%
	60 - 64	1.68%	1.03%	2.34%	5.06%
	Total	15.56%	8.81%	28.18%	52.55%
Overall	18 - 24	4.37%	1.95%	5.34%	11.65%
	25 - 29	3.17%	1.68%	4.75%	9.60%
	30 - 34	2.64%	1.70%	6.07%	10.41%
	35 - 39	2.36%	1.40%	6.50%	10.25%
	40 - 44	2.77%	1.34%	6.84%	10.95%
	45 - 49	3.06%	1.81%	6.46%	11.34%
	50 - 54	3.75%	2.18%	7.11%	13.04%
	55 - 59	3.94%	2.67%	6.14%	12.74%
	60 - 64	3.32%	2.11%	4.59%	10.02%
	Total	29.38%	16.83%	53.78%	100.00%

Table 2.9b: Weights by age, gender and type of living quarters applied in the analyses

Gender/ Age group		Type of living quarters		
		Public rental flats	**Subsidised sale flats**	**Private housing**
Male	18 - 24	1.089869060	0.976997020	0.892241198
	25 - 29	1.603277161	1.657809680	1.941653024
	30 - 34	1.534913739	2.651736040	2.187102100
	35 - 39	1.792875233	2.378450161	2.100216368
	40 - 44	1.491891589	1.372937917	1.592355436
	45 - 49	1.870958815	1.028417915	1.151828065
	50 - 54	1.296226336	0.985171624	1.115039132
	55 - 59	1.358980817	1.209419469	0.835986429
	60 - 64	0.928855138	0.937917139	0.535026629
	Missing	1.000000000	1.000000000	1.000000000
Female	18 - 24	0.754671765	0.762288545	0.865894166
	25 - 29	1.045848728	1.719081737	1.864347044
	30 - 34	1.182233465	1.897128578	2.109072931
	35 - 39	1.410401713	0.951629378	1.313270274
	40 - 44	1.449134335	1.020190572	0.836285251
	45 - 49	0.994333207	1.249527767	0.907732051
	50 - 54	0.685162362	0.760365762	0.623030977
	55 - 59	0.871184243	0.905007766	0.651716522
	60 - 64	0.488765137	0.654206493	0.391677798
	Missing	1.000000000	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 24.0 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, age and type of living quarters. 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 gender and age were applied to compile weightings in this survey, the distribution of gender and age reported in this report matches the Hong Kong land-based non-institutional population (excluding foreign domestic helpers) compiled by the C&SD for the second quarter of 2016.

Overall, 53.3% of the respondents were females and 42.8% were aged between 30 and 49.

3.1.2   Marital status

About three-fifths (60.0%) of the respondents were married – 53.5% had children and 6.4% did not have a child. Over one-third (36.3%) of the respondents were never married, 2.6% were divorced or separated and 1.2% were widowed.

3.1.3   Educational attainment

The majority (80.5%) of the respondents had upper secondary education or above – 34.6% had upper secondary (S4-S6)/matriculation and 45.9% attained tertiary education or above. The rest of the respondents (19.5%) had lower secondary (S1-S3) or primary education or below.

3.1.4   Occupation

About one-third (33.4%) of the respondents were not working. Of these, 7.3% were students, 13.6% were homemakers, 4.8% were unemployed persons, 7.2% were retired persons and 0.6% were other non-working persons.

A relatively higher proportion of the respondents were clerks (14.7%), followed by associate professionals (10.2%), professionals (10.1%), employers/managers/ administrators (9.9%) and service workers (7.5%).

3.1.5 Income

Less than half (45.4%) of the respondents had a monthly personal income below $20,000 – 34.6% had a monthly personal income of $10,000-$19,999 and 10.8% had a monthly personal income below $10,000.

For the monthly household income, about two-fifths (38.3%) of the respondents had a monthly household income below $30,000 – 17.0% had a monthly household income of $20,000-$29,999, 15.1% had a monthly household income of $10,000-$19,999 and 6.1% had a monthly household income below $10,000.

3.1.6 Type of living quarters

As type of living quarters was applied as one of the weighting factors in this survey, the distribution of type of living quarters reported in this report matches the Hong Kong land-based non-institutional population (excluding foreign domestic helpers) compiled by the C&SD for the second quarter of 2016.

More than half (53.9%) of the respondents were living in private housing, followed by public rental flats (29.2%) and Housing Authority/Housing Society subsidised sale flats (16.8%).

Table 3.1: Demographic information (Section 10: Q1-Q8)

Gender	Base = 4 071	Age	Base = 3 994
Male	46.7%	18-24	11.6%
Female	53.3%	25-29	9.5%
		30-34	10.2%
Marital Status	**Base = 4 047**	35-39	10.1%
Never married	36.3%	40-44	11.0%
Married and with child(ren)	53.5%	45-49	11.4%
Married and without child	6.4%	50-54	13.1%
Divorced/ Separated	2.6%	55-59	12.8%
Widowed	1.2%	60-64	10.1%
Educational Attainment	**Base = 4 060**	**Occupation**	**Base = 3 988**
Primary or below	6.6%	Employer/Manager/ Administrator	9.9%
Lower secondary (S1- S3)	12.9%		
Upper secondary (S4-S6)/ Matriculation	34.6%	Professional	10.1%
Tertiary (Non-degree, degree or above)	45.9%	Associate professional	10.2%
		Clerk	14.7%
		Service worker	7.5%
		Shop sales worker	2.8%

Table 3.1: Demographic information (Section 10: Q1-Q8)[9] (Continued)

Type of Living Quarters	Base = 3 988		
		Skilled agricultural/fishery worker	0.1%
		Craft and related worker	3.2%
Public rental flats	29.2%	Plant and machine operator and assembler	3.0%
Housing Authority subsidised sale flats	15.7%		
		Unskilled worker	5.0%
Housing Society subsidised sale flats	1.1%	Student	7.3%
		Homemaker	13.6%
Private residential flats	47.6%	Unemployed person	4.8%
Villas/Bungalows/Modern village houses	3.0%	Retired person	7.2%
Simple stone structures/ Traditional village houses	2.0%	Other non-working person	0.6%
Staff quarters	1.3%		
Non-domestic quarters	#		

Monthly Personal Income	Base =2 491[10]	Monthly Household Income	Base =3 296
Below $10,000	10.8%	Below $10,000	6.1%
$10,000-$19,999	34.6%	$10,000-$19,999	15.1%
$20,000-$29,999	23.7%	$20,000-$29,999	17.0%
$30,000-$49,999	17.7%	$30,000-$49,999	28.9%
$50,000 or above	13.1%	$50,000 or above	32.9%

Less than 0.05%

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[9] Refers to the question number in the survey questionnaire, see the Annex.
[10] For non-working respondents, they did not need to answer question Q6 (monthly personal income).

3.2 Weight Status, Control and Perception

Four questions were asked in this survey to ascertain the respondents' height, weight, and waist circumference and their perception of their current weight. The respondents' body mass index (BMI) was calculated from the reported height and weight.

Those respondents with a body height out of the suggested range 100-190 cm, body weight out of the suggested range 37-120 kg 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 26 outlier cases for height or weight (including nine pregnant women) were excluded from analyses in section 3.2.5. In addition, 90 cases were excluded from the BMI analyses due to outliers and missing data for height or weight.

3.2.1   Height

The self-reported height of the respondents ranged from 106.0 cm to 190.0 cm. About two-fifths (40.4%) of the respondents were within the height range from 160.0 cm to less than 170.0 cm, followed by 27.1% in the range from 170.0 cm to less than 180.0 cm. The overall mean and median height were 164.6 cm and 165.0 cm respectively (Table 3.2.1).

Table 3.2.1: Height distribution of respondents (percentage, mean and median) (Section 1: Q1a)

Height (cm)	Number	% of Total
100.0 – < 150.0	67	1.7%
150.0 – < 160.0	1 020	25.3%
160.0 – < 170.0	1 626	40.4%
170.0 – < 180.0	1 092	27.1%
180.0 – 190.0	223	5.5%
Total	*4 027**	*100%*
Mean	164.6 cm	
Median	165.0 cm	

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

3.2.2 Weight

The self-reported weight of the respondents ranged from 37.0 kg to 120.0 kg. About one-third (31.9%) of the respondents fell into the weight range from 50.0 kg to less than 60.0 kg, followed by 27.9% in the range from 60.0 kg to less than 70.0 kg. The overall mean and median weight were 61.5 kg and 60.0 kg respectively (Table 3.2.2).

Table 3.2.2: Weight distribution of respondents (percentage, mean and median) (Section 1: Q1b)

Weight (kg)	Number	% of Total
37.0 – < 40.0	11	0.3%
40.0 – < 50.0	664	16.6%
50.0 – < 60.0	1 279	31.9%
60.0 – < 70.0	1 117	27.9%
70.0 – < 80.0	588	14.7%
80.0 – 120.0	351	8.7%
Total	*4 008**	*100%*
Mean	61.5 kg	
Median	60.0 kg	

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 50-120 cm (~19.7-47.2 inches) or who were pregnant were treated as outliers. A total of 20 cases (9 of them were pregnant women) were treated as outliers.

The self-reported waist circumference of the respondents ranged from 50.0 cm to 116.8 cm. About two-fifths (41.1%) of the respondents had their waist circumference in the range from 70.0 cm to less than 80.0 cm, followed by 27.9% in the range from 80.0 cm to less than 90.0 cm. The overall mean and median waist circumference were 76.5 cm and 76.2 cm respectively (Table 3.2.3).

Table 3.2.3: Waist circumference distribution of respondents (percentage, mean and median) (Section 1: Q1c)

Waist circumference (cm)	Number	% of Total
50.0 – < 60.0	25	0.7%
60.0 – < 70.0	875	23.2%
70.0 – < 80.0	1 553	41.1%
80.0 – < 90.0	1 055	27.9%
90.0 – 120.0	268	7.1%
Total	*3 776**	*100%*
Mean	76.5 cm	
Median	76.2 cm	

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 the World Health Organization (WHO) classification and locally adapted classification for Chinese adults in Hong Kong

According to the WHO classification, about seven-tenths (70.1%) of the respondents were classified as "normal", 17.4% as "overweight" and 3.8% as "obese". Less than one-tenth (8.8%) of the respondents were regarded as "underweight" (Table 3.2.4.1a).

Table 3.2.4.1a: Distribution of weight status by WHO classification (Section 1: Q1a & Q1b)

Weight status	BMI	Number	% of Total
Underweight	BMI < 18.5	350	8.8%
Normal	BMI 18.5 – < 25.0	2 790	70.1%
Overweight	BMI 25.0 – < 30.0	691	17.4%
Obese	BMI ≥ 30.0	150	3.8%
Total		**3 981***	**100%**

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

Based on the locally adapted classification for Chinese adults in Hong Kong, about half (51.5%) of the respondents were classified as "normal", 21.1% as "obese" and 18.5% as "overweight", while the remaining 8.8% were classified as "underweight" (Table 3.2.4.1b).

Table 3.2.4.1b: Distribution of weight status by the locally adapted classification for Chinese adults in Hong Kong (Section 1: Q1a & Q1b)

Weight status	BMI	Number	% of Total
Underweight	BMI < 18.5	350	8.8%
Normal	BMI 18.5 – < 23.0	2 052	51.5%
Overweight	BMI 23.0 – < 25.0	738	18.5%
Obese	BMI ≥ 25.0	841	21.1%
Total		**3 981***	**100%**

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, about half (50.3%) of the respondents perceived it as "just right". However, 41.9% considered themselves as "overweight" while 7.8% considered themselves as "underweight" (Table 3.2.5a).

Table 3.2.5a: Perception of current weight status (Section 1: Q2)

Perception of current weight	Number	% of Total
Overweight	1 691	41.9%
Just right	2 028	50.3%
Underweight	314	7.8%
Total	*4 033**	*100%*

Note: * All respondents excluding outliers for height, weight or pregnant respondents, "don't know" and refusal

Table 3.2.5b shows the differences of weight status between the locally adapted classification and the respondents' perception. About half (50.2%) of the respondents considered their weight status as "just right" while slightly more than half (51.6%) were classified as "normal". On the other hand, 42.0% of respondents perceived themselves as "overweight" while 39.6% were classified as "overweight" or "obese". Overall, 67.6% of the respondents perceived their weight status in a way consistent with the adapted criteria, while 17.8% of the respondents overestimated and 14.5% underestimated their weight status.

Table 3.2.5b: Comparison of weight status between the locally adapted classification and respondents' perception of their current weight (Section 1: Q1a, Q1b & Q2)

Cross-tabulation		Weight status by the locally adapted classification				
		Underweight	Normal	Overweight	Obese	*Total*
Respondents' perception of current weight	**Overweight**	17	496	449	706	1 669
	% of Total	0.4%	12.5%	11.3%	17.8%	42.0%
	Just right	194	1 391	278	128	1 992
	% of Total	4.9%	35.1%	7.0%	3.2%	50.2%
	Underweight	138	160	5	5	308
	% of Total	3.5%	4.0%	0.1%	0.1%	7.8%
	Total	350	2 048	732	840	3 970
	% of Total	8.8%	51.6%	18.4%	21.2%	100.0%

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

3.3 Physical Activities and Leisure-time Exercise

Eight questions were asked to assess the frequency and duration of physical activities[11] that the respondents had engaged in. Seven of the questions were adopted from the International Physical Activity Questionnaire (IPAQ) short form (see Annex, Section 2: Q1a-Q4).

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, 71.9% of the respondents spent at least 10 minutes walking every day. On the other hand, 44.6% and 56.9% 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 (Section 2: Q1a, Q2a & Q3a)*
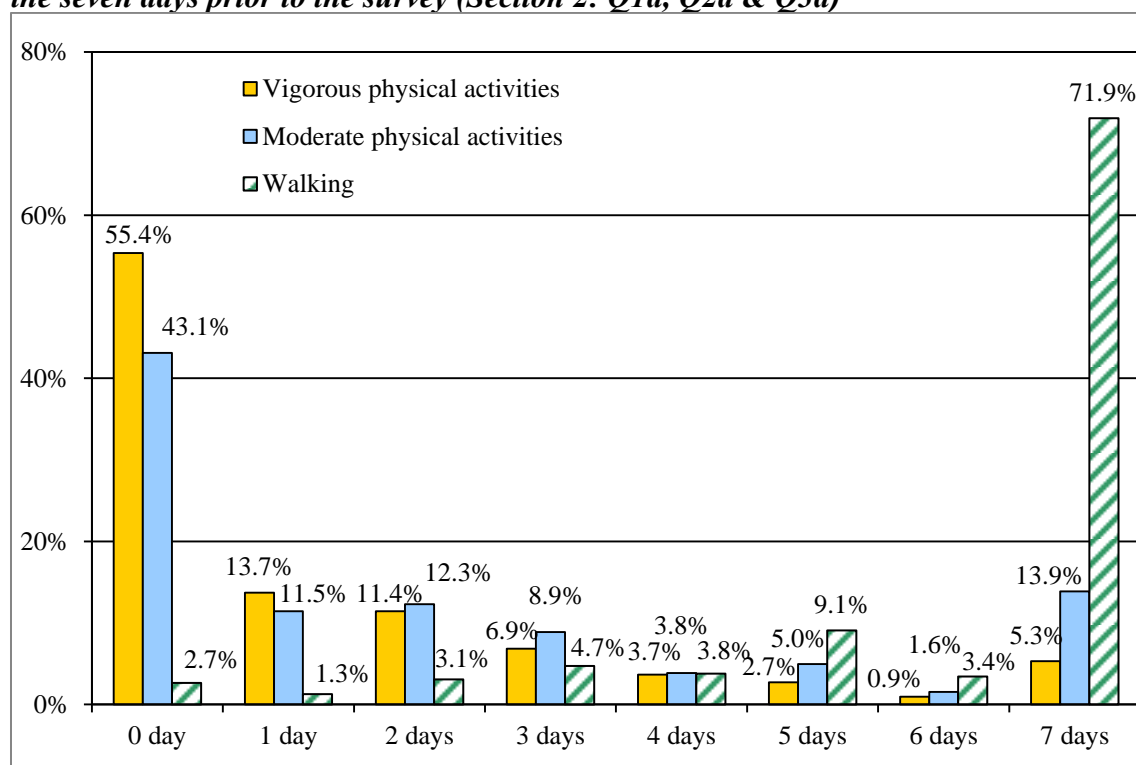
Base: All respondents excluding "don't know" and refusal (Vigorous physical activities = 4 071; Moderate physical activities = 4 071; Walking = 4 069)

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[11] 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 and the heart beat much faster than normal, for example running, aerobics, football, swimming, heavy physical work and jogging. Moderate physical activities are defined as those that make people breathe somewhat harder and the heart beat somewhat faster 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 physical activities, moderate physical activities 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 1.3 days per week on vigorous physical activities and 2.1 days per week on moderate physical activities. In contrast, the average number of days spent on walking was much higher at 6.1 days per week.

Fig. 3.3.1b: Weekly average number of days spent on different types of physical activities with median and mode (Section 2: Q1a, Q2a & Q3a)

Bar chart. Y-axis "Days per week" from 0 to 7.

Median and Mode
Vigorous exercise activities= both 0 day/week
Moderate exercise activities= 1 day/week for median and 0 day/week for mode
Walking= both 7 days/week

Vigorous physical activities: 1.3
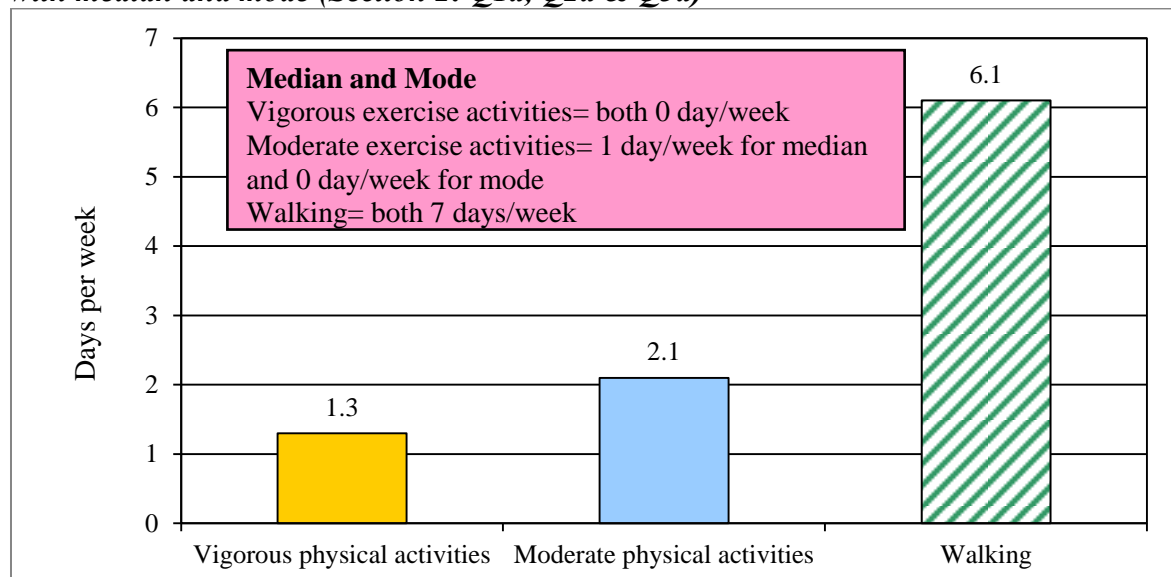Moderate physical activities: 2.1
Walking: 6.1

Base: All respondents excluding "don't know" and refusal (Vigorous physical activities = 4 071; Moderate physical activities = 4 071; Walking = 4 069)

3.3.2   Daily average time spent on physical activities[12]

On average, respondents spent 12.4 minutes per day on vigorous physical activities, 15.0 minutes per day on moderate physical activities and 61.8 minutes per day on walking. The median and mode average time spent per day were both zero minute for vigorous physical activities. And the median average time spent per day was 4.3 minutes and the mode average time spent per day was 0 minute for moderate physical activity. Both the median and mode average time spent per day were 30 minutes for walking (Fig. 3.3.2a).

Fig. 3.3.2a: Daily average minutes spent on different types of physical activity with median and mode (Section 2: Q1a, Q1b, Q2a, Q2b, Q3a & Q3b)
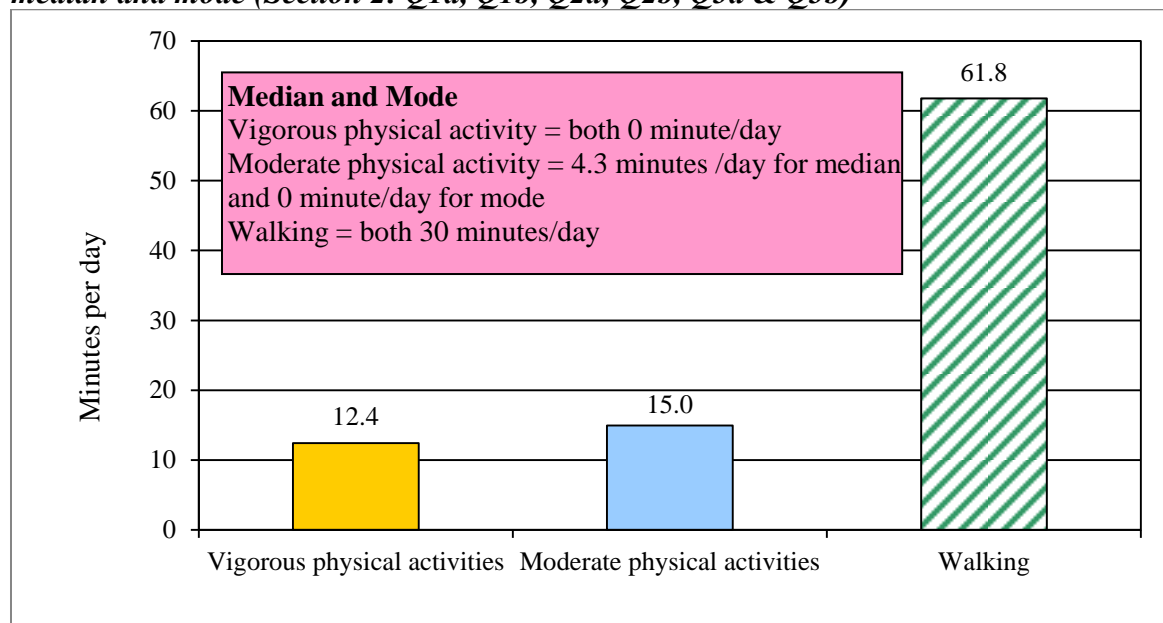
Base: All respondents excluding "don't know" and refusal (Vigorous physical activities = 4 062; Moderate physical activities = 4 056; Walking = 3 989)

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[12] 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: (Q1a*Q1b)/7; Moderate exercise: (Q2a*Q2b)/7; Walking: (Q3a*Q3b)/7.

Overall, about one-tenth of the respondents spent a daily average of 31 minutes or more on vigorous physical activities (10.6%) and moderate physical activities (11.7%), while 45.6% of the respondents spent a daily average of 31 minutes or more on walking (Table 3.3.2b).

Table 3.3.2b: Daily average time spent on doing different types of physical activity (Section 2: Q1a, Q1b, Q2a, Q2b, Q3a & Q3b)

Time spent (minutes)	Vigorous physical activity		Moderate physical activity		Walking	
	Number	% of Total	Number	% of Total	Number	% of Total
Below 10	2 903	71.5%	2 647	65.3%	399	10.0%
10 – < 16	206	5.1%	358	8.8%	392	9.8%
16 – < 31	524	12.9%	575	14.2%	1 378	34.5%
31 – < 61	296	7.3%	321	7.9%	986	24.7%
61 or above	133	3.3%	155	3.8%	834	20.9%
Total	*4 062**	*100%*	*4 056**	*100%*	*3 989**	*100%*

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

3.3.3 Sitting[13]

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 (55.0%) of the respondents reported that they sat for at least six hours per day during weekdays. The mean and median sitting hours were 6.4 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) (Section 2: Q4)

Sitting time	Number	% of Total
10 mins - < 2 hrs	155	3.9%
2 - < 4 hrs	752	18.8%
4 - < 6 hrs	892	22.3%
6 - < 8 hrs	689	17.2%
8 - < 10 hrs	669	16.7%
10 - 15 hrs	844	21.1%
Total	*4 000**	*100%*
Mean	6.4 hrs	
Median	6.0 hrs	

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

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[13] Sitting includes time spent sitting at work, at home or other places, 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)[14] . 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, 103 cases which were excluded from this part of analysis for "don't know", refusal or cases being classified as outliers.

3.3.4.1 Categorical scoring

The categorical score comprises three levels of physical activity, namely "low", "moderate" and "high"[15]. 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*

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[14] This document for data processing and analysis of the IPAQ is available on the website: http://sites.google.com/site/theipaq/scoring-protocol.

[15] 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 (55.8%) 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 26.8% and 17.4 % respectively (Fig. 3.3.4.1b).

Fig. 3.3.4.1b: Classification of respondents' physical activity level (Section 2: Q1a, Q1b, Q2a, Q2b, Q3a & Q3b)
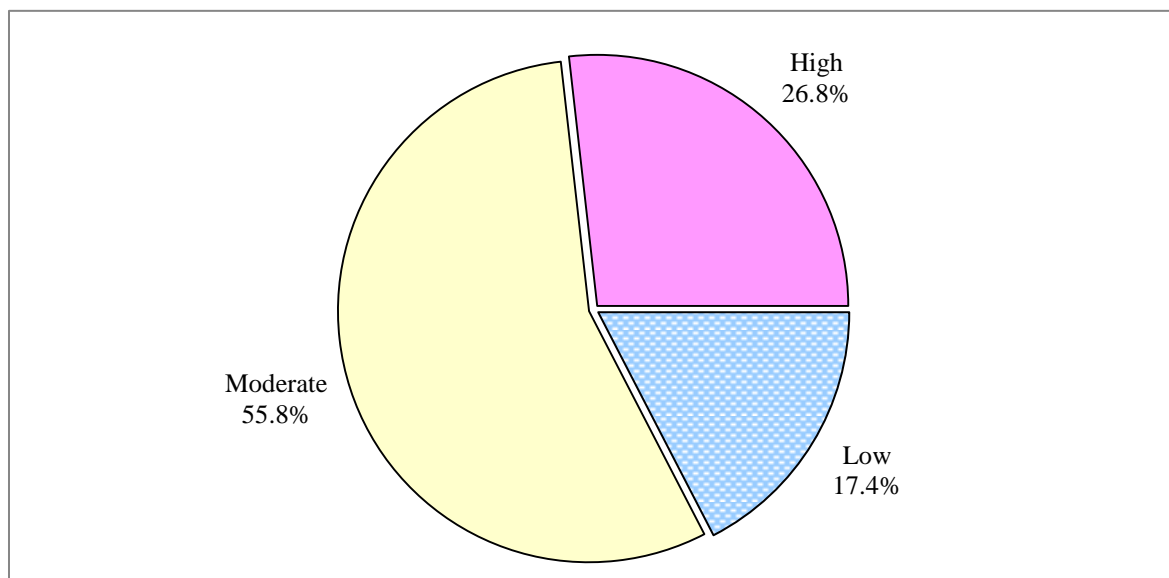
Base: All respondents excluding "don't know", refusal and outliers according to the data processing rules of the IPAQ analysis guidelines = 3 968

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 [16] is computed by multiplying the MET by the minutes performed. MET-minute scores are equivalent to kilocalories expended for a 60 kg 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.

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

Table 3.3.4.2a: Continuous score computation

MET-min/week for each activity	= (MET level of activity) x (minutes of activity/day) x (days/week)
Total MET-min/week	= MET-min/week for Walking + MET-min/week for Moderate PA + MET-min/week for Vigorous PA
Example:	*Consider:* *MET-min/week for 30 minutes/day, 5 days/week* *Given:* *MET levels for Walking = 3.3 METs, Moderate PA = 4.0 METs and Vigorous PA = 8.0 METs*
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 activities
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 median for vigorous physical activity was 0 and the median for moderate activity was 120 MET-minutes per week while the median for walking was 693 MET-minutes per week. The median score of these three activities combined was 1 533 MET-minutes per week.

Table 3.3.4.2b: Medians of the IPAQ continuous score for each type of physical activity (PA) level (Section 2: Q1a, Q1b, Q2a, Q2b, Q3a & Q3b)

Statistics	Continuous Score (MET-minutes/week)			
	Vigorous PA	Moderate PA	Walking	**Total**
Median	0	120	693	1 533

*Note: *All respondents excluding "don't know" and refusal according to the data processing rules of the IPAQ analysis guideline (Vigorous physical activities = 4 062; Moderate physical activities = 4 056; Walking = 3 989)*

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[17]. 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[18].

Overall, more than two-fifths of the respondents (43.8%) attained 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 (Section 2: Q1a, Q1b, Q2a & Q2b)
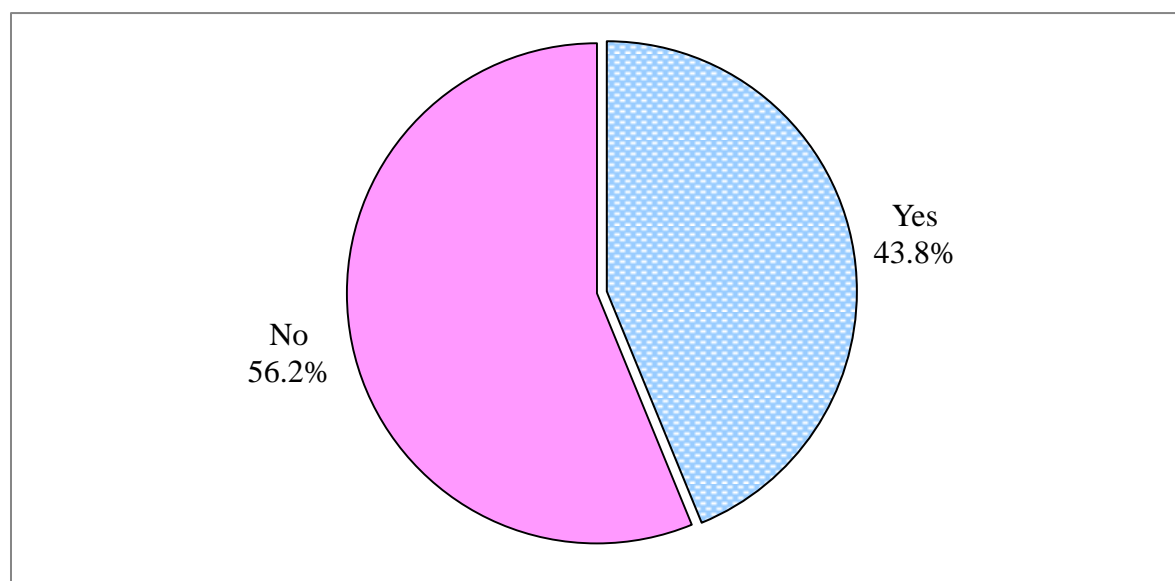
Base: All respondents excluding "unknown" physical activity level = 4 052

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[17] "Global Recommendations on Physical Activity for Health", World Health Organization; 2010. (http://whqlibdoc.who.int/publications/2010/9789241599979_eng.pdf)
[18] 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[19]

Respondents were asked how often they exercised in their leisure-time during the thirty days prior to the survey. Overall, about one-third (30.6%) of the respondents reported that they exercised less than once a month in their leisure-time. On the other hand, 18.5% of the respondents reported that they exercised 4 times or more a week and 37.7% 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 (Section 2: Q5)
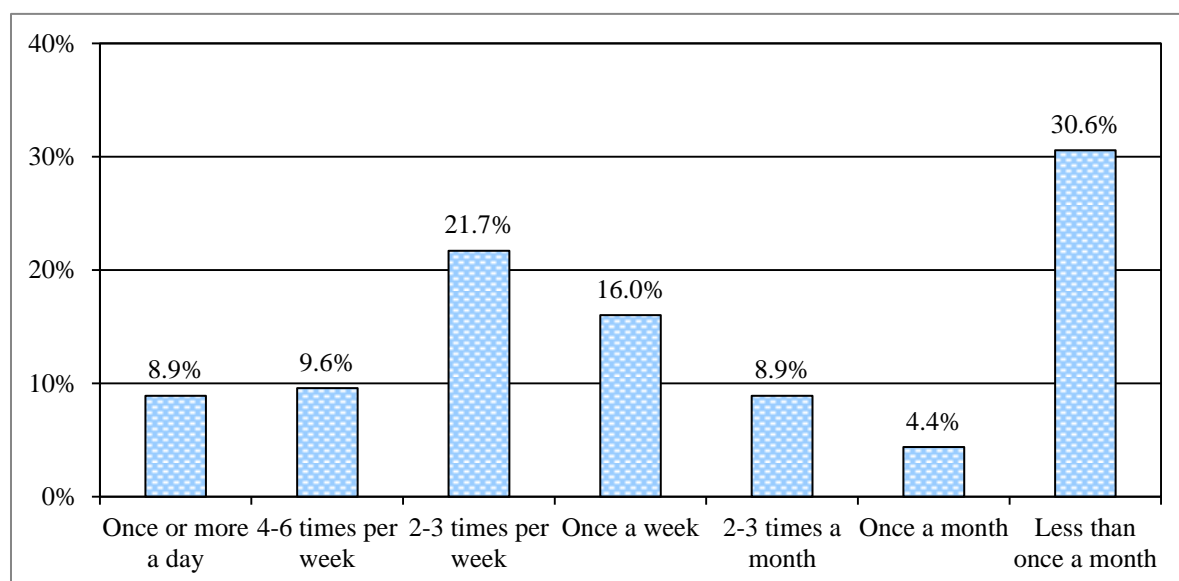
Base: All respondents excluding "don't know" and refusal = 4 066

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[19] 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[20]

Overall, only 2.0% 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 (Section 3: Q3)
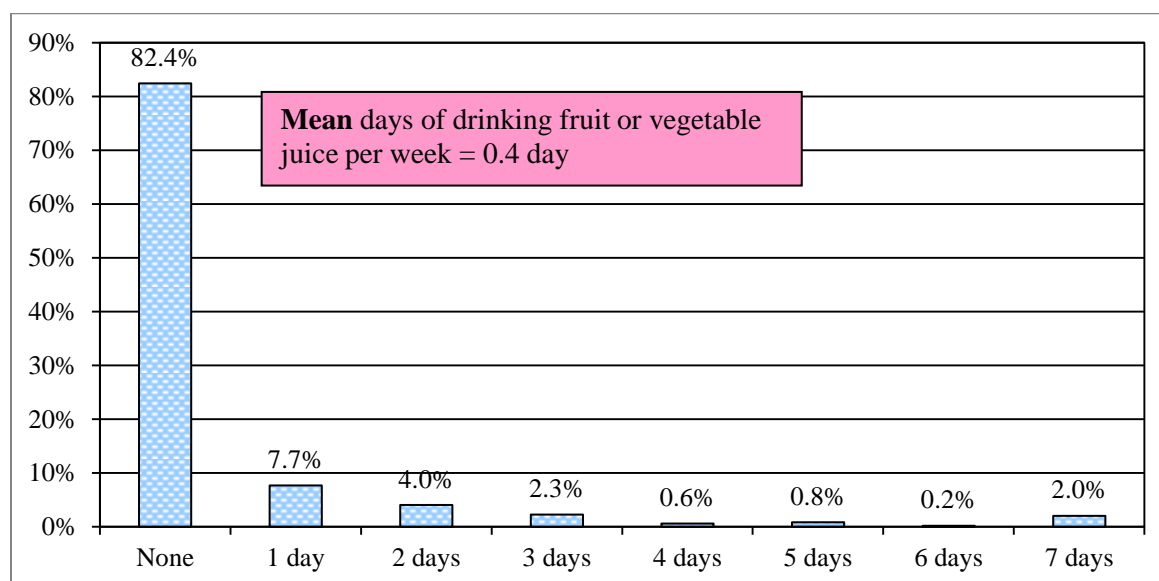
Base: All respondents excluding "don't know" and refusal = 4 067

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 (80.3%) of the respondents had consumed vegetables every day while about half the respondents (50.2%) 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 (5.0 days per week) (Fig. 3.4.2).

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[20] 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 (Section 3: Q1a & Q2a)
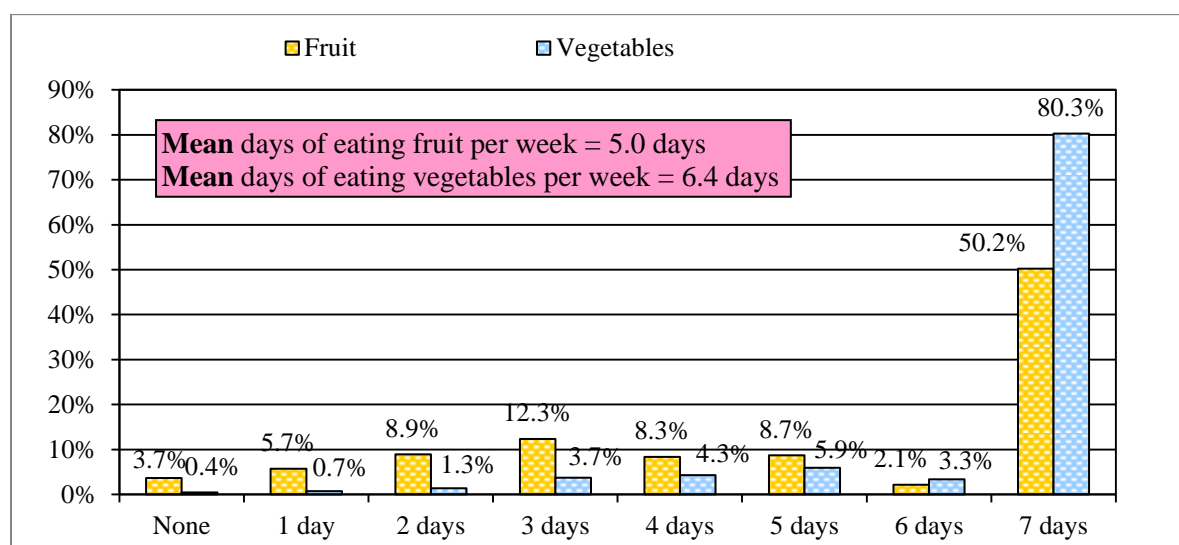
Base: All respondents excluding refusal (Eating fruit = 4 070; Eating vegetables = 4 071)

3.4.3 Amount of fruit and vegetables eaten per day[21]

On average, 46.9% and 30.9% of the respondents consumed less than one fruit per day and less than one bowl of cooked vegetables[22] per day respectively. In addition, less than half (48.1%) of the respondents consumed 1-2 fruit per day and less than two-thirds (63.3%) of the respondents ate 1-2 bowls of cooked vegetables per day on average. Overall, the daily average amount consumed was 1.0 fruit and 1.2 bowls of cooked vegetables (Table 3.4.3).

Table 3.4.3: Average amount of fruit and vegetables eaten per day (Section 3: Q1a, Q1b, Q2a & Q2b)

Average no. of fruit/ no. of bowls of cooked vegetables eaten per day	Fruit		Vegetables	
	Number	**% of Total**	**Number**	**% of Total**
Less than 1	1 908	46.9%	1 253	30.9%
1 – 2	1 958	48.1%	2 568	63.3%
More than 2	201	4.9%	238	5.9%
Total	*4 067**	*100%*	*4 058**	*100%*
Mean	1.0 fruit		1.2 bowls of cooked vegetables	

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

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[21] Respondents were informed that one fruit was a medium-sized apple or orange, one medium-sized banana, two kiwi fruits or plums, or half 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.

[22] 1 bowl of uncooked vegetable was coded as 0.5 bowl of cooked vegetable.

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[23].

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 <u>average number of fruit eaten per day</u>, and <u>twice the average number of bowls of cooked vegetables eaten per day</u> (i.e. one fruit equates to 1 serving and one bowl of cooked vegetables equates to 2 servings).

Overall, about one-fifth (20.5%) of the respondents consumed 5 or more servings of fruit and vegetables per day. The mean and median numbers of servings per day were 3.4 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) (Section 3: Q1a, Q1b, Q2a & Q2b)

No. of servings (excluding juice)	Number	% of Total
Less than 3	1 834 (0 serving = 7)	45.2% (0 serving = 0.2%)
3 - < 5	1 389	34.2%
5 or above	833	20.5%
Total	*4 056**	*100%*
Mean	3.4 servings per day	
Median	3.0 servings per day	

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 <u>the average number of fruit eaten per day</u>, and <u>twice the average number of bowls of cooked vegetables eaten per day</u> (i.e. one fruit equates to 1 serving and 1 bowl of cooked vegetables equates to 2 servings), and <u>the average number of days per week having drunk one cup or more of fruit or vegetable juice</u> (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)[24].

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[23] Fruit, vegetables and NCD disease prevention. Geneva: World Health Organization; 2003. (http://www.who.int/dietphysicalactivity/media/en/gsfs_fv.pdf)

[24] 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, 21.1% of the respondents consumed 5 or more servings of fruit and vegetables per day. The mean and median numbers of servings per day were 3.5 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) (Section 3: Q1a, Q1b, Q2a, Q2b & Q3)

No. of servings (including juice)	Number	% of Total
Less than 3	1 792 (0 serving = 5)	44.2% (0 serving = 0.1%)
3 - < 5	1 403	34.6%
5 or above	857	21.1%
Total	*4 052**	*100%*
Mean	3.5 servings per day	
Median	3.0 servings per day	

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

3.5 Meat Consumption

In this section, 5 questions were asked to understand respondents' meat consumption pattern during the thirty days prior to the survey.

3.5.1 Frequency of consuming red[25] and white meat[26]

Overall, more than two-fifths (44.4%) of the respondents had consumed red meat every day while about a quarter (26.4%) of the respondents had eaten white meat on a daily basis. The average number of days per week in which the respondents consumed red meat and white meat were 5.0 days and 4.2 days respectively (Fig. 3.5.1).

Fig. 3.5.1 Number of days in the week when respondents ate red and white meat (Section 4: Q1a & Q2a)
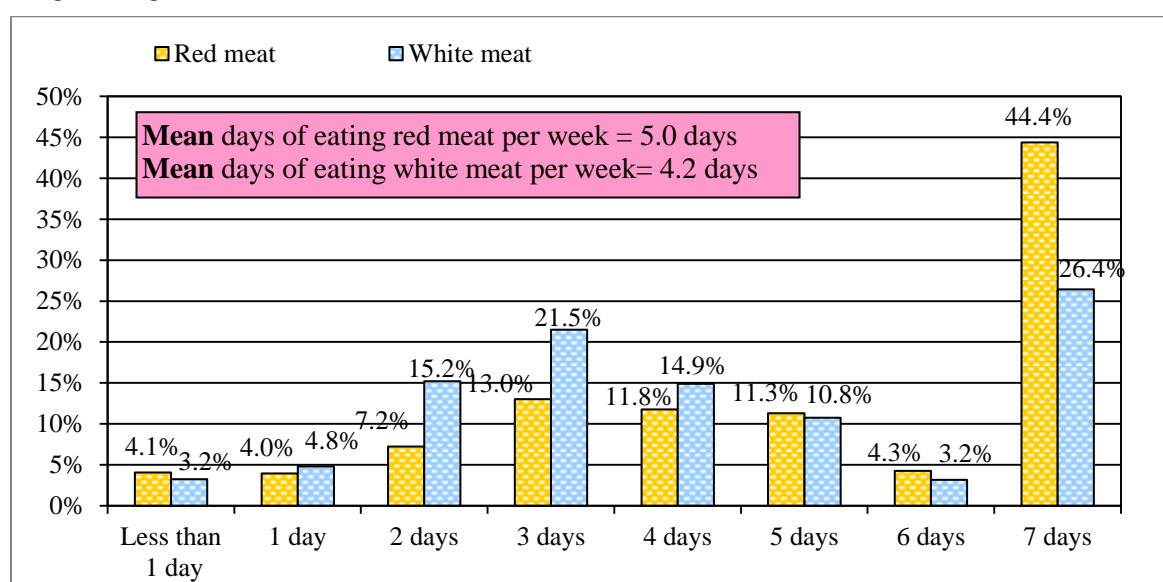
Base: All respondents excluding "don't know" and refusal (Eating red meat = 4 070; Eating white meat = 4 069)

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[25] Respondents were given example of red meat: pork, beef and lamb.
[26] Respondents were given example of white meat: poultry and fish.

3.5.2 Amount of red meat and white meat consumed per day[27]

Overall, about two-fifths (42.6%) of the respondents ate less than 2 taels of red meat per day and more than half (57.1%) of the respondents ate less than 2 taels of white meat per day. On average, respondents consumed 2.7 taels of red meat and 2.1 taels of white meat per day (Table 3.5.2).

Table 3.5.2: Number of taels of red meat and white meat consumed per day (Percentage, mean and median) (Section 4: Q1a, Q1b, Q2a & Q2b)

No. of taels	Red Meat		White Meat	
	Number	% of Total	Number	% of Total
Less than 2	1 719	42.6%	2 299	57.1%
2-4	1 595	39.5%	1 282	31.8%
More than 4	726	18.0%	448	11.1%
Total	*4 040**	*100.0%*	*4 029**	*100.0%*
Mean	2.7 taels		2.1 taels	
Median	2.0 taels		1.7 taels	

*All respondent excluding "don't know" and refusal

3.5.3 Average daily total consumption of red and white meat

In total, about a quarter (25.2%) of the respondents consumed more than 6 taels of red and white meat on average per day (with a mean of 4.8 taels) during the thirty days prior to the survey (Table 3.5.3).

Table 3.5.3: Average daily total consumption of red and white meat per day (Percentage, mean and median) (Section 4: Q1a, Q1b, Q2a & Q2b)

No. of taels	Number	% of Total
Less than 4	1 948	48.5%
4-6	1 058	26.3%
More than 6	1 013	25.2%
Total	*4 018**	*100.0%*
Mean	4.8 taels	
Median	4.0 taels	

*All respondent excluding "don't know" and refusal

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[27] The average number of taels of red/white meat consumption per day was computed by multiplying the average number of days consuming red/white meat on a weekly basis and the average number of taels of red/white meat consumed on the days they had eaten red/white meat and then dividing by 7 days. Red meat: (Q1a*Q1b)/7; White meat: (Q2a*Q2b)/7.

3.5.4   Frequency of consuming processed meat[28]

More than one-third of the respondents (38.3%) had not consumed processed meat per week while only 3.7% of them had eaten processed meat on a daily basis during the thirty days prior to the survey (Fig. 3.5.4).

***Fig. 3.5.4 Number of days in the week when respondents ate processed meat (Section 4: Q3*)**
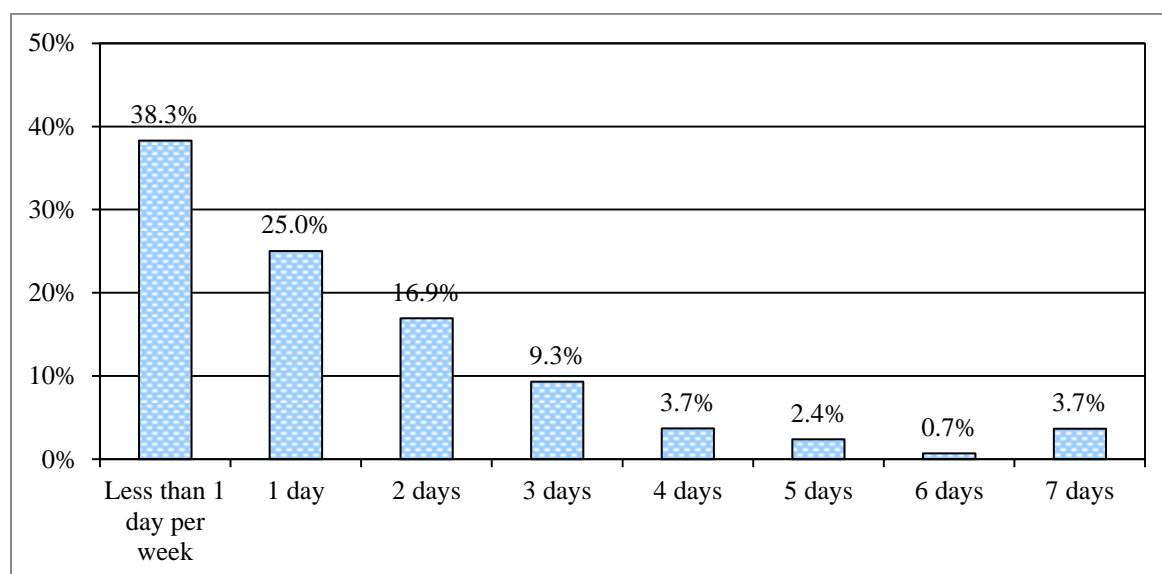
Base: All respondents = 4 071

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[28] Respondents were explained that processed meat included canned meat, cured meat or smoked meat, such as luncheon meat, ham, sausages, bacon and Chinese preserved meat.

3.6 Smoking Pattern

In this survey, four questions were asked to assess respondents' smoking pattern.

3.6.1   Whether smoked before

About four-fifths (79.8%) of the respondents reported that they had never smoked, 9.4% smoked in the past but had now abstained and 10.9% of the respondents were current smokers (Fig. 3.6.1).

Fig. 3.6.1: Breakdown of smoking habits amongst respondents (Section 5: Q1)
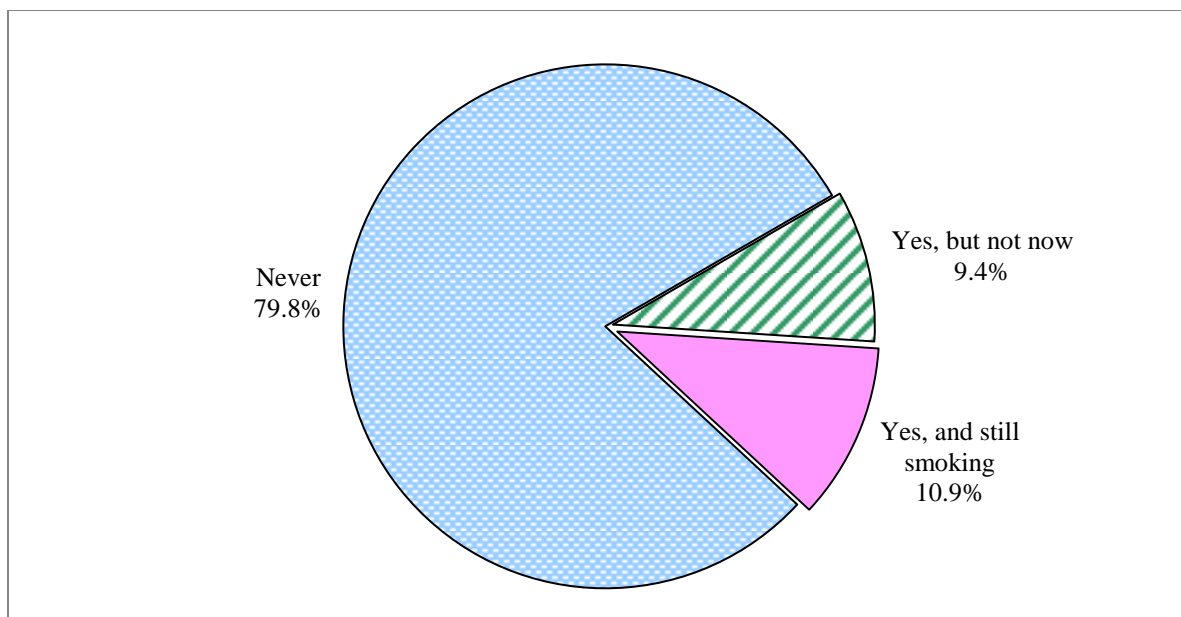
Base: All respondents = 4 071

3.6.2   Abstaining from smoking

Among those who had smoked before but had now abstained from smoking, most (89.6%) of them reported that they had abstained for more than one year and 9.4% had given up smoking for one month to one year. Only 1.0% of them reported that they had given up smoking for less than one month (Fig. 3.6.2).

Fig. 3.6.2: Length of time abstained from smoking (Section 5: Q2)
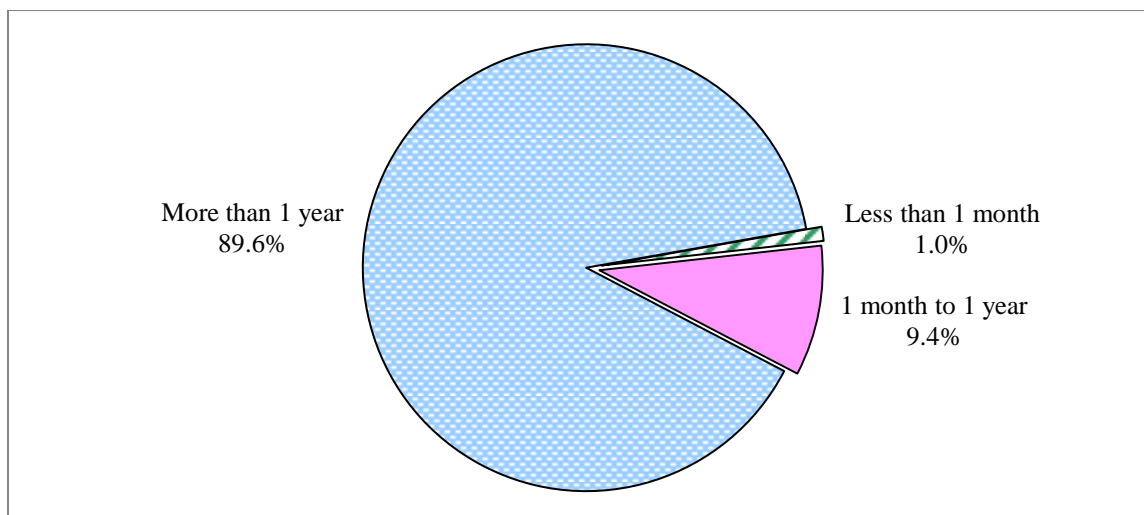
Base: All past smokers = 381

3.6.3   Cigarette consumption

Among the current smokers, the vast majority (95.9%) of them were daily smokers. Almost half (47.1%) of the current smokers reported that they smoked at least 11 cigarettes a day and nearly half (48.8%) of the current smokers reported that they smoked 1-10 cigarettes per day (Fig. 3.6.3).

Fig. 3.6.3: Number of cigarettes smoked on average per day by current smokers (Section 5: Q3a)
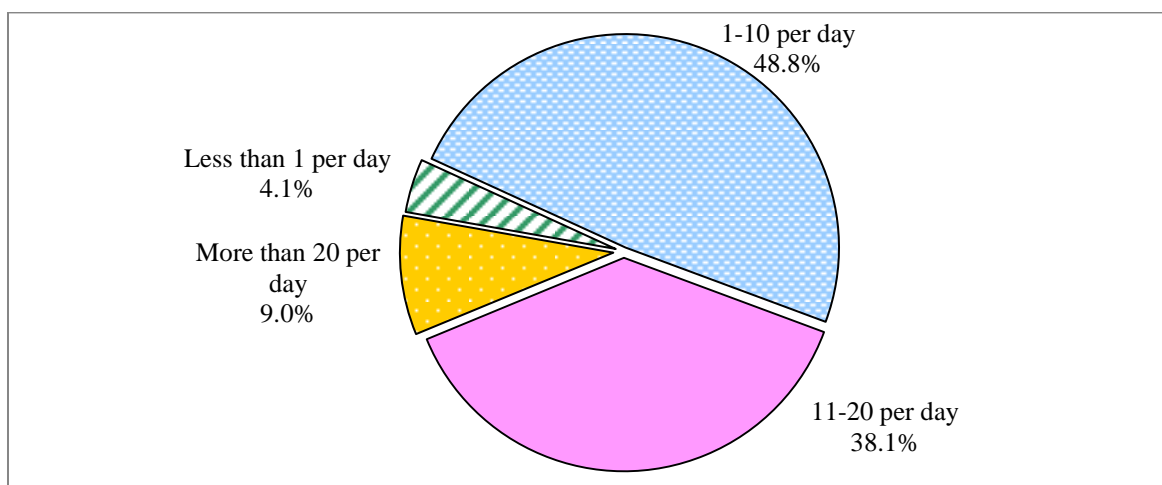
Base: All current smokers excluding refusal = 441

3.6.4 Whether respondents were planning to quit smoking or smoke less in the next 6 months

Among the current smokers, more than half (52.6%) of them had no plan to quit smoking or smoke less in the next 6 months while only about one-fifth (20.7%) of them were planning to quit smoking (Fig. 3.6.4).

Fig. 3.6.4: Whether respondents were planning to quit smoking or smoke less in the next 6 months (Section 5: Q3b)
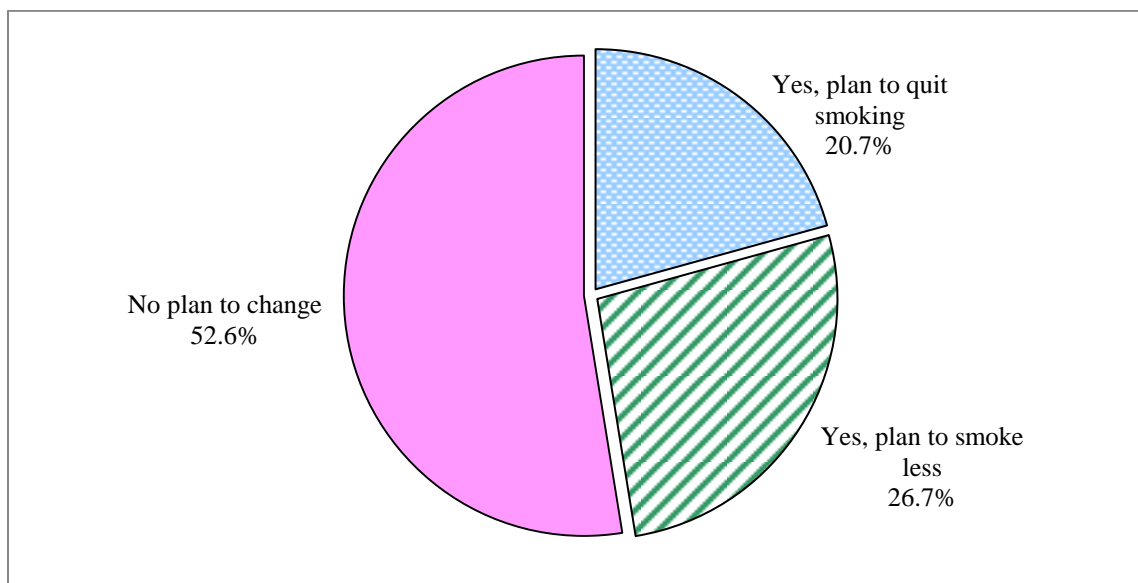
Base: All current smokers excluding "not sure/don't know" and refusal = 432

3.7 Pattern of Alcohol Consumption

In this survey, seven questions were asked to identify the respondents' alcohol drinking patterns.

3.7.1 Whether had a drink containing alcohol during the past year prior to the survey

Overall, about seven-tenths (70.5%) of the respondents reported that they had a drink containing alcohol during the past year prior to the survey. On the other hand, more than a quarter (29.5%) of the respondents reported that they had never drunk alcohol during the past year prior to the survey (Fig. 3.7.1).

Fig. 3.7.1: Whether had a drink containing alcohol during the past year prior to the survey (Section 6: Q1a)
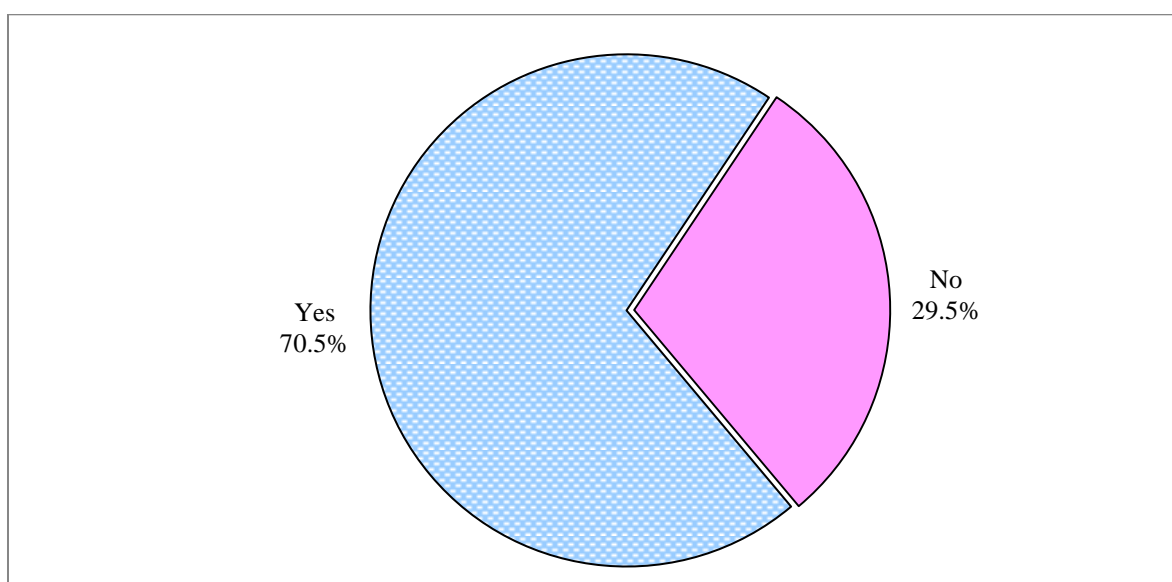
Base: All respondents excluding "don't know" = 4 070

3.7.2 Whether respondents would have a drink containing alcohol in the next 6 months

Among those respondents who had never drunk alcohol during the past year prior to the survey, most (96.5%) of them would not have a drink containing alcohol in the next 6 months. (Fig. 3.7.2)

Fig. 3.7.2: Whether respondents would have a drink containing alcohol in the next 6 months (Section 6: Q1b)
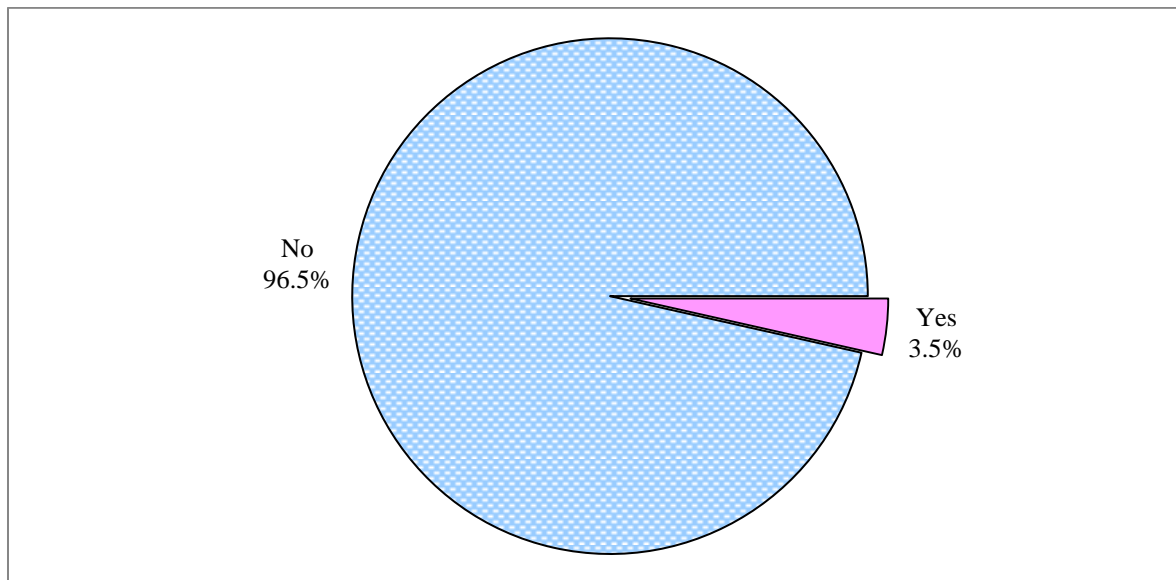
Base: Respondents who had never drunk alcohol during the past year prior to the survey excluding "not sure/don't know" =1 146

3.7.3 Frequency of alcohol consumption

Among those respondents who had at least one alcoholic drink during the past year prior to the survey, less than one-tenth (4.0%) reported that they drank daily. On the other hand, about two-fifths (40.0%) of the drinkers reported that they drank less than monthly (Fig. 3.7.3).

Fig. 3.7.3: Frequency of drinkers consuming at least one alcoholic drink (Section 6: Q2a)
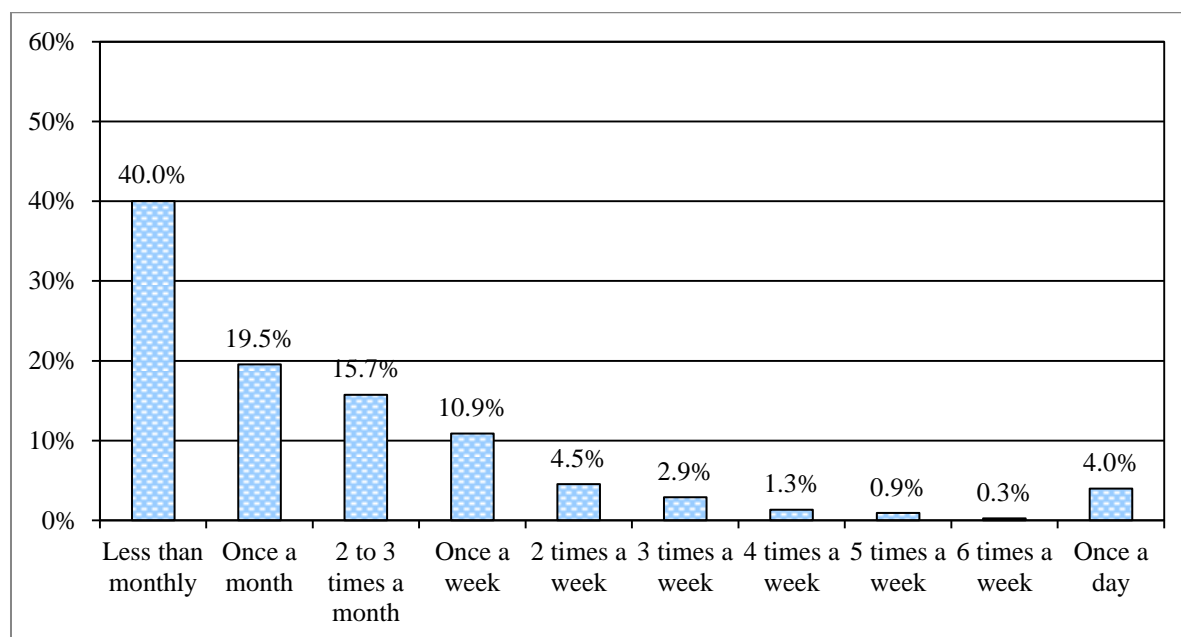
Base: Respondents who had at least one alcoholic drink during the past year prior to the survey excluding outliers and refusal = 2 835

3.7.4 Type of alcoholic drinks consumed by drinkers

Among those respondents who had at least one alcoholic drink during the past year prior to the survey, nearly half (47.2%) of them reported that they consumed beer and about two-fifths (40.7%) of them reported that they consumed red/white wine (Fig. 3.7.4).

Fig. 3.7.4: Type of alcoholic drinks consumed by drinkers (Section 6: Q2b)
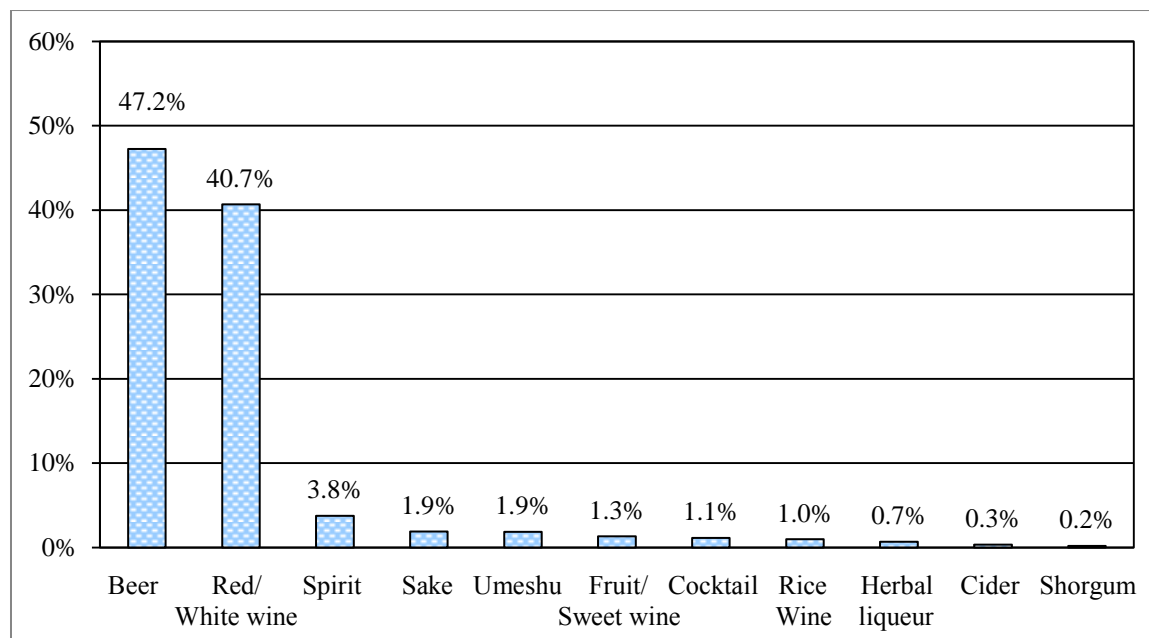
Base: Respondents who had at least one alcoholic drink during the past year prior to the survey excluding outliers and refusal = 2 832

3.7.5 Amount of alcoholic drinks consumed

The respondents who drank at least one alcoholic drink during the past year prior to the survey were further asked about how many standard drinks[29] they would consume on each drinking day. Over four-fifths (82.3%) of them consumed less than 3 standard drinks on each drinking day while less than one-tenth (7.6%) consumed 5 or more standard drinks. On average, they consumed 2.1 standard drinks on each drinking day and the median was 1.3 standard drinks (Table 3.7.5).

Table 3.7.5: Average number of standard drinks consumed on the days respondents drank alcohol (percentage, mean and median) (Section 6: Q2b)

No. of standard drinks	Number	% of Total
Less than 3	2 291	82.3%
3 – < 5	281	10.1%
5 or above	213	7.6%
Total	***2 785***	***100%***
Mean	2.1 standard drinks	
Median	1.3 standard drinks	

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

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[29] The number of standard drinks consumed was estimated as follows: one can of beer of about 330 ml is equal to 1.3 standard drinks; one dining glass of wine of 125 ml is approximately equal to 1.2 standard drinks. For details, please refer to the survey questions (Q2b).

3.7.6   Drinking at least 5 glasses/cans of alcohol on one occasion (Binge drinking)[30]

Among those respondents who had at least one alcoholic drink during the past year prior to the survey, more than a quarter (27.4%) of them had consumed at least 5 glasses/cans of alcohol on one occasion during the past year prior to the survey (Fig. 3.7.6a).

Fig. 3.7.6a: Consumption of at least 5 glasses/cans of alcohol on one occasion by drinkers during the past year prior to the survey (Section 6: Q2c)
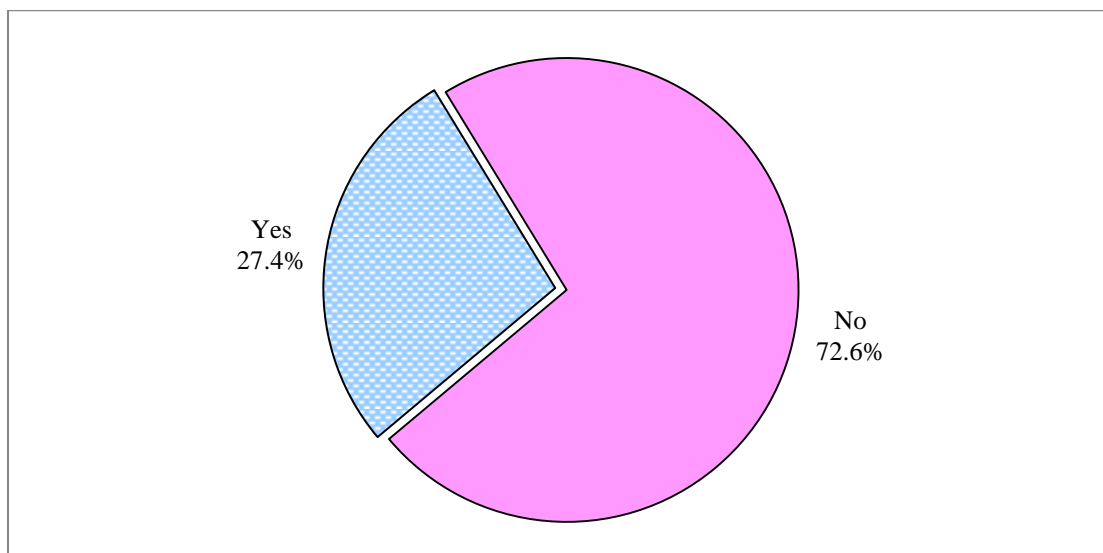
Base: Respondents who had at least one alcoholic drink during the past year prior to the survey, excluding outliers and refusal = 2 791

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[30] 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 three-fifths (62.8%) of them had binge drinking less than monthly and over one-third (37.2%) of them had the experience at least once a month during the past year prior to the survey (Fig. 3.7.6b).

Fig. 3.7.6b: Frequency of binge drinking among those who had the experience during the past year prior to the survey (Section 6: Q2c)
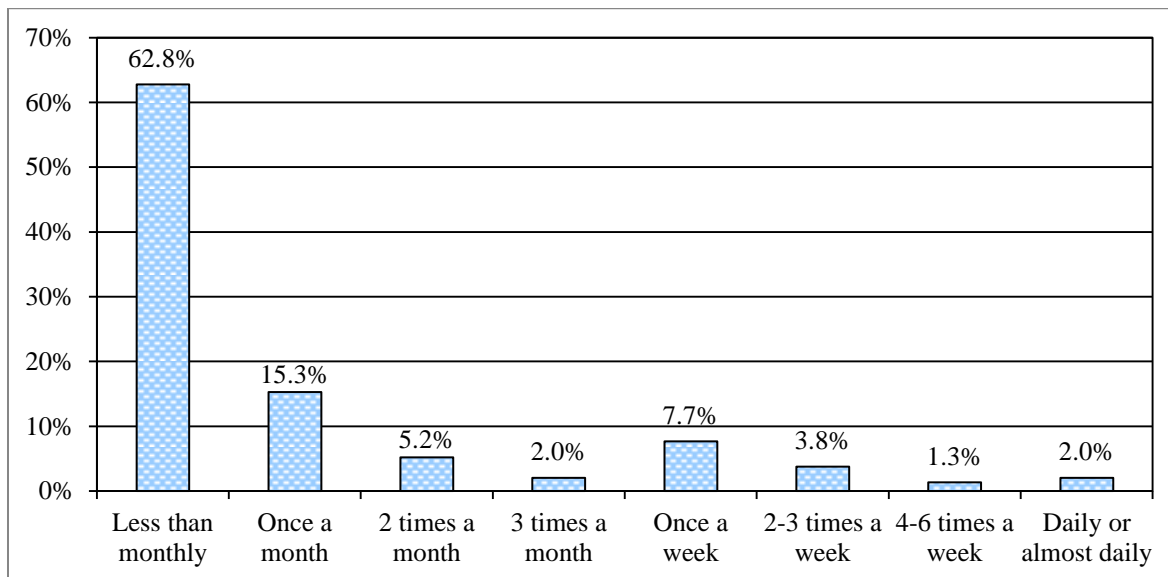
Base: Drinkers who had binge drinking during the past year prior to the survey excluding outliers and refusal = 764

3.7.7   Whether the respondents were planning to change their drinking habit in the next 6 months

Among those respondents who had at least one alcoholic drink during the past year prior to the survey, only 6.8% of them were planning to drink less and 2% were planning to stop drinking completely in the next 6 months (Fig. 3.7.7).

Fig. 3.7.7: Whether the respondents were planning to change their drinking habit in the next 6 months (Section 6: Q2d)
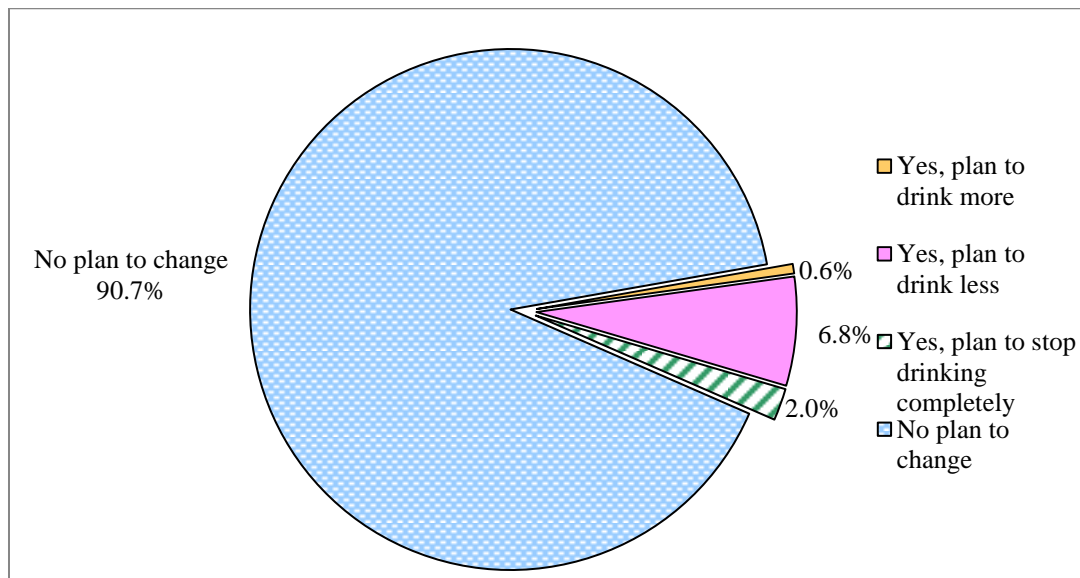
Base: Respondents who had at least one alcoholic drink during the past year prior to the survey excluding outliers, "not sure/don't know" and refusal = 2 791

3.8 Cervical Cancer Screening (for female respondents only)

In this section, five questions were asked to assess female respondents' behaviour regarding cervical screening.

3.8.1   Whether had a cervical smear before

Overall, nearly two-thirds (63.4%) of the female respondents reported that they had a cervical smear before (Fig. 3.8.1).

Fig. 3.8.1: Whether had a cervical smear before (Section 7: Q1a)
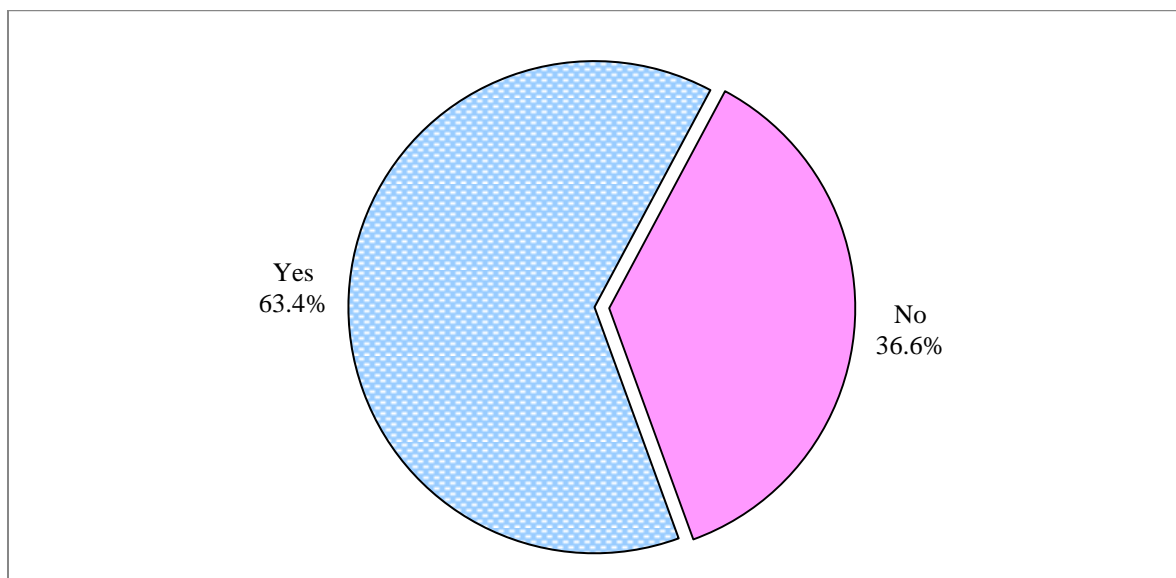
Base: All female respondents excluding "not sure" and refusal = 2 153

3.8.2   Length of time since last cervical smear if ever had a smear

Of those female respondents who had had a cervical smear before, more than two-fifths (45.0%) had their last cervical smear taken within twelve months prior to the survey. About one-third (34.5%) of them had the examination within 13-36 months, while 20.4% had their last cervical smear at least 37 months ago (Fig. 3.8.2).

Fig. 3.8.2: Length of time since last cervical smear if ever had a smear (Section 7: Q1b)
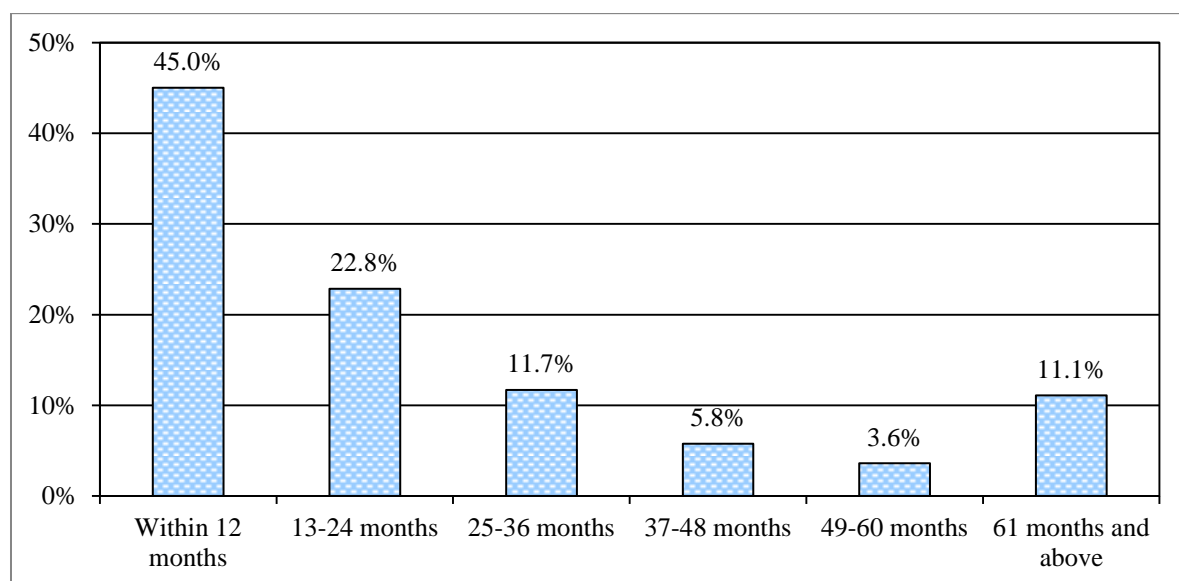
Base: Female respondents who ever had a cervical smear before, excluding "cannot remember" and refusal = 1 328

3.8.3   Cervical smear at a regular interval

About two-thirds (66.6%) of the female respondents who had a cervical smear before had the test at a regular interval (Fig. 3.8.3a).

Fig. 3.8.3a: Whether had a cervical smear at a regular interval (Section 7: Q1c)
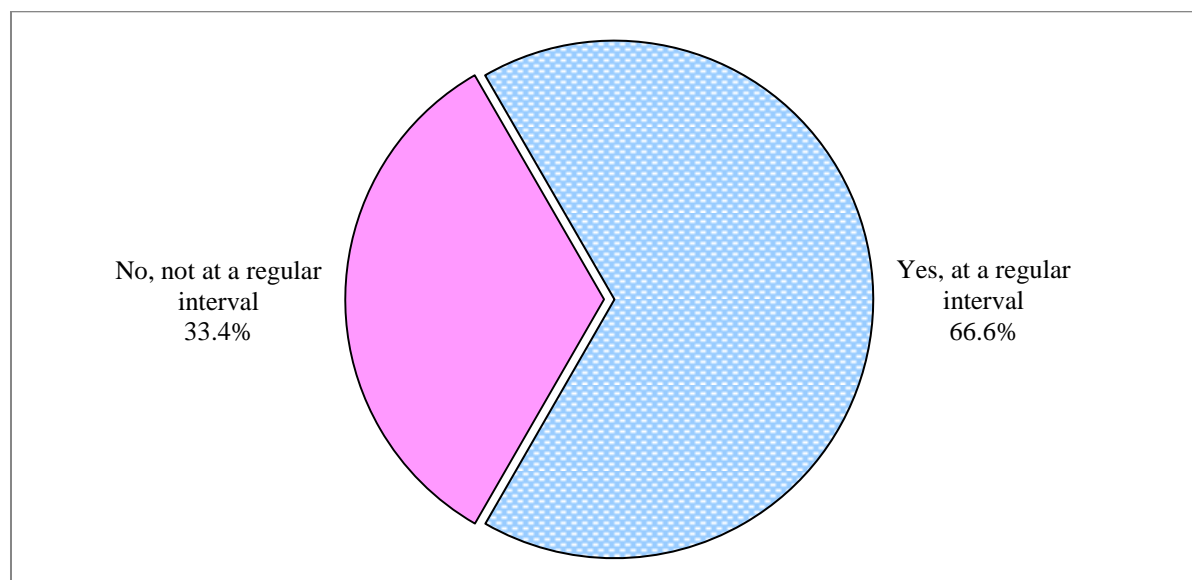
Base: Female respondents who ever had a cervical smear before, excluding refusal = 1 362

Among those female respondents who had a cervical smear at a regular interval, about one-third (35.7%) of the respondents reported that they had a cervical smear once a year. Nearly three-fifths (57.4%) of them had it once every two or three years. Another 3.6% had the test more than once a year (Fig. 3.8.3b).

Fig. 3.8.3b: Frequency of having cervical smear at a regular interval (Section 7: Q1d)
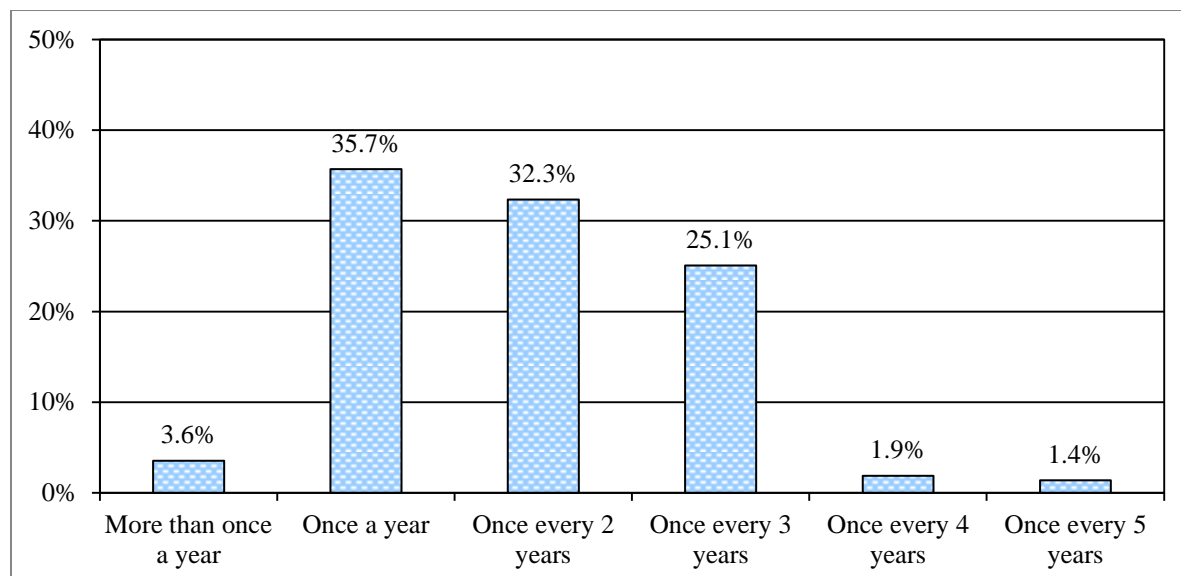
Base: Female respondents who had cervical smear at a regular interval, excluding "cannot say/ remember" and refusal = 853

3.8.4 Whether had a total hysterectomy

Among all female respondents, 4.2% of them had a total hysterectomy (surgical removal of the entire uterus) (Fig. 3.8.4).

Fig. 3.8.4: Whether had a total hysterectomy (Section 7: Q2)
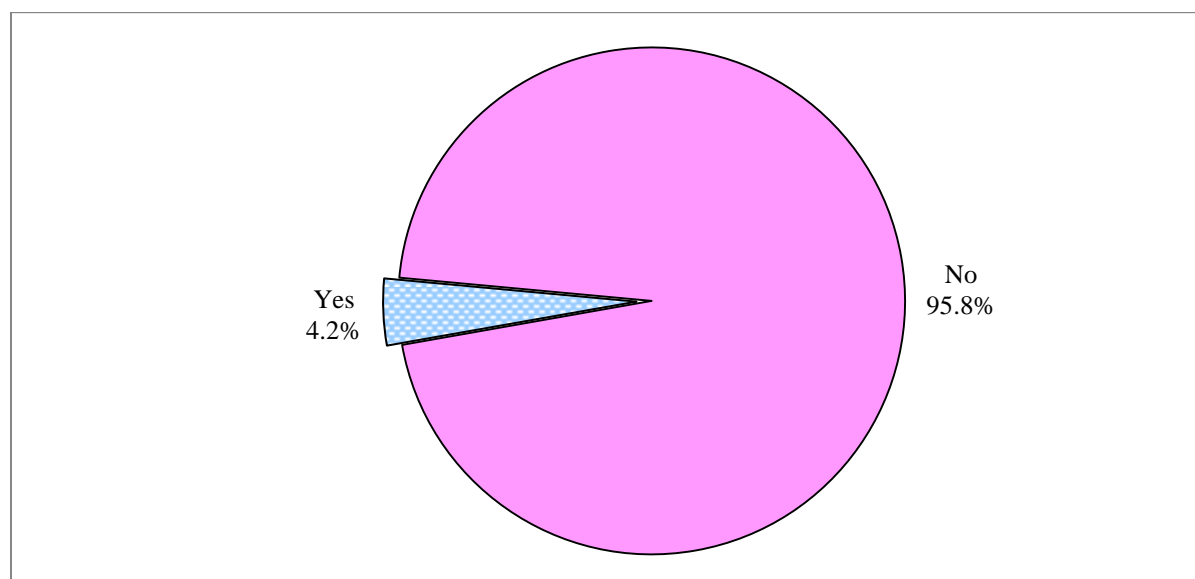
Base: All female respondents excluding refusal = 2 161

3.9 Awareness of Cancer Prevention and Screening

In this section, nine questions were asked to assess the respondents' awareness of cancer prevention and screening.

3.9.1 Awareness of cancer prevention

Over 90% of the respondents strongly agreed/agreed to the (correct) statements "Some cancer cases can be prevented by adopting healthy lifestyle" and "Processed meat can cause colorectal cancer". Over 60% of the respondents strongly agreed/agreed to the (correct) statements "Obesity is a risk factor for cancers" and "Cancer screening is to conduct test on people who have no symptom". However, about two-fifths (41.6%) of them strongly disagreed/disagreed to the (correct) statement "Alcohol is a human cancer-causing agent (carcinogen)" (Fig. 3.9.1).

Fig. 3.9.1: Awareness of cancer prevention (Section 8: Q1a-Q1e)
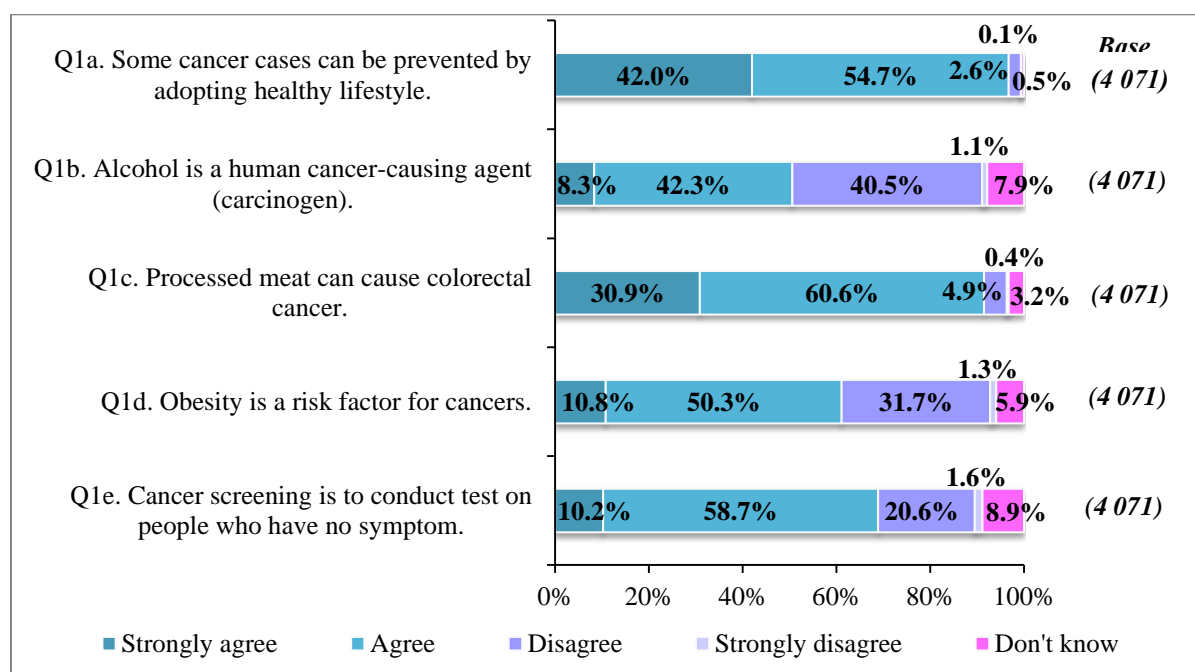
Base: All respondents

3.9.2   Awareness of cancer screening

The statements "Cancer screening results are 100% accurate" and "Cancer screening may be done without a doctor's instruction or advice" are incorrect, while "Some cancer screening tests have potential risks" is a correct statement. However, only about two-fifths (44.8%) of the respondents strongly disagreed/disagreed to "Cancer screening results are 100% accurate". While over four-fifths (81.2%) of the respondents strongly disagreed/disagreed with "Cancer screening may be done without a doctor's instruction or advice", 17.1% of them strongly disagreed/disagreed to "Some cancer screening tests have potential risks". (Fig. 3.9.2)

Fig. 3.9.2: Awareness of cancer screening (Section 8: Q1f-Q1h)
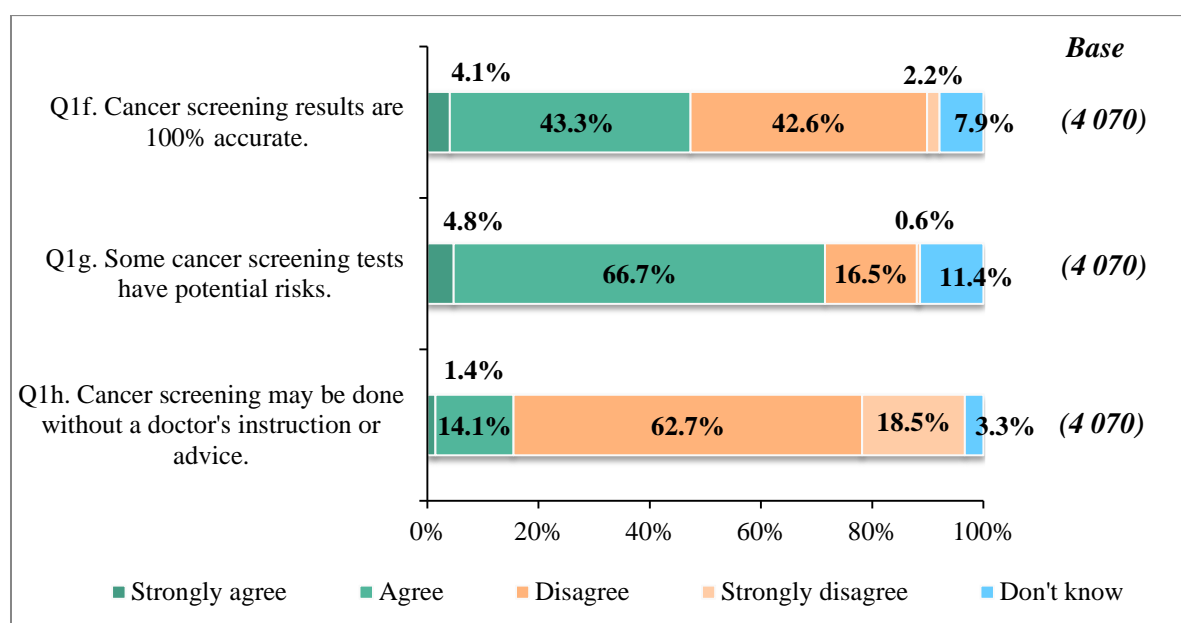
Base: All respondents excluding refusal

3.9.3 Promotional channels the respondents usually get health information on cancer

More than two-thirds (68.2%) of the respondents usually got health information on cancer from television, followed by internet websites (43.1%) and newspapers (printed version) (36.3%) (Fig. 3.9.3).

Fig. 3.9.3: Promotional channels the respondents usually get health information on cancer (Section 8: Q2)
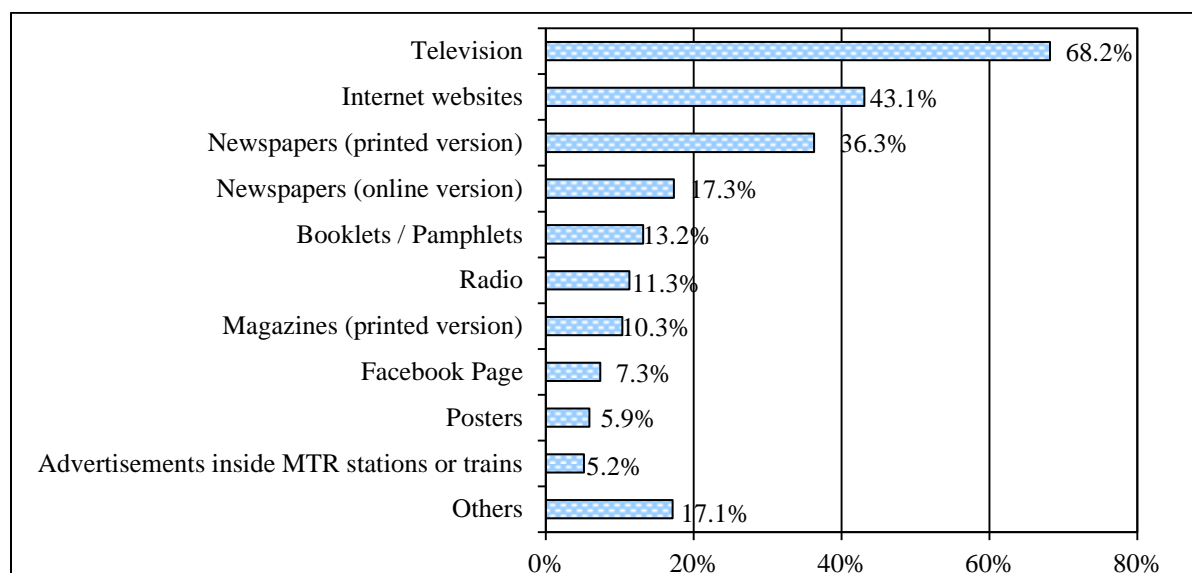
Base: All respondents excluding refusal = 4 048

Notes:

1. *Multiple answers were allowed. Others included "Outdoor billboards", "Roadside banners", "Advertisements on the bodies of trams", "Advertisements on the bodies of buses", "Stickers on the seats of buses", "Bus Roadshow", "Magazines (online version)", "YouTube", "Mobile Apps", "Video CD/DVD", "Talks", "Exhibitions", "Bus shelter advertising", "Books", " Newsletter/email from health/cancer-related organisations", "Advertisement on packing of cigarettes", "Pop-up advertisement from Facebook/Social Media", "Pop-up advertisement from mobile apps", "Pop-up advertisement from web/email", "Curriculum at school", "Advertisement on the bodies of mini bus", "Medical journal", "Medical seminar", "Notice board in hospital/housing estate", "Learn from work" and "Other social media e.g. Instagram"*

2. *For those respondents who have selected more than one other choices, they are counted more than once.*

3.10 Use of Mobile Phone

In this section, three questions were asked to understand the use of mobile phone by respondents.

3.10.1 Whether currently using a mobile phone

Most respondents (98.9%) reported that they were currently using a mobile phone (Fig. 3.10.1).

Fig. 3.10.1: Whether currently using a mobile phone (Section 9: Q1)

Yes
98.9%

No
1.1%
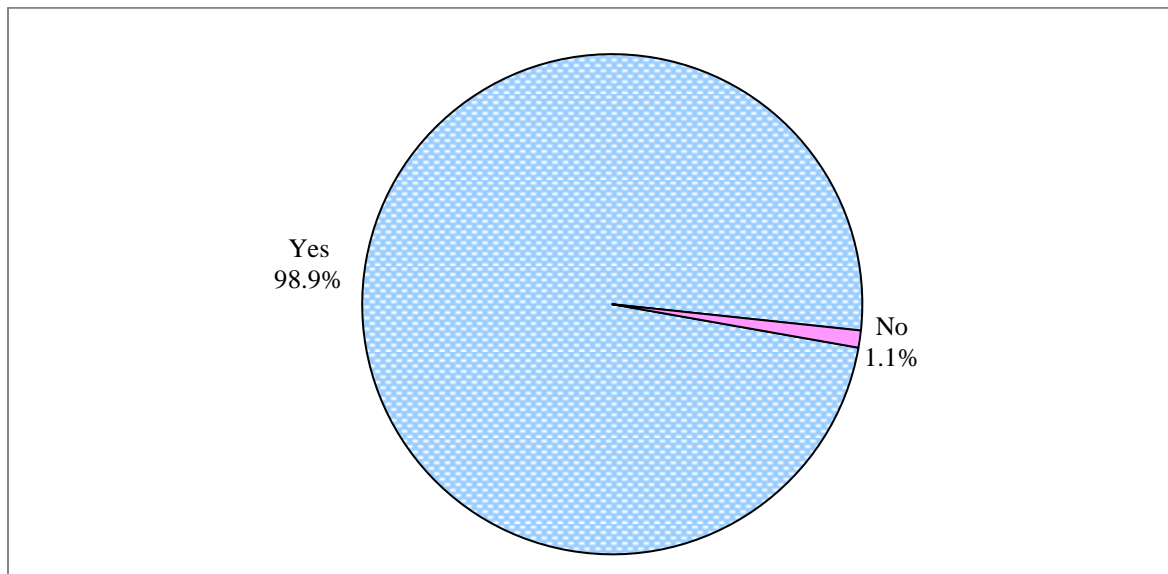
Base: All respondents = 4 071

3.10.2 Number of mobile phone numbers in total which the respondents were using personally and would usually answer

Among those respondents who were currently using a mobile phone, the majority (84.3%) of them had only one mobile phone number which they were using personally and would usually answer (Fig. 3.10.2).

Fig. 3.10.2: Number of mobile phone numbers in total which the respondents were using personally and would usually answer (Section 9: Q2)
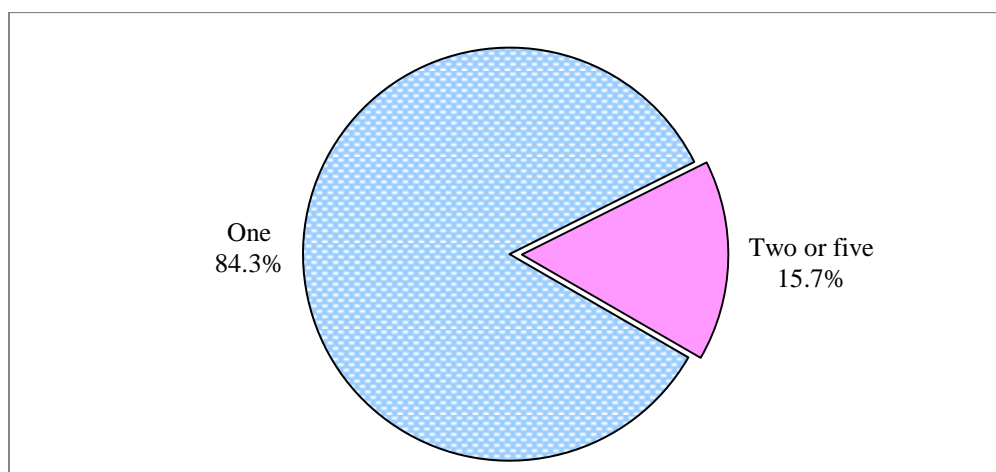
Base: Respondents who were currently using a mobile phone excluding outliers and refusal = 4 015

3.10.3 Percentage of all the telephone calls that the respondents received on their mobile phone

Among those respondents who were currently using a mobile phone, about half (51.8%) of them received 81% or more mobile phone calls out of all the telephone calls as compared with residential telephone (Table 3.10.3).

Table 3.10.3: Percentage of all the telephone calls that the respondents received on their mobile phone (Section 9: Q3)

Percentage (%)	Number	% of Total
1-20	303	7.6%
21-40	198	5.0%
41-60	478	12.0%
61-80	941	23.6%
81-100	2 061	51.8%
Total	*3 982**	*100%*

*Note: * Respondents who were currently using a mobile phone excluding "don't know" and refusal*

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

4.1 Re-grouping of Variables

In this chapter, sub-group analyses are performed based on the breakdown of respondents' demographic information including gender, age, educational attainment, marital status, occupation, monthly household income and type of living quarters to see if there are any significant associations between these demographic factors and the topics being investigated.

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 response of "not sure/don't know", "not applicable", "refuse to answer", "cannot say/remember" and outliers have been excluded from all the sub-group analyses in this chapter.

Table 4.1a: Re-grouping the responses of demographic information (Section 10: Q1 to Q8)

Demographic variable	Original level	Re-grouped level	Sample size after re-grouping (weighted)
Gender	Male	Male	1 900
	Female	Female	2 171
Age group	No grouping	18 – 24	465
		25 – 34	790
		35 – 44	846
		45 – 54	980
		55 – 64	913
Educational attainment	Primary or below	Primary or below	268
	Lower secondary (S1 – S3)	Lower secondary (S1 – S3)	524
	Upper secondary (S4 – S6)/ Matriculation	Upper secondary (S4 – S6)/ Matriculation	1 405
	Tertiary (Non-degree, degree or above)	Tertiary (Non-degree, degree or above)	1 864
Marital status	Never married	Never married	1 468
	Married with child(ren)	Married	2 426
	Married without child		
	Divorced/ Separated	Divorced/Separated/Widowed	153
	Widowed		

Table 4.1a: Re-grouping the responses of demographic information (Section 10: Q1 to Q8) (Continued)

Demographic variable	Original level	Re-grouped level	Sample size after re-grouping (weighted)
Occupation	Employer/ Manager/ Administrator	Managerial/ Professional worker	1 205
	Professional		
	Associate professional		
	Clerk	Clerk	587
	Service worker	Service/ Shop sales worker	410
	Shop sales worker		
	Skilled agricultural/ Fishery worker	Blue collar worker	455
	Craft and related worker		
	Plant and machine operator and assembler		
	Unskilled worker		
	Student	Not working	1 331
	Homemaker		
	Unemployed person		
	Retired person		
	Other non-working person		
Monthly household income	Less than $2,000	Below $8,000	147
	$2,000 - $3,999		
	$4,000 - $5,999		
	$6,000 - $7,999		
	$8,000 - $9,999	$8,000 - $13,999	254
	$10,000 - $11,999		
	$12,000 - $13,999		
	$14,000 - $15,999	$14,000 - $19,999	300
	$16,000 - $17,999		
	$18,000 - $19,999		
	$20,000 - $24,999	$20,000 - $39,999	1 110
	$25,000 - $29,999		
	$30,000 - $34,999		
	$35,000 - $39,999		
	$40,000 - $44,999	$40,000 or above	1 485
	$45,000 - $49,999		
	$50,000 - $54,999		
	$55,000 - $59,999		
	$60,000 or above		
Type of living quarters	Public rental flats	Public rental flats	1 164
	Housing Authority subsidised sale flats	Subsidised sale flats	672
	Housing Society subsidised sale flats		
	Private residential flats	Private housing	2 151
	Villas/ Bungalows/ Modern village houses		
	Simple stone structures/ Traditional village houses		
	Staff quarters		

Table 4.1b: Re-grouping the responses of questions

Question No.	Question content	Original level	Re-grouped level
Section 2: Q1, Q2a and Q3a **Section 3: Q1a, Q2a and Q3** **Section 4: Q1, Q2a and Q3**	Average days per week spent on vigorous/moderate physical activities and walking Average days per week consumed fruit/vegetable and drink fruit/vegetable juice Average days per week consumed red/white/processed meat	0 day/Less than 1 day per week	0 - 1 day
		1 day	
		2 days	2 - 3 days
		3 days	
		4 days	4 - 5 days
		5 days	
		6 days	6 - 7 days
		7 days	
Section 2: Q4	Average time spent on sitting on a weekday	No grouping	10 mins - < 2 hrs
			2 - < 4 hrs
			4 - < 6 hrs
			6 - < 8 hrs
			8 - < 10 hrs
			10 – 15 hrs
Section 2: Q5	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
Section 3: Q1a, Q1b, Q2a and Q2b **Section 3: Q1a, Q1b, Q2a, Q2b and Q3**	The total number of servings of fruit and vegetables consumed per day excluding fruit or vegetable juice The total number of servings of fruit and vegetables consumed per day including fruit or vegetable juice	No grouping	Less than 5 servings 5 servings or more
Section 5: Q3a	Average number of cigarettes smoked per day	Less than 1 per day	10 per day or less
		1-10 per day	
		11-20 per day	More than 10 per day
		More than 20 per day	
Section 6: Q2a	Frequency of having a drink containing alcohol	Less than monthly	Once per week or less
		Once a month	
		2 to 3 times a month	
		Once a week	
		2 times a week	2-3 times per week
		3 times a week	
		4 times a week	4 times per week or more
		5 times a week	
		6 times a week	
		Once a day	

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

Question No.	Question content	Original level	Re-grouped level
Section 6: Q2c	Frequency of having at least 5 or more drinks on one occasion	Never	Never
		Less than monthly	Less than monthly at least
		Once a month	
		2 times a month	
		3 times a month	
		Once a week	
		2-3 times a week	
		4-6 times a week	
		Daily or almost daily	
Section 6: Q2c	Frequency of having at least 5 or more drinks on one occasion	Less than monthly	Once a month or less
		Once a month	
		2 times a month	Twice a month or more
		3 times a month	
		Once a week	
		2-3 times a week	
		4-6 times a week	
		Daily or almost daily	
Section 7: Q1b	Period of time since last cervical smear	Within 12 months	Within 12 months
		13 - 24 months	13 - 36 months
		25 - 36 months	
		37 - 48 months	37 months or above
		49 - 60 months	
		61 months or above	
Section 7: Q1d	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	
Section 8: Q1a-Q1h	Awareness of cancer prevention and screening	Strongly agree	Strongly agree/Agree
		Agree	
		Disagree	Strongly disagree/Disagree
		Strongly disagree	
		Don't know	Don't know

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 [31].

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

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[31] 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 ith column and the jth row, e_{ij} is the expected value corresponding to the ith column and the jth row. The calculation of e_{ij} is as follows: 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 ith sample, n_i is the number of observations of the ith sample.

Spearman's rank correlation coefficient:

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

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 ith rank of X and Y respectively, and $\overline{X}$ and $\overline{Y}$ are the mean rank of X and Y respectively. The rank order of each data value is used in the above formula (adjustments are made if there are ties). Pairwise method is used to handle missing data.

4.2 Weight Status, Control and Perception

4.2.1 Weight status

When the locally adapted classification of weight status for Chinese adults in Hong Kong is used, weight status is associated significantly with the respondents' gender, age, educational attainment, marital status, occupation and type of living quarters.

More male respondents (28.5%) were classified as "obese" while more female respondents (11.9%) 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".

The lower the educational attainment of the respondents, the more likely that they were classified as "obese". Besides, a relatively higher proportion of the married respondents (26.3%) and divorced/separated/widowed respondents (23.1%) than never married respondents (12.6%) were classified as "obese".

Regarding the respondents' occupation, a relatively higher proportion of blue collar workers (35.7%) were classified as "obese". Besides, a relatively higher proportion of those living in subsidised sale flats (24.5%) were classified as "obese".

On the contrary, the respondents with upper secondary education/matriculation (10.4%) were more likely to be "underweight". Never married respondents (13.5%) were more likely to be "underweight" than the divorced/separated/widowed respondents (6.5%) and the married respondents (6.0%). Those living in public rental flats (10.8%) were more likely to be "underweight" (Table 4.2.1).

Table 4.2.1: Weight status by BMI according to the locally adapted classification for Chinese adults in HK (Section 1: Q1a & Q1b)

| | | | | | | | p-value | |
| | | | | | | | Kruskal-Wallis test | Rank Correlation |
Variable	Level	Base	Under-weight	Normal	Overweight	Obese		
Gender	Male	1 867	5.3%	45.6%	20.5%	28.5%	0.000	
	Female	2 114	11.9%	56.8%	16.7%	14.6%		
Age group	18-24	458	21.2%	62.5%	9.3%	7.0%		0.000
	25-34	760	11.8%	59.2%	16.6%	12.4%		
	35-44	832	7.7%	51.2%	18.5%	22.6%		
	45-54	963	5.0%	47.1%	20.0%	27.9%		
	55-64	893	5.2%	44.3%	22.9%	27.6%		
Educational attainment	Primary or below	255	5.4%	45.6%	16.9%	32.1%		0.000
	Lower secondary (S1-S3)	514	4.7%	42.3%	22.9%	30.2%		
	Upper secondary (S4-S6)/Matriculation	1 371	10.4%	52.1%	18.2%	19.3%		
	Tertiary (Non-degree, degree or above)	1 832	9.2%	54.6%	17.7%	18.5%		
Marital status	Never married	1 443	13.5%	59.5%	14.4%	12.6%	0.000	
	Married	2 365	6.0%	46.8%	20.8%	26.3%		
	Divorced/Separated/Widowed	150	6.5%	50.1%	20.2%	23.1%		

Table 4.2.1: Weight status by BMI according to the locally adapted classification for Chinese adults in HK (Section 1: Q1a & Q1b) (Continued)

Variable	Level	Base	Under-weight	Normal	Overweight	Obese	Kruskal-Wallis test	Rank Correlation
							p-value	
Occupation	Managerial/ Professional worker	1 176	6.0%	51.7%	20.2%	22.2%	0.000	
	Clerk	575	9.6%	58.5%	18.4%	13.5%		
	Service/Shop sales worker	402	11.5%	48.0%	17.1%	23.4%		
	Blue collar worker	448	6.4%	36.7%	21.2%	35.7%		
	Not working	1 301	11.5%	54.0%	16.6%	17.8%		
Type of living quarters	Public rental flats	1 135	10.8%	51.6%	17.5%	20.1%	0.005	
	Subsidised sale flats	657	6.7%	50.2%	18.5%	24.5%		
	Private housing	2 109	8.5%	51.8%	18.9%	20.8%		

4.2.2 Perception about current weight status

Perception about current weight status is associated significantly with the respondents' gender, age, educational attainment, marital status and type of living quarters.

A relatively higher proportion of female respondents (45.4%), respondents aged 35-64 (ranging from 46.4% to 48.7%), those with lower secondary education (49.9%) and married or divorced/separated/widowed respondents (ranging from 46.7% to 48.0%) and those living in subsidised sale flats (46.5%) considered themselves as "overweight" (Table 4.2.2).

Table 4.2.2: Perception about current weight status (Section 1: Q3)

Variable	Level	Base	Overweight	Just right	Underweight	Kruskal-Wallis test	Rank Correlation
						p-value	
Gender	Male	1 886	38.0%	52.3%	9.7%	0.000	
	Female	2 147	45.4%	48.5%	6.1%		
Age group	18-24	463	24.5%	61.1%	14.4%		0.000
	25-34	777	32.5%	59.4%	8.1%		
	35-44	834	47.2%	46.2%	6.6%		
	45-54	975	48.7%	45.4%	5.9%		
	55-64	908	46.4%	46.0%	7.6%		
Educational attainment	Primary or below	263	44.2%	45.2%	10.6%		0.001
	Lower secondary (S1-S3)	519	49.9%	44.7%	5.4%		
	Upper secondary (S4-S6)/ Matriculation	1 389	42.7%	48.8%	8.5%		
	Tertiary (Non-degree, degree or above)	1 851	38.7%	53.7%	7.6%		

Table 4.2.2: Perception about current weight status (Section 1: Q3) (Continued)

| | | | | | | p-value | |
| | | | | | | Kruskal-Wallis test | Rank Correlation |
Variable	**Level**	**Base**	**Overweight**	**Just right**	**Underweight**		
Marital status	Never married	1 458	33.6%	56.4%	9.9%		
	Married	2 399	46.7%	46.8%	6.5%	0.000	
	Divorced/Separated/Widowed	152	48.0%	45.0%	7.0%		
Type of living quarters	Public rental flats	1 152	39.5%	49.1%	11.3%		
	Subsidised sale flats	669	46.5%	48.3%	5.1%	0.001	
	Private housing	2 129	41.7%	51.5%	6.8%		

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 the respondents' gender, age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

The older the respondents and the lower the educational attainment of the respondents, the more likely that they engaged in vigorous physical activities for at least 10 minutes for one day or less during the seven days prior to the survey. Also, female respondents (75.2%), divorced/separated/widowed respondents (75.5%), clerks or service/shop sales workers (ranging from 73.1% to 74.2%), those with monthly household income below $20,000 (ranging from 72.7% to 74.6%) and those living in public rental flats (72.6%) were more likely than their respective counterparts to have engaged in vigorous physical activities for at least 10 minutes for one day or less 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 (Section 2: Q1a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value Kruskal-Wallis test	p-value Rank Correlation
Gender	Male	1 900	62.0%	22.6%	7.6%	7.8%	0.000	
	Female	2 171	75.2%	14.5%	5.3%	4.9%		
Age group	18-24	465	58.1%	28.7%	8.3%	4.8%		0.000
	25-34	790	68.4%	22.4%	5.7%	3.5%		
	35-44	846	69.4%	17.8%	6.9%	5.9%		
	45-54	980	70.0%	16.3%	6.6%	7.1%		
	55-64	913	73.5%	12.5%	5.5%	8.4%		
Educational attainment	Primary or below	268	80.1%	7.2%	4.7%	8.0%		0.000
	Lower secondary (S1-S3)	524	71.9%	11.8%	5.4%	10.9%		
	Upper secondary (S4-S6)/ Matriculation	1 405	69.1%	18.8%	5.7%	6.4%		
	Tertiary (Non-degree, degree or above)	1 864	66.8%	21.3%	7.5%	4.4%		
Marital status	Never married	1 468	65.7%	23.3%	6.8%	4.2%	0.015	
	Married	2 426	70.7%	15.7%	6.3%	7.3%		
	Divorced/Separated/ Widowed	153	75.5%	11.2%	4.1%	9.3%		

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 (Section 2: Q1a)(Continued)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value Kruskal-Wallis test	p-value Rank Correlation
Occupation	Managerial/Professional worker	1 205	66.2%	21.8%	7.3%	4.8%	0.001	
	Clerk	587	74.2%	17.5%	4.7%	3.6%		
	Service/Shop sales worker	410	73.1%	15.2%	5.6%	6.0%		
	Blue collar worker	455	63.8%	15.2%	7.1%	13.9%		
	Not working	1 331	70.1%	17.3%	6.4%	6.2%		
Monthly Household Income	Below $8,000	147	72.7%	12.3%	7.7%	7.3%		0.000
	$8,000-$13,999	254	74.6%	14.2%	3.7%	7.4%		
	$14,000-$19,999	300	73.8%	12.5%	5.6%	8.2%		
	$20,000-$39,999	1 110	69.8%	16.8%	7.0%	6.3%		
	$40,000 or above	1 485	65.5%	23.1%	6.6%	4.7%		
Type of living quarters	Public rental flats	1 164	72.6%	14.8%	5.5%	7.2%	0.006	
	Subsidised sale flats	672	68.2%	18.5%	6.7%	6.6%		
	Private housing	2 151	67.4%	20.1%	6.8%	5.6%		

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' age, marital status and occupation.

Those aged 25-44 (ranging from 56.0% to 57.5%), never married or divorced/separated widowed respondents (ranging from 55.1% to 55.5%) and clerks (60.6%) were more likely than their respective counterparts to have spent on moderate physical activities for at least 10 minutes for one day or less 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 (Section 2: Q2a)

| | | | | | | | p-value | |
| | | | | | | | Kruskal-Wallis test | Rank Correlation |
Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	Kruskal-Wallis test	Rank Correlation
Age group	18-24	465	53.1%	26.8%	11.7%	8.4%		0.001
	25-34	790	57.5%	21.1%	8.8%	12.6%		
	35-44	846	56.0%	21.9%	7.7%	14.5%		
	45-54	980	53.7%	20.5%	9.1%	16.8%		
	55-64	913	52.5%	19.0%	8.3%	20.3%		
Marital status	Never married	1 468	55.5%	23.5%	9.9%	11.1%	0.002	
	Married	2 426	53.9%	20.1%	8.3%	17.7%		
	Divorced/Separated/ Widowed	153	55.1%	17.6%	5.2%	22.1%		
Occupation	Managerial/Professional worker	1 205	55.6%	20.1%	10.4%	14.0%	0.005	
	Clerk	587	60.6%	20.5%	6.7%	12.2%		
	Service/Shop sales worker	410	54.3%	21.2%	9.4%	15.1%		
	Blue collar worker	455	53.3%	19.1%	8.8%	18.8%		
	Not working	1 331	51.5%	23.0%	8.4%	17.1%		

4.3.3 Walking

Significant associations exist between the number of days on which respondents walked at least 10 minutes during the seven days prior to the survey and respondents' educational attainment, marital status and occupation.

A relatively higher proportion of those with lower secondary education or below (ranging from 4.7% to 4.9%), divorced/separated/widowed respondents (6.7%) and non-working respondents (4.2%) reported that they walked at least 10 minutes for one day or less 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 walking for at least 10 minutes during the seven days prior to the survey (Section 2: Q3a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value Kruskal-Wallis test	p-value Rank Correlation
Educational attainment	Primary or below	266	4.7%	5.2%	11.9%	78.1%		0.005
	Lower secondary (S1-S3)	524	4.9%	5.9%	9.3%	79.8%		
	Upper secondary (S4-S6)/ Matriculation	1 405	4.0%	8.1%	13.1%	74.8%		
	Tertiary (Non-degree, degree or above)	1 864	3.5%	8.5%	13.9%	74.1%		
Marital status	Never married	1 467	2.6%	8.3%	15.2%	73.9%	0.023	
	Married	2 426	4.6%	7.4%	11.4%	76.7%		
	Divorced/Separated/ Widowed	152	6.7%	10.5%	14.4%	68.4%		
Occupation	Managerial/Professional worker	1 205	3.7%	8.5%	12.9%	74.9%	0.001	
	Clerk	587	4.0%	9.2%	12.1%	74.6%		
	Service/ Shop sales worker	409	2.3%	4.5%	9.8%	83.4%		
	Blue collar worker	455	4.1%	5.2%	12.5%	78.2%		
	Not working	1 329	4.2%	8.7%	13.9%	73.2%		

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, educational attainment, marital status, occupation and monthly household income.

A relatively higher proportion of female respondents (62.5%), those aged 35-64 (ranging from 57.2% to 59.9%), married respondents (58.0%) or divorced/separated/widowed respondents (58.7%), clerks (64.7%) and respondents with monthly household income of below $8,000 (64.0%) were found to have not attained the physical activity level recommended by WHO for adults when compared with their respective counterparts. Besides, the lower the educational attainment of the respondents, the more likely that they had not attained the physical activity level recommended by WHO for adults (Table 4.3.4).

Table 4.3.4: Whether attained the physical activity level recommended by WHO for adults (Section 2: Q1a, Q1b, Q2a & Q2b)

Variable	Level	Base	Yes	No	p-value Chi-square test	p-value Kruskal-Wallis test
Gender	Male	1 891	51.0%	49.0%	0.000	
	Female	2 161	37.5%	62.5%		
Age group	18-24	464	54.6%	45.4%		0.009
	25-34	786	43.8%	56.2%		
	35-44	842	40.1%	59.9%		
	45-54	977	42.8%	57.2%		
	55-64	906	42.6%	57.4%		
Educational attainment	Primary or below	265	34.9%	65.1%		0.000
	Lower secondary (S1-S3)	520	40.8%	59.2%		
	Upper secondary (S4-S6)/ Matriculation	1 396	44.0%	56.0%		
	Tertiary (Non-degree, degree or above)	1 861	45.7%	54.3%		
Marital status	Never married	1 462	47.0%	53.0%	0.008	
	Married	2 414	42.0%	58.0%		
	Divorced/Separated/Widowed	153	41.3%	58.7%		
Occupation	Managerial/Professional worker	1 199	45.4%	54.6%	0.000	
	Clerk	585	35.3%	64.7%		
	Service/Shop sales worker	406	39.6%	60.4%		
	Blue collar worker	449	49.8%	50.2%		
	Not working	1 330	45.3%	54.7%		
Monthly Household Income	Below $8,000	146	36.0%	64.0%		0.000
	$8,000-$13,999	253	40.2%	59.8%		
	$14,000-$19,999	297	39.6%	60.4%		
	$20,000-$39,999	1 105	43.6%	56.4%		
	$40,000 or above	1 479	46.7%	53.3%		

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 the respondents' gender, educational attainment, marital status, occupation, monthly household income and type of living quarters.

Male respondents (24.7%), never married respondents (26.9%), clerks (38.5%), those with monthly household income of $40,000 or above (26.5%) and those living in private housing (23.8 %) were more likely than their respective counterparts to sit for 10 to 15 hours on a weekday on average during the seven days prior to the survey. Also, the higher the educational attainment of the respondents, the more likely that they had sat for 10 to 15 hours 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 (Section 2: Q4)

Variable	Level	Base	10 mins - < 2hrs	2 - < 4 hrs	4 - < 6 hrs	6 - < 8 hrs	8 - < 10 hrs	10 – 15 hrs	p-value Kruskal-Wallis test	p-value Rank Correlation
Gender	Male	1 865	3.4%	16.5%	22.1%	17.6%	15.7%	24.7%	0.000	
	Female	2 135	4.3%	20.8%	22.4%	16.9%	17.6%	18.0%		
Educational attainment	Primary or below	262	14.3%	29.1%	28.7%	14.1%	7.6%	6.3%		0.000
	Lower secondary (S1-S3)	516	7.1%	30.4%	26.8%	17.7%	8.5%	9.5%		
	Upper secondary (S4-S6)/ Matriculation	1 376	3.5%	21.4%	24.8%	16.8%	15.1%	18.4%		
	Tertiary (Non-degree, degree or above)	1 835	1.7%	12.1%	18.3%	17.9%	21.5%	28.5%		
Marital status	Never married	1 441	2.1%	11.1%	18.7%	19.7%	21.6%	26.9%	0.000	
	Married	2 384	4.8%	22.5%	24.6%	16.1%	13.9%	18.2%		
	Divorced/ Separated/ Widowed	151	7.1%	33.6%	19.7%	12.4%	12.6%	14.6%		
Occupation	Managerial/ Professional worker	1 177	2.4%	10.7%	18.0%	18.0%	22.1%	28.8%	0.000	
	Clerk	583	1.2%	5.4%	11.1%	17.1%	26.8%	38.5%		
	Service/Shop sales worker	400	8.1%	29.3%	25.5%	15.8%	8.3%	13.0%		
	Blue collar worker	451	5.9%	29.7%	28.8%	15.5%	7.6%	12.6%		
	Not working	1 310	4.6%	24.7%	28.0%	17.8%	12.9%	12.0%		

Table 4.3.5: Average time spent on sitting on a weekday during the seven days prior to the survey (Section 2: Q4) (Continued)

Variable	Level	Base	10 mins - < 2hrs	2 - < 4 hrs	4 - < 6 hrs	6 - < 8 hrs	8 - < 10 hrs	10 – 15 hrs	p-value	
									Kruskal-Wallis test	Rank Correlation
Monthly Household Income	Below $8,000	145	4.9%	26.7%	22.7%	16.9%	15.2%	13.6%		0.000
	$8,000-$13,999	249	6.4%	30.1%	25.7%	13.8%	10.4%	13.6%		
	$14,000-$19,999	299	4.6%	26.0%	23.7%	15.9%	13.4%	16.5%		
	$20,000-$39,999	1 099	3.8%	19.3%	24.1%	17.5%	16.3%	19.0%		
	$40,000 or above	1 458	2.1%	14.2%	19.7%	18.0%	19.5%	26.5%		
Type of living quarters	Public rental flats	1 148	5.6%	21.4%	24.2%	17.3%	14.6%	16.9%	0.000	
	Subsidised sale flats	656	2.7%	19.5%	23.5%	17.4%	16.2%	20.7%		
	Private housing	2 113	3.4%	16.9%	20.9%	17.3%	17.7%	23.8%		

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 the respondents' gender, educational attainment, occupation, monthly household income and type of living quarters.

Female respondents (34.4%), blue collar workers (39.6%) or service/shop sales workers (40.4%), those with monthly household income below $8,000 (42.6%) and those living in public rental flats (36.8%) 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 lower the educational attainment 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 (Section 2: Q5)

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	1 898	19.9%	41.0%	12.9%	26.2%	0.000	
	Female	2 168	17.2%	34.8%	13.6%	34.4%		
Educational attainment	Primary or below	267	31.1%	16.9%	4.9%	47.2%		0.000
	Lower secondary (S1-S3)	524	22.6%	27.3%	8.1%	42.1%		
	Upper secondary (S4-S6)/ Matriculation	1 403	18.0%	36.0%	12.1%	33.9%		
	Tertiary (Non-degree, degree or above)	1 861	15.7%	45.0%	16.9%	22.5%		

Table 4.3.6: Frequency of doing exercise in leisure-time during the thirty days prior to the survey (Section 2: Q5) (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	p-value Rank Correlation
Occupation	Managerial/ Professional worker	1 205	16.2%	42.4%	18.0%	23.4%	0.000	
	Clerk	587	11.2%	42.5%	15.0%	31.3%		
	Service/Shop sales worker	408	16.3%	31.2%	12.1%	40.4%		
	Blue collar worker	455	21.1%	28.9%	10.4%	39.6%		
	Not working	1 329	23.6%	36.3%	9.7%	30.3%		
Monthly Household Income	Below $8,000	147	25.5%	26.3%	5.6%	42.6%		0.003
	$8,000-$13,999	254	21.4%	31.1%	7.5%	40.0%		
	$14,000-$19,999	299	20.9%	24.0%	14.5%	40.6%		
	$20,000-$39,999	1 110	19.2%	37.7%	12.1%	31.0%		
	$40,000 or above	1 484	15.0%	43.7%	16.9%	24.4%		
Type of living quarters	Public rental flats	1 162	19.0%	33.9%	10.3%	36.8%	0.013	
	Subsidised sale flats	672	20.3%	38.4%	14.7%	26.7%		
	Private housing	2 148	17.8%	39.6%	14.4%	28.2%		

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 the respondents' gender, age and type of living quarters.

A relatively higher proportion of female respondents (91.2%), those aged 55-64 (93.7%) and those living in subsidised sale flats (92.5%) 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 (Section 3: Q3)

| | | | | | | | p-value | |
| | | | | | | | Kruskal-Wallis test | Rank Correlation |
Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	Kruskal-Wallis test	Rank Correlation
Gender	Male	1 899	88.9%	7.3%	1.6%	2.2%	0.036	
	Female	2 169	91.2%	5.4%	1.3%	2.1%		
Age group	18-24	465	87.1%	9.5%	1.5%	1.9%		0.000
	25-34	790	89.0%	7.2%	2.1%	1.6%		
	35-44	845	87.9%	7.3%	1.5%	3.3%		
	45-54	978	91.0%	5.6%	1.5%	1.9%		
	55-64	912	93.7%	3.4%	0.8%	2.1%		
Type of living quarters	Public rental flats	1 162	91.9%	5.3%	1.0%	1.7%	0.007	
	Subsidised sale flats	672	92.5%	4.8%	0.8%	1.9%		
	Private housing	2 150	88.4%	7.3%	1.8%	2.5%		

4.4.2 Frequency of consuming fruit per week

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

The proportion of people consuming fruit one day or less a week was higher among male respondents (12.6%), those aged 25-34 (15.0%), those with primary education or below (11.1%), never married respondents (14.3%), clerks or service/shop sales workers (ranging from 11.6% to 12.7%) and those living in public rental flats or subsidised sale flats (ranging from 10.9% to 11.3%) (Table 4.4.2).

Table 4.4.2: Number of days per week in which respondents consumed fruit (excluding fruit juice) (Section 3: Q1a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value Kruskal-Wallis test	p-value Rank Correlation
Gender	Male	1 900	12.6%	25.9%	15.7%	45.8%	0.000	
	Female	2 170	6.6%	17.1%	18.2%	58.1%		
Age group	18-24	465	12.6%	25.3%	22.4%	39.8%		0.000
	25-34	789	15.0%	28.1%	18.4%	38.5%		
	35-44	846	8.6%	25.2%	16.9%	49.3%		
	45-54	980	7.3%	18.3%	15.9%	58.5%		
	55-64	913	6.4%	12.9%	14.6%	66.1%		
Educational attainment	Primary or below	268	11.1%	16.9%	10.4%	61.7%		0.006
	Lower secondary (S1-S3)	524	9.3%	20.7%	15.6%	54.4%		
	Upper secondary (S4-S6)/ Matriculation	1 405	9.0%	20.8%	17.2%	53.1%		
	Tertiary (Non-degree, degree or above)	1 863	9.5%	22.4%	18.3%	49.8%		
Marital status	Never married	1 467	14.3%	25.9%	19.1%	40.6%	0.000	
	Married	2 426	6.4%	18.7%	15.8%	59.1%		
	Divorced/Separated/ Widowed	153	9.8%	17.1%	17.4%	55.7%		
Occupation	Managerial/Professional worker	1 205	9.0%	23.7%	17.6%	49.6%	0.000	
	Clerk	587	11.6%	21.2%	21.6%	45.6%		
	Service/Shop sales worker	410	12.7%	25.8%	17.1%	44.5%		
	Blue collar worker	455	10.3%	19.9%	15.6%	54.2%		
	Not working	1 331	7.7%	18.2%	14.9%	59.3%		
Type of living quarters	Public rental flats	1 163	11.3%	24.4%	15.1%	49.2%	0.000	
	Subsidised sale flats	672	10.9%	18.9%	19.4%	50.7%		
	Private housing	2 151	7.9%	20.2%	17.5%	54.5%		

4.4.3 Frequency of consuming vegetables per week

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

The proportion of people consuming vegetables one day or less a week was higher among male respondents (1.9%) and those aged 18-24 (1.9%) (Table 4.4.3).

Table 4.4.3: Number of days per week in which respondents consumed vegetables (excluding vegetable juice) (Section 3: Q2a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value Kruskal-Wallis test	p-value Rank Correlation
Gender	Male	1 900	1.9%	6.3%	13.0%	78.8%	0.000	
	Female	2 171	0.5%	3.8%	7.8%	87.8%		
Age group	18-24	465	1.9%	5.1%	11.7%	81.4%		0.009
	25-34	790	0.8%	6.5%	10.9%	81.8%		
	35-44	846	1.0%	4.5%	10.6%	84.0%		
	45-54	980	1.0%	4.6%	10.6%	83.9%		
	55-64	913	1.4%	4.7%	8.6%	85.3%		

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 the respondents' gender, age, marital status, occupation and type of living quarters.

4.4.4.1 Number of servings of fruit and vegetables consumed per day (excluding fruit/vegetable juice consumption)[32]

Male respondents (84.6%), those aged 18-24 (85.7%), never married (82.1%) or divorced/ separated/widowed (81.4%) respondents, blue collar workers (84.4%) and those living in public rental flats or subsidised sales flats (ranging from 81.1% to 82.0%) 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) (Table 4.4.4.1).

Table 4.4.4.1: Number of servings of fruit and vegetables consumed per day (excluding fruit or vegetable juice) (Section 3: Q1a, Q1b, Q2a & Q2b)

Variable	Level	Base	Less than 5 servings	5 servings or more	p-value Kruskal-Wallis test	p-value Rank Correlation
Gender	Male	1 890	84.6%	15.4%	0.000	
	Female	2 166	75.0%	25.0%		
Age group	18-24	463	85.7%	14.3%		0.000
	25-34	788	81.4%	18.6%		
	35-44	843	77.5%	22.5%		
	45-54	977	80.9%	19.1%		
	55-64	909	75.6%	24.4%		
Marital status	Never married	1 463	82.1%	17.9%	0.001	
	Married	2 418	77.7%	22.3%		
	Divorced/Separated/Widowed	151	81.4%	18.6%		
Occupation	Managerial/Professional worker	1 205	79.7%	20.3%	0.007	
	Clerk	585	82.0%	18.0%		
	Service/Shop sales worker	407	76.6%	23.4%		
	Blue collar worker	451	84.4%	15.6%		
	Not working	1 325	77.2%	22.8%		
Type of living quarters	Public rental flats	1 159	81.1%	18.9%	0.009	
	Subsidised sale flats	669	82.0%	18.0%		
	Private housing	2 145	77.8%	22.2%		

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[32] 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)[33]

Male respondents (84.1%), those aged 18-24 (85.5%), never married (81.5%) or divorced/separated/widowed respondents (80.6%), blue collar workers (84.4%) and those living in public rental flats or subsidised sale flats (ranging from 80.8% to 81.5%) 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) (Table 4.4.4.2).

Table 4.4.4.2: Number of servings of fruit and vegetables consumed per day (including fruit/vegetable juice) (Section 3: Q1a, Q1b, Q2a, Q2b & Q3)

Variable	Level	Base	Less than 5 servings	5 servings or more	p-value	
					Kruskal-Wallis test	Rank Correlation
Gender	Male	1 888	84.1%	15.9%	0.000	
	Female	2 164	74.3%	25.7%		
Age group	18-24	463	85.5%	14.5%		0.000
	25-34	788	80.6%	19.4%		
	35-44	842	77.0%	23.0%		
	45-54	975	80.3%	19.7%		
	55-64	908	74.9%	25.1%		
Marital status	Never married	1 461	81.5%	18.5%	0.000	
	Married	2 416	77.1%	22.9%		
	Divorced/Separated/Widowed	151	80.6%	19.4%		
Occupation	Managerial/Professional worker	1 202	78.9%	21.1%	0.005	
	Clerk	585	81.4%	18.6%		
	Service/Shop sales worker	407	75.2%	24.8%		
	Blue collar worker	451	84.4%	15.6%		
	Not working	1 325	76.7%	23.3%		
Type of living quarters	Public rental flats	1 157	80.8%	19.2%	0.005	
	Subsidised sale flats	669	81.5%	18.5%		
	Private housing	2 143	77.0%	23.0%		

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[33] 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 Meat Consumption

4.5.1 Frequency of consuming red meat

Frequency of consuming red meat is associated significantly with the respondents' gender, age, educational attainment, marital status, occupation and monthly household income.

A relatively higher proportion of female respondents (10.4%), those aged 45-54 (10.5%), those with primary education or below (12.1%), married respondents (8.6%), non-working respondents (9.9%) and those with monthly household income below $8,000 (16.8%) consumed red meat 1 day or less per week on average during the thirty days prior to the survey when compared with their respective counterparts (Table 4.5.1).

Table 4.5.1: Average number of days per week of consuming red meat (Section 4: Q1a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value Kruskal-Wallis test	p-value Rank Correlation
Gender	Male	1 900	5.4%	17.3%	23.7%	53.6%	0.000	
	Female	2 170	10.4%	22.8%	22.5%	44.4%		
Age group	18-24	465	5.2%	17.9%	28.0%	48.9%		0.000
	25-34	790	6.7%	13.5%	22.2%	57.6%		
	35-44	845	6.6%	19.6%	22.5%	51.3%		
	45-54	980	10.5%	22.8%	22.6%	44.2%		
	55-64	913	9.1%	24.9%	22.1%	43.8%		
Educational attainment	Primary or below	268	12.1%	26.9%	15.6%	45.3%		0.028
	Lower secondary (S1-S3)	524	8.4%	20.3%	20.7%	50.7%		
	Upper secondary (S4-S6)/ Matriculation	1 404	8.6%	22.1%	23.1%	46.2%		
	Tertiary (Non-degree, degree or above)	1 864	6.9%	18.0%	24.6%	50.5%		
Marital status	Never married	1 468	7.1%	18.3%	24.6%	50.0%	0.012	
	Married	2 426	8.6%	21.1%	22.1%	48.3%		
	Divorced/Separated/ Widowed	153	7.0%	28.3%	23.5%	41.2%		
Occupation	Managerial/Professional worker	1 205	6.7%	16.8%	24.5%	52.0%	0.000	
	Clerk	587	7.5%	21.1%	22.2%	49.1%		
	Service/Shop sales worker	410	7.8%	20.9%	20.3%	51.1%		
	Blue collar worker	455	6.3%	20.2%	20.4%	53.1%		
	Not working	1 331	9.9%	22.9%	23.9%	43.2%		
Monthly Household Income	Below $8,000	147	16.8%	26.6%	21.5%	35.1%		0.000
	$8,000-$13,999	254	10.5%	23.7%	19.2%	46.6%		
	$14,000-$19,999	300	8.0%	25.5%	18.6%	48.0%		
	$20,000-$39,999	1 110	6.8%	20.7%	24.9%	47.7%		
	$40,000 or above	1 485	7.1%	16.8%	25.2%	50.9%		

4.5.2 Frequency of consuming white meat

Frequency of consuming white meat is associated significantly with the respondents' marital status, occupation and monthly household income.

A relatively higher proportion of divorced/separated/widowed respondents (11.9%), clerks, blue collar workers or non-working respondents (ranging from 9.0% to 9.5%) and those with monthly household income of below $8,000 (16.6%) consumed white meat 1 day or less per week on average during the thirty days prior to the survey when compared with their counterparts (Table 4.5.2).

Table 4.5.2: Average number of days per week of consuming white meat (Section 4: Q2a)

Variable	Level	Base	0-1 day	2-3 days	4-5 days	6-7 days	p-value Kruskal-Wallis test	Rank Correlation
Marital status	Never married	1 467	7.9%	33.9%	28.9%	29.4%	0.025	
	Married	2 425	7.8%	38.3%	24.1%	29.8%		
	Divorced/Separated/ Widowed	153	11.9%	38.7%	23.3%	26.2%		
Occupation	Managerial/Professional worker	1 205	5.5%	34.8%	28.5%	31.2%	0.037	
	Clerk	587	9.5%	39.0%	24.8%	26.7%		
	Service/Shop sales worker	410	7.3%	34.8%	26.5%	31.4%		
	Blue collar worker	455	9.0%	37.4%	24.1%	29.5%		
	Not working	1 330	9.5%	38.3%	23.9%	28.3%		
Monthly Household Income	Below $8,000	147	16.6%	41.1%	17.9%	24.3%		0.005
	$8,000-$13,999	254	12.0%	38.3%	20.7%	29.0%		
	$14,000-$19,999	300	7.5%	35.7%	25.1%	31.7%		
	$20,000-$39,999	1 109	8.8%	38.6%	25.2%	27.4%		
	$40,000 or above	1 485	5.7%	35.4%	28.7%	30.2%		

4.5.3   Daily average amount of red meat consumed

Daily average amount of red meat consumed is associated significantly with the respondents' gender, age, educational attainment, marital status, occupation and monthly household income.

Female respondents (50.6%), those aged 55-64 (54.2%), divorced/separated/widowed respondents (50.6%) and not working respondents (49.4%) were more likely to have consumed less than 2 taels of red meat per day on average during the thirty days prior to the survey when compared with their respective counterparts. Also, the lower the educational attainment and the monthly household income of the respondents, the more likely that they had consumed less than 2 taels of red meat per day on average when compared with their counterparts (Table 4.5.3).

Table 4.5.3: Daily average amount of red meat consumed (Section 4: Q1a & Q1b)

Variable	Level	Base	Less than 2 taels	2-4 taels	More than 4 taels	p-value Kruskal-Wallis test	p-value Rank Correlation
Gender	Male	1 885	33.3%	41.9%	24.8%	0.000	
	Female	2 155	50.6%	37.3%	12.0%		
Age group	18-24	463	31.9%	38.8%	29.3%		0.000
	25-34	782	31.2%	41.0%	27.8%		
	35-44	840	37.9%	43.5%	18.6%		
	45-54	975	49.2%	38.1%	12.7%		
	55-64	905	54.2%	36.9%	8.9%		
Educational attainment	Primary or below	261	55.0%	36.3%	8.7%		0.000
	Lower secondary (S1-S3)	522	47.9%	37.5%	14.6%		
	Upper secondary (S4-S6)/ Matriculation	1 392	45.8%	38.5%	15.6%		
	Tertiary (Non-degree, degree or above)	1 855	36.8%	41.3%	21.9%		
Marital status	Never married	1 458	36.6%	38.9%	24.5%	0.000	
	Married	2 408	45.6%	40.2%	14.2%		
	Divorced/Separated/Widowed	152	50.6%	35.0%	14.3%		
Occupation	Managerial/Professional worker	1 199	35.8%	44.0%	20.2%	0.000	
	Clerk	587	42.0%	37.7%	20.3%		
	Service/Shop sales worker	407	43.2%	34.1%	22.7%		
	Blue collar worker	448	41.3%	39.9%	18.8%		
	Not working	1 320	49.4%	37.8%	12.8%		
Monthly Household Income	Below $8,000	147	62.3%	26.4%	11.4%		0.000
	$8,000-$13,999	254	51.0%	37.2%	11.8%		
	$14,000-$19,999	300	44.7%	45.1%	10.2%		
	$20,000-$39,999	1 105	43.4%	40.3%	16.3%		
	$40,000 or above	1 480	37.4%	40.4%	22.2%		

4.5.4 Daily average amount of white meat consumed

Daily average amount of white meat consumed is associated significantly with the respondents' gender, age, marital status, occupation and monthly household income.

Female respondents (60.7%), those aged 45-54 (62.2%), married respondents (59.3%) and clerks (62.1%) were more likely to have consumed less than 2 taels of white meat per day on average during the thirty days prior to the survey when compared with their respective counterparts. The lower the monthly household income of the respondents, the more likely that they consumed less than 2 taels of white meat per day on average during the thirty days prior to the survey (Table 4.5.4).

Table 4.5.4: Daily average amount of white meat consumed (Section 4: Q2a & Q2b)

Variable	Level	Base	Less than 2 taels	2-4 taels	More than 4 taels	p-value Kruskal-Wallis test	p-value Rank Correlation
Gender	Male	1 881	52.9%	33.6%	13.6%	0.000	
	Female	2 148	60.7%	30.3%	9.0%		
Age group	18-24	462	53.0%	32.6%	14.4%		0.000
	25-34	782	50.3%	33.5%	16.2%		
	35-44	837	56.8%	32.3%	11.0%		
	45-54	971	62.2%	28.3%	9.4%		
	55-64	902	59.6%	33.4%	7.0%		
Marital status	Never married	1 458	53.4%	32.3%	14.3%	0.000	
	Married	2 398	59.3%	31.3%	9.4%		
	Divorced/Separated/Widowed	152	58.1%	35.1%	6.8%		
Occupation	Managerial/Professional worker	1 197	53.0%	34.6%	12.3%	0.018	
	Clerk	585	62.1%	27.7%	10.2%		
	Service/Shop sales worker	403	53.9%	33.8%	12.3%		
	Blue collar worker	447	58.3%	28.4%	13.3%		
	Not working	1 315	59.9%	31.3%	8.8%		
Monthly Household Income	Below $8,000	147	64.8%	29.0%	6.2%		0.008
	$8,000-$13,999	253	61.5%	28.5%	10.0%		
	$14,000-$19,999	299	59.5%	30.6%	9.9%		
	$20,000-$39,999	1 105	58.4%	32.2%	9.3%		
	$40,000 or above	1 472	54.5%	32.7%	12.9%		

4.5.5 Average daily total consumption of red and white meat

Average daily total consumption of red and white meat is associated significantly with the respondents' gender, age, educational attainment, marital status, occupation and monthly household income.

Female respondents (56.0%), those aged 55-64 (58.3%), those having lower secondary education (54.0%) or upper secondary education/ matriculation (54.2%), married or divorced/separated/widowed respondents (ranging from 53.1% to 53.4%) and non-working respondents (54.3%) were more likely to have consumed less than 4 taels of red and white meat per day on average during the thirty days prior to the survey when compared with their respective counterparts. The lower the monthly household income of the respondents, the more likely that they consumed less than 4 taels of red and white meat per day on average during the thirty days prior to the survey (Table 4.5.5).

Table 4.5.5: Average daily total consumption of red and white meat (Section 4: Q1a, Q1b, Q2a &Q2b)

Variable	Level	Base	Less than 4 taels	4-6 taels	More than 6 taels	p-value Kruskal-Wallis test	Rank Correlation
Gender	Male	1 874	39.8%	26.8%	33.3%	0.000	
	Female	2 144	56.0%	25.9%	18.1%		
Age group	18-24	461	37.0%	25.9%	37.1%		0.000
	25-34	781	36.9%	26.7%	36.4%		
	35-44	836	47.1%	27.6%	25.3%		
	45-54	969	54.8%	25.4%	19.8%		
	55-64	896	58.3%	26.5%	15.2%		
Educational attainment	Primary or below	256	51.6%	31.9%	16.5%		0.000
	Lower secondary (S1-S3)	522	54.0%	21.4%	24.6%		
	Upper secondary (S4-S6)/ Matriculation	1 386	54.2%	24.7%	21.1%		
	Tertiary (Non-degree, degree or above)	1 846	42.3%	28.1%	29.6%		
Marital status	Never married	1 454	40.4%	26.8%	32.8%	0.000	
	Married	2 391	53.1%	26.3%	20.6%		
	Divorced/Separated/Widowed	152	53.4%	23.5%	23.1%		
Occupation	Managerial/Professional worker	1 194	42.0%	28.9%	29.1%	0.000	
	Clerk	585	50.6%	25.0%	24.4%		
	Service/Shop sales worker	403	47.4%	21.8%	30.8%		
	Blue collar worker	446	47.6%	25.3%	27.1%		
	Not working	1 311	54.3%	26.5%	19.2%		
Monthly Household Income	Below $8,000	146	61.8%	23.1%	15.1%		0.000
	$8,000-$13,999	253	59.5%	19.3%	21.2%		
	$14,000-$19,999	299	54.1%	26.1%	19.8%		
	$20,000-$39,999	1 101	49.6%	26.3%	24.1%		
	$40,000 or above	1 472	42.4%	29.1%	28.5%		

4.6 Smoking Pattern

4.6.1 Smoking habits

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

A relatively higher proportion of male respondents (18.9%), those aged 25-44 (ranging from 13.3% to 13.4%), those with lower secondary education (22.0%), divorced/separated/widowed respondents (14.2%), blue collar workers (24.6%) and those living in public rental flats (14.1%) were current smokers when compared with their respective counterparts (Table 4.6.1).

Table 4.6.1: Smoking habits (Section 5: Q1)

Variable	Level	Base	Yes, but not now	Yes, and still smoking	Never	p-value Chi-square test	p-value Kruskal-Wallis test
Gender	Male	1 900	14.5%	18.9%	66.6%	0.000	
	Female	2 171	4.9%	3.9%	91.3%		
Age group	18-24	465	2.7%	4.0%	93.4%		0.000
	25-34	790	8.6%	13.3%	78.2%		
	35-44	846	8.3%	13.4%	78.3%		
	45-54	980	12.0%	10.6%	77.4%		
	55-64	913	12.1%	10.8%	77.1%		
Educational attainment	Primary or below	268	9.1%	16.6%	74.3%		0.000
	Lower secondary (S1-S3)	524	15.1%	22.0%	63.0%		
	Upper secondary (S4-S6)/ Matriculation	1 405	9.6%	11.8%	78.6%		
	Tertiary (Non-degree, degree or above)	1 864	7.7%	6.2%	86.2%		
Marital status	Never married	1 468	6.0%	9.7%	84.3%	0.000	
	Married	2 426	11.3%	11.4%	77.3%		
	Divorced/Separated/Widowed	153	11.3%	14.2%	74.5%		
Occupation	Managerial/Professional worker	1 205	10.2%	10.5%	79.4%	0.000	
	Clerk	587	6.5%	6.0%	87.5%		
	Service/Shop sales worker	410	10.6%	15.2%	74.2%		
	Blue collar worker	455	17.5%	24.6%	57.9%		
	Not working	1 331	7.1%	7.5%	85.4%		
Type of living quarters	Public rental flats	1 164	10.5%	14.1%	75.4%	0.000	
	Subsidised sale flats	672	8.3%	10.5%	81.2%		
	Private housing	2 151	9.2%	9.5%	81.3%		

4.6.2 Number of cigarettes consumed

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

A relatively higher proportion of male smokers (52.9%), blue collar workers (71.0%), those with monthly household income of below $8,000 (64.6%) and those living in subsidised sale flats (61.2%) reported that they smoked more than 10 cigarettes per day when compared with their respective counterparts. The lower the educational attainment of the current smoking respondents, the more likely that they smoked more than 10 cigarettes per day (Table 4.6.2).

Table 4.6.2: Average number of cigarettes smokers smoked per day (Section 5: Q3a)

Variable	Level	Base	10 per day or less	More than 10 per day	p-value Kruskal-Wallis test	Rank Correlation
Gender	Male	357	47.1%	52.9%	0.000	
	Female	84	77.6%	22.4%		
Educational attainment	Primary or below	44	32.7%	67.3%		0.000
	Lower secondary (S1-S3)	114	34.2%	65.8%		
	Upper secondary (S4-S6)/ Matriculation	165	57.1%	42.9%		
	Tertiary (Non-degree, degree or above)	115	72.1%	27.9%		
Occupation	Managerial/Professional worker	126	66.2%	33.8%	0.000	
	Clerk	35	70.9%	29.1%		
	Service/Shop sales worker	62	53.5%	46.5%		
	Blue collar worker	112	29.0%	71.0%		
	Not working	99	55.9%	44.1%		
Monthly Household Income	Below $8,000	16	35.4%	64.6%		0.008
	$8,000-$13,999	31	44.3%	55.7%		
	$14,000-$19,999	41	43.6%	56.4%		
	$20,000-$39,999	105	48.5%	51.5%		
	$40,000 or above	157	65.8%	34.2%		
Type of living quarters	Public rental flats	164	46.9%	53.1%	0.002	
	Subsidised sale flats	70	38.8%	61.2%		
	Private housing	202	62.2%	37.8%		

4.7 Pattern of Alcohol Consumption

4.7.1 Consumption of alcohol

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

Male respondents (77.9%), those aged 25-34 (81.2%), never married respondents (75.4%), managerial/professional workers (82.0%) and those living in private housing (72.9%) were more likely than their respective counterparts to have had a drink containing alcohol during the past year prior to the survey. The higher the educational attainment and the monthly household income of the respondents, the more likely that they had a drink containing alcohol during the past year prior to the survey (Table 4.7.1).

Table 4.7.1: Whether had a drink containing alcohol during the past year prior to the survey (Section 6: Q1a)

Variable	Level	Base	Yes	No	p-value Chi-square test	p-value Kruskal-Wallis test
Gender	Male	1 900	77.9%	22.1%	0.000	
	Female	2 170	64.0%	36.0%		
Age group	18-24	465	71.5%	28.5%		0.000
	25-34	790	81.2%	18.8%		
	35-44	846	73.8%	26.2%		
	45-54	979	67.4%	32.6%		
	55-64	913	61.8%	38.2%		
Educational attainment	Primary or below	268	52.2%	47.8%		0.000
	Lower secondary (S1-S3)	524	65.7%	34.3%		
	Upper secondary (S4-S6)/ Matriculation	1 404	66.1%	33.9%		
	Tertiary (Non-degree, degree or above)	1 864	77.7%	22.3%		
Marital status	Never married	1 467	75.4%	24.6%	0.000	
	Married	2 426	68.0%	32.0%		
	Divorced/Separated/Widowed	153	61.7%	38.3%		
Occupation	Managerial/Professional worker	1 205	82.0%	18.0%		
	Clerk	587	71.8%	28.2%		
	Service/Shop sales worker	409	73.0%	27.0%	0.000	
	Blue collar worker	455	68.3%	31.7%		
	Not working	1 331	59.2%	40.8%		

Table 4.7.1: Whether had a drink containing alcohol during the past year prior to the survey (Section 6: Q1a) (Continued)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Monthly Household Income	Below $8,000	147	48.3%	51.7%		0.000
	$8,000-$13,999	254	54.4%	45.6%		
	$14,000-$19,999	300	64.6%	35.4%		
	$20,000-$39,999	1 110	71.0%	29.0%		
	$40,000 or above	1 485	76.8%	23.2%		
Type of living quarters	Public rental flats	1 163	65.9%	34.1%	0.000	
	Subsidised sale flats	672	71.2%	28.8%		
	Private housing	2 151	72.9%	27.1%		

4.7.2 Frequency of alcohol consumption

Among the respondents who had at least one alcoholic drink during the past year prior to the survey, frequency of alcohol consumption in days per week is associated significantly with the drinkers' gender, educational attainment, marital status, occupation and type of living quarters.

A relatively higher proportion of male respondents (9.0%), divorced/separated/widowed respondents (17.0%), blue collar workers (10.5%) and those living in public rental flats (8.8%) reported that they drank 4 times or more per week when compared with their respective counterparts. The lower the educational attainment of the drinking respondents, the more likely that they drank 4 times or more per week (Table 4.7.2).

Table 4.7.2: Frequency of consuming alcohol per week among those respondents who had at least one alcoholic drink (Section 6: Q2a)

Variable	Level	Base	Once per week or less	2-3 times per week	4 times per week or more	p-value Kruskal-Wallis test	p-value Rank Correlation
Gender	Male	1 461	81.6%	9.4%	9.0%	0.000	
	Female	1 375	91.0%	5.3%	3.7%		
Educational attainment	Primary or below	137	71.0%	11.1%	17.9%		0.005
	Lower secondary (S1-S3)	338	81.4%	9.3%	9.3%		
	Upper secondary (S4-S6)/ Matriculation	916	87.8%	5.9%	6.3%		
	Tertiary (Non-degree, degree or above)	1 435	87.7%	7.5%	4.8%		
Marital status	Never married	1 091	90.0%	6.2%	3.8%	0.000	
	Married	1 631	84.3%	8.1%	7.5%		
	Divorced/Separated/Widowed	94	75.4%	7.5%	17.0%		
Occupation	Managerial/Professional worker	979	85.3%	8.5%	6.2%	0.000	
	Clerk	414	91.5%	4.9%	3.6%		
	Service/Shop sales worker	295	84.5%	8.1%	7.4%		
	Blue collar worker	305	78.6%	10.8%	10.5%		
	Not working	778	88.3%	5.4%	6.3%		
Type of living quarters	Public rental flats	755	83.6%	7.7%	8.8%	0.009	
	Subsidised sale flats	472	91.2%	5.8%	2.9%		
	Private housing	1 552	85.8%	7.8%	6.4%		

4.7.3 Amount of alcoholic drinks consumed

The average number of standard drinks consumed on the days the respondents drank alcohol is associated significantly with drinkers' gender, age, marital status and occupation.

A relatively higher proportion of male respondents (10.4%), those aged 25-34 (12.4%), divorced/separated/widowed respondents (12.0%) and service/shop sales workers (10.2%) reported that they drank on average 5-24 units on the days they drank alcohol when compared with their respective counterparts (Table 4.7.3).

Table 4.7.3: Average number of standard drinks consumed on the days drinkers drank alcohol (Section 6: Q2b)

Variable	Level	Base	Less than 3 units of drinks	3-<5 units of drinks	5-24 units of drinks	p-value	
						Kruskal-Wallis test	Rank Correlation
Gender	Male	1 446	76.5%	13.1%	10.4%	0.000	
	Female	1 340	88.4%	6.9%	4.7%		
Age group	18-24	327	76.6%	13.2%	10.2%		0.000
	25-34	626	75.9%	11.7%	12.4%		
	35-44	604	80.2%	12.2%	7.5%		
	45-54	646	86.7%	8.4%	4.9%		
	55-64	541	89.1%	6.5%	4.4%		
Marital status	Never married	1 079	77.9%	11.2%	10.9%	0.000	
	Married	1 594	85.4%	9.6%	5.1%		
	Divorced/Separated/Widowed	93	82.5%	5.4%	12.0%		
Occupation	Managerial/Professional worker	969	81.3%	10.1%	8.6%	0.000	
	Clerk	407	84.9%	10.6%	4.5%		
	Service/Shop sales worker	292	77.5%	12.3%	10.2%		
	Blue collar worker	302	76.3%	15.4%	8.3%		
	Not working	753	86.1%	6.9%	7.0%		

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

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

A relatively higher proportion of male respondents (37.9%), those aged 25-34 (37.4%), those with tertiary education (29.1%), never married respondents (34.2%), service/shop sales workers or blue collar workers (ranging from 35.1% to 36.1%) and those with monthly household income of $40,000 or above (32.8%) reported that they had engaged in binge drinking on at least one occasion when compared with their respective counterparts (Table 4.7.4a).

Table 4.7.4a: Consumption of at least 5 glasses/cans of alcohol on at least one occasion by drinkers (Section 6: Q2c)

Variable	Level	Base	Yes	No	p-value Chi-square test	p-value Kruskal-Wallis test
Gender	Male	1 428	37.9%	62.1%	0.000	
	Female	1 363	16.3%	83.7%		
Age group	18-24	321	31.2%	68.8%		0.000
	25-34	618	37.4%	62.6%		
	35-44	599	32.6%	67.4%		
	45-54	647	21.2%	78.8%		
	55-64	560	16.3%	83.7%		
Educational attainment	Primary or below	138	17.1%	82.9%		0.002
	Lower secondary (S1-S3)	336	26.8%	73.2%		
	Upper secondary (S4-S6)/ Matriculation	892	26.4%	73.6%		
	Tertiary (Non-degree, degree or above)	1 416	29.1%	70.9%		
Marital status	Never married	1 066	34.2%	65.8%	0.000	
	Married	1 614	22.9%	77.1%		
	Divorced/Separated/Widowed	92	27.0%	73.0%		
Occupation	Managerial/Professional worker	948	28.7%	71.3%	0.000	
	Clerk	415	27.8%	72.2%		
	Service/Shop sales worker	288	36.1%	63.9%		
	Blue collar worker	303	35.1%	64.9%		
	Not working	774	18.9%	81.1%		
Monthly household income	Below $8,000	71	20.6%	79.4%		0.000
	$8,000-$13,999	136	23.4%	76.6%		
	$14,000-$19,999	189	28.5%	71.5%		
	$20,000-$39,999	767	20.3%	79.7%		
	$40,000 or above	1 105	32.8%	67.2%		

The frequency of binge drinking is associated significantly with binge drinkers' gender, age, educational attainment, marital status and type of living quarters.

Male binge drinkers (23.6%), those aged 55-64 (28.5%), divorced/separated/widowed respondents (39.9%) and those living in public rental flats (24.9%) or private housing (24.2%) were more likely to have engaged in binge drinking twice a month or more when compared with their respective binging counterparts. The lower the educational attainment of the binge drinkers, the more likely that they had engaged in binge drinking twice a month or more (Table 4.7.4b).

Table 4.7.4b: Frequency of binge drinking among the binge drinkers (Section 6: Q2c)

Variable	Level	Base	Once a month or less	Twice a month or more	p-value Kruskal-Wallis test	Rank Correlation
Gender	Male	541	76.4%	23.6%	0.018	
	Female	223	82.0%	18.0%		
Age group	18-24	100	88.6%	11.4%		0.018
	25-34	231	75.3%	24.7%		
	35-44	195	80.6%	19.4%		
	45-54	137	76.5%	23.5%		
	55-64	92	71.5%	28.5%		
Educational attainment	Primary or below	24	48.3%	51.7%		0.003
	Lower secondary (S1-S3)	90	69.6%	30.4%		
	Upper secondary (S4-S6)/ Matriculation	235	79.4%	20.6%		
	Tertiary (Non-degree, degree or above)	412	81.3%	18.7%		
Marital status	Never married	365	78.5%	21.5%	0.049	
	Married	369	79.3%	20.7%		
	Divorced/Separated/Widowed	25	60.1%	39.9%		
Type of living quarters	Public rental flats	203	75.1%	24.9%	0.001	
	Subsidised sale flats	118	92.6%	7.4%		
	Private housing	427	75.8%	24.2%		

4.8 Cervical Cancer Screening (for female respondents only)

4.8.1 Experience of cervical screening

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

Women aged 18-24 (95.3%), those with tertiary education (42.3%), never married respondents (73.9%), clerks (42.4%), those with monthly household income of below $8,000 (46.0%) and those living in public rental flats (45.8%) were more likely to have not had a cervical smear when compared with their respective counterparts (Table 4.8.1).

Table 4.8.1: Ever had cervical smear before (Section 7: Q1a)

Variable	Level	Base	Yes	No	p-value Chi-square test	p-value Kruskal-Wallis test
Age group	18-24	229	4.7%	95.3%		
	25-34	416	48.2%	51.8%		
	35-44	460	75.3%	24.7%		0.000
	45-54	527	80.2%	19.8%		
	55-64	455	74.1%	25.9%		
Educational attainment	Primary or below	168	71.6%	28.4%		
	Lower secondary (S1-S3)	251	80.2%	19.8%		
	Upper secondary (S4-S6)/ Matriculation	807	62.9%	37.1%		0.000
	Tertiary (Non-degree, degree or above)	924	57.7%	42.3%		
Marital status	Never married	745	26.1%	73.9%		
	Married	1 302	83.6%	16.4%	0.000	
	Divorced/Separated/Widowed	94	81.2%	18.8%		
Occupation	Managerial/Professional worker	481	63.6%	36.4%		
	Clerk	407	57.6%	42.4%		
	Service/Shop sales worker	211	66.8%	33.2%	0.019	
	Blue collar worker	116	73.1%	26.9%		
	Not working	898	63.7%	36.3%		
Monthly Household Income	Below $8,000	86	54.0%	46.0%		
	$8,000-$13,999	147	60.1%	39.9%		
	$14,000-$19,999	165	65.0%	35.0%		0.000
	$20,000-$39,999	609	61.8%	38.2%		
	$40,000 or above	701	71.0%	29.0%		

Table 4.8.1: Ever had cervical smear before (Section 7: Q1a) (Continued)

Variable	Level	Base	Yes	No	p-value Chi-square test	p-value Kruskal-Wallis test
Type of living quarters	Public rental flats	614	54.2%	45.8%	0.000	
	Subsidised sale flats	354	64.3%	35.7%		
	Private housing	1 136	68.3%	31.7%		

4.8.2 Length of 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 educational attainment, marital status, occupation, monthly household income and type of living quarters.

A relatively higher proportion of divorced separated/widowed respondents (32.7%), non-working respondents (25.0%), those with monthly household income of $8,000-$13,999 (35.7%) and those living in public rental flats (24.1%) reported that they had their last smear at least 37 months ago when compared with their respective counterparts. The lower the educational attainment of the respondents who have had a cervical smear before, the more likely that they had their last smear at least 37 months ago (Table 4.8.2).

Table 4.8.2: Length of time since last cervical smear (Section 7: Q1b)

Variable	Level	Base	Within 12 months	13-36 months	37 months or above	p-value Kruskal-Wallis test	p-value Rank Correlation
Educational attainment	Primary or below	114	36.8%	31.3%	31.9%		0.000
	Lower secondary (S1-S3)	191	37.9%	38.6%	23.5%		
	Upper secondary (S4-S6)/ Matriculation	496	42.9%	34.6%	22.4%		
	Tertiary (Non-degree, degree or above)	526	51.3%	33.7%	15.0%		
Marital status	Never married	189	57.8%	27.5%	14.7%	0.000	
	Married	1 062	43.8%	35.6%	20.7%		
	Divorced/Separated/ Widowed	73	32.2%	35.1%	32.7%		
Occupation	Managerial/Professional worker	305	50.5%	34.6%	14.9%	0.000	
	Clerk	231	53.5%	30.2%	16.3%		
	Service/Shop sales worker	137	42.0%	35.6%	22.4%		
	Blue collar worker	82	40.2%	41.1%	18.7%		
	Not working	549	40.3%	34.7%	25.0%		
Monthly Household Income	Below $8,000	46	32.5%	36.3%	31.2%		0.000
	$8,000-$13,999	87	29.8%	34.4%	35.7%		
	$14,000-$19,999	102	42.3%	30.0%	27.6%		
	$20,000-$39,999	362	41.9%	38.3%	19.8%		
	$40,000 or above	494	49.4%	33.8%	16.7%		
Type of living quarters	Public rental flats	324	38.7%	37.3%	24.1%	0.005	
	Subsidised sale flats	221	38.8%	43.1%	18.1%		
	Private housing	758	49.6%	31.1%	19.2%		

4.8.3 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 educational attainment, marital status, occupation, monthly household income and type of living quarters.

Never married respondents (43.1%), service/shop sales workers (37.3%) or non-working respondents (36.6%), those with monthly household income of below $8,000 (44.8%) and those living in public rental flats (38.7%) 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 educational attainment of respondents who have had a cervical smear before, the more likely that they did not have cervical smear at a regular interval (Table 4.8.3).

Table 4.8.3: Whether had had cervical smear at a regular interval (Section 7: Q1c)

Variable	Level	Base	Yes, at a regular interval	No, not at a regular interval	p-value Chi-square test	p-value Kruskal-Wallis test
Educational attainment	Primary or below	120	60.4%	39.6%		0.008
	Lower secondary (S1-S3)	201	65.1%	34.9%		
	Upper secondary (S4-S6)/ Matriculation	506	67.3%	32.7%		
	Tertiary (Non-degree, degree or above)	533	68.2%	31.8%		
Marital status	Never married	195	56.9%	43.1%	0.004	
	Married	1 086	68.7%	31.3%		
	Divorced/Separated/Widowed	77	62.8%	37.2%		
Occupation	Managerial/Professional worker	306	73.5%	26.5%	0.029	
	Clerk	233	68.9%	31.1%		
	Service/Shop sales worker	141	62.7%	37.3%		
	Blue collar worker	85	66.8%	33.2%		
	Not working	571	63.4%	36.6%		
Monthly Household Income	Below $8,000	47	55.2%	44.8%		0.000
	$8,000-$13,999	88	59.1%	40.9%		
	$14,000-$19,999	107	56.8%	43.2%		
	$20,000-$39,999	376	66.6%	33.4%		
	$40,000 or above	497	70.1%	29.9%		
Type of living quarters	Public rental flats	333	61.3%	38.7%	0.037	
	Subsidised sale flats	227	71.0%	29.0%		
	Private housing	774	67.6%	32.4%		

4.8.4 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 educational attainment, marital status, occupation and type of living quarters.

Divorced/separated/widowed respondents (35.7%), blue collar workers (51.2%) and those living in public rental flats (45.2%) 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 lower the educational attainment of the respondents who have had a cervical smear at a regular interval, the more likely that they had the cervical smear test less frequent than once every 2 years (Table 4.8.4).

Table 4.8.4: Frequency of having cervical smear (Section 7: Q1d)

Variable	Level	Base	At least once a year	Once every 2 years	Less frequent than once every 2 years	p-value Kruskal-Wallis test	p-value Rank Correlation
Educational attainment	Primary or below	68	24.7%	22.0%	53.3%		0.000
	Lower secondary (S1-S3)	120	26.3%	29.2%	44.5%		
	Upper secondary (S4-S6)/ Matriculation	313	38.8%	30.4%	30.8%		
	Tertiary (Non-degree, degree or above)	351	46.8%	37.2%	16.0%		
Marital status	Never married	106	59.4%	26.2%	14.4%	0.000	
	Married	704	36.8%	33.3%	29.9%		
	Divorced/Separated/Widowed	41	30.6%	33.8%	35.7%		
Occupation	Managerial/Professional worker	213	47.8%	32.3%	19.9%	0.000	
	Clerk	154	44.5%	35.2%	20.3%		
	Service/Shop sales worker	84	37.0%	28.2%	34.8%		
	Blue collar worker	53	23.3%	25.5%	51.2%		
	Not working	335	34.7%	32.9%	32.3%		
Type of living quarters	Public rental flats	189	28.3%	26.5%	45.2%	0.000	
	Subsidised sale flats	146	28.7%	39.4%	32.0%		
	Private housing	500	46.8%	33.2%	20.0%		

4.9 Awareness of Cancer Prevention and Screening

4.9.1 Level of agreement to "Alcohol is a human cancer-causing agent (carcinogen)" (Correct statement)

Level of agreement to "Alcohol is a human cancer-causing agent" is associated significantly with the respondents' gender, age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

Male respondents (44.4%), those aged 25-34 (48.3%), married respondents (42.2%), managerial/professional workers (47.8%), those with monthly household income of $40,000 or above (47.0%) and those living in private housing (43.7%) were more likely to strongly disagree/disagree to the statement that "Alcohol is a human cancer-causing agent (carcinogen)". The higher the educational attainment of the respondents, the more likely that they strongly disagreed/disagreed to the statement (Table 4.9.1).

Table 4.9.1 Level of agreement to "Alcohol is a human cancer-causing agent (carcinogen)" (Section 8: Q1b)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value Chi-square test	p-value Kruskal-Wallis test
Gender	Male	1 900	48.9%	44.4%	6.8%	0.001	
	Female	2 171	52.0%	39.1%	8.8%		
Age group	18-24	465	63.4%	32.7%	3.9%		0.000
	25-34	790	47.5%	48.3%	4.2%		
	35-44	846	49.5%	43.1%	7.4%		
	45-54	980	48.3%	42.4%	9.2%		
	55-64	913	50.9%	37.5%	11.7%		
Educational attainment	Primary or below	268	56.4%	31.2%	12.5%		0.000
	Lower secondary (S1-S3)	524	51.4%	39.1%	9.5%		
	Upper secondary (S4-S6)/ Matriculation	1 405	51.2%	41.7%	7.1%		
	Tertiary (Non-degree, degree or above)	1 864	49.0%	43.7%	7.3%		
Marital status	Never married	1 468	54.2%	40.7%	5.1%	0.000	
	Married	2 426	48.3%	42.2%	9.4%		
	Divorced/Separated/Widowed	153	51.4%	40.8%	7.8%		
Occupation	Managerial/Professional worker	1 205	45.4%	47.8%	6.8%	0.000	
	Clerk	587	46.3%	45.8%	7.9%		
	Service/Shop sales worker	410	47.1%	46.2%	6.7%		
	Blue collar worker	455	50.1%	41.7%	8.1%		
	Not working	1 331	58.5%	32.6%	8.9%		

Table 4.9.1: Level of agreement to "Alcohol is a human cancer-causing agent (carcinogen)" (Section 8: Q1b) (Continued)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value Chi-square test	p-value Kruskal-Wallis test
Monthly household income	Below $8,000	147	61.6%	28.9%	9.5%		
	$8,000-$13,999	254	59.9%	28.9%	11.2%		
	$14,000-$19,999	300	52.1%	39.2%	8.7%		0.000
	$20,000-$39,999	1 110	53.7%	39.3%	7.0%		
	$40,000 or above	1 485	47.7%	47.0%	5.3%		
Type of living quarters	Public rental flats	1 164	54.7%	37.9%	7.4%		
	Subsidised sale flats	672	49.4%	41.4%	9.2%	0.009	
	Private housing	2 151	48.9%	43.7%	7.4%		

4.9.2 Level of agreement to "Processed meat can cause colorectal cancer" (Correct statement)

Level of agreement to "Processed meat can cause colorectal cancer" is associated significantly with the respondents' age, educational attainment, marital status, occupation and monthly household income.

Those aged 55-64 (8.1%), those with primary education or below (8.7%), divorced/ separated/widowed respondents (7.2%), blue collar workers (8.1%) and those with monthly household income of $14,000-$19,999 (8.7%) were more likely to strongly disagree/disagree to the statement that "Processed meat can cause colorectal cancer" (Table 4.9.2).

Table 4.9.2: Level of agreement to "Processed meat can cause colorectal cancer" (Section 8: Q1c)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value Chi-square test	p-value Kruskal-Wallis test
Age group	18-24	465	94.3%	2.7%	3.0%		
	25-34	790	93.5%	4.8%	1.6%		
	35-44	846	93.6%	4.7%	1.7%		0.000
	45-54	980	91.7%	5.0%	3.3%		
	55-64	913	86.3%	8.1%	5.6%		
Educational attainment	Primary or below	268	82.7%	8.7%	8.6%		
	Lower secondary (S1-S3)	524	89.7%	6.3%	4.0%		
	Upper secondary (S4-S6)/ Matriculation	1 405	91.9%	4.7%	3.4%		0.000
	Tertiary (Non-degree, degree or above)	1 864	92.8%	5.0%	2.2%		
Marital status	Never married	1 468	94.0%	3.8%	2.2%		
	Married	2 426	90.4%	6.0%	3.5%	0.000	
	Divorced/Separated/Widowed	153	85.0%	7.2%	7.8%		
Occupation	Managerial/Professional worker	1 205	92.3%	5.4%	2.3%		
	Clerk	587	94.0%	4.0%	2.0%		
	Service/Shop sales worker	410	91.0%	4.9%	4.1%	0.007	
	Blue collar worker	455	87.8%	8.1%	4.1%		
	Not working	1 331	90.8%	5.1%	4.1%		

Table 4.9.2: Level of agreement to "Processed meat can cause colorectal cancer"
(Section 8: Q1c) (Continued)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value	
						Chi-square test	Kruskal-Wallis test
Monthly household income	Below $8,000	147	88.8%	6.9%	4.3%		
	$8,000-$13,999	254	89.0%	6.5%	4.5%		
	$14,000-$19,999	300	88.3%	8.7%	3.0%		0.013
	$20,000-$39,999	1 110	93.7%	3.7%	2.7%		
	$40,000 or above	1 485	93.2%	4.7%	2.1%		

4.9.3 Level of agreement to "Obesity is a risk factor for cancers" (Correct statement)

Level of agreement to "Obesity is a risk factor for cancers" is associated significantly with the respondents' age, educational attainment, marital status and monthly household income.

Those aged 45-64 (ranging from 35.6% to 36.2%), those with lower secondary education (35.4%) or upper secondary education/matriculation (34.9%), married (34.8%) or divorced/separated/widowed respondents (34.8%) and those with monthly household income of $14,000-$19,999 (37.7%) were more likely to strongly disagree/disagree to the statement that "Obesity is a risk factor for cancers" (Table 4.9.3).

Table 4.9.3: Level of agreement to "Obesity is a risk factor for cancers" (Section 8: Q1d)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value Chi-square test	p-value Kruskal-Wallis test
Age group	18-24	465	72.5%	25.8%	1.6%		
	25-34	790	65.7%	31.7%	2.6%		
	35-44	846	63.8%	30.7%	5.5%		0.000
	45-54	980	56.4%	36.2%	7.3%		
	55-64	913	55.0%	35.6%	9.4%		
Educational attainment	Primary or below	268	57.7%	32.0%	10.3%		
	Lower secondary (S1-S3)	524	57.3%	35.4%	7.2%		
	Upper secondary (S4-S6)/ Matriculation	1 405	59.5%	34.9%	5.6%		0.000
	Tertiary (Non-degree, degree or above)	1 864	64.0%	31.0%	5.0%		
Marital status	Never married	1 468	66.8%	29.5%	3.6%		
	Married	2 426	58.2%	34.8%	7.1%	0.000	
	Divorced/Separated/ Widowed	153	58.8%	34.8%	6.4%		
Monthly household income	Below $8,000	147	56.2%	32.5%	11.3%		
	$8,000-$13,999	254	61.6%	30.3%	8.1%		
	$14,000-$19,999	300	58.2%	37.7%	4.1%		0.028
	$20,000-$39,999	1 110	64.6%	30.8%	4.6%		
	$40,000 or above	1 485	62.6%	32.7%	4.7%		

4.9.4 Level of agreement to "Cancer screening is to conduct test on people who have no symptom" (Correct statement)

Level of agreement to "Cancer screening is to conduct test on people who have no symptom" is associated significantly with the respondents' age, educational attainment, marital status and types of living quarters.

Never married (25.3%) or divorced/separated/widowed respondents (25.4%) and those living in private housing (23.8%) were more likely to strongly disagree/disagree to the statement that "Cancer screening is to conduct test on people who have no symptom". The younger and the higher the educational attainment of the respondents, the more likely that they strongly disagreed/disagreed to the statement (Table 4.9.4).

Table 4.9.4: Level of agreement to "Cancer screening is to conduct test on people who have no symptom" (Section 8: Q1e)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value Chi-square test	p-value Kruskal-Wallis test
Age group	18-24	465	64.4%	28.5%	7.1%		
	25-34	790	66.2%	24.4%	9.4%		
	35-44	846	68.3%	23.5%	8.2%		0.000
	45-54	980	70.3%	20.7%	9.1%		
	55-64	913	72.6%	18.1%	9.3%		
Educational attainment	Primary or below	268	72.1%	16.0%	11.9%		
	Lower secondary (S1-S3)	524	70.6%	19.3%	10.2%		
	Upper secondary (S4-S6)/ Matriculation	1 405	68.3%	22.5%	9.2%		0.000
	Tertiary (Non-degree, degree or above)	1 864	68.4%	23.8%	7.8%		
Marital status	Never married	1 468	66.9%	25.3%	7.8%		
	Married	2 426	70.8%	20.1%	9.2%	0.000	
	Divorced/Separated/ Widowed	153	61.0%	25.4%	13.6%		
Type of living quarters	Public rental flats	1 164	71.8%	19.5%	8.6%		
	Subsidised sale flats	672	71.0%	21.8%	7.2%	0.023	
	Private housing	2 151	67.1%	23.8%	9.1%		

4.9.5 Level of agreement to "Cancer screening results are 100% accurate" (Incorrect statement)

Level of agreement to "Cancer screening results are not 100% accurate" is associated significantly with the respondents' gender, age, educational attainment, marital status, occupation, monthly household income and types of living quarters.

Male respondents (48.9%), those aged 55-64 (52.9%), married respondents (50.0%), blue collar workers (61.8%), those with monthly household income of $8,000-$13,999 (59.8%) and those living in public rental flats (54.1%) were more likely to strongly agree/agree to the statement that "Cancer screening results are 100% accurate". The lower the educational attainment of the respondents, the more likely that they strongly agreed/agreed to the statement (Table 4.9.5).

Table 4.9.5: Level of agreement to "Cancer screening results are 100% accurate" (Section 8: Q1f)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value Chi-square test	Kruskal-Wallis test
Gender	Male	1 900	48.9%	44.1%	6.9%	0.047	
	Female	2 170	45.9%	45.4%	8.7%		
Age group	18-24	465	40.0%	56.4%	3.7%		0.000
	25-34	790	43.7%	49.4%	6.8%		
	35-44	846	50.2%	42.1%	7.7%		
	45-54	980	47.0%	44.1%	8.9%		
	55-64	913	52.9%	37.5%	9.6%		
Educational attainment	Primary or below	268	64.8%	24.8%	10.4%		0.000
	Lower secondary (S1-S3)	524	63.3%	26.3%	10.4%		
	Upper secondary (S4-S6)/ Matriculation	1 404	49.0%	43.5%	7.5%		
	Tertiary (Non-degree, degree or above)	1 864	39.2%	53.8%	7.0%		
Marital status	Never married	1 468	43.7%	51.0%	5.3%	0.000	
	Married	2 426	50.0%	40.9%	9.1%		
	Divorced/Separated/Widowed	153	43.1%	44.4%	12.4%		
Occupation	Managerial/Professional worker	1 205	41.3%	51.7%	6.9%	0.000	
	Clerk	587	43.8%	46.4%	9.8%		
	Service/Shop sales worker	410	52.1%	41.6%	6.3%		
	Blue collar worker	455	61.8%	30.6%	7.6%		
	Not working	1 330	48.5%	43.2%	8.3%		

Table 4.9.5: Level of agreement to "Cancer screening results are 100% accurate" (Section 8: Q1f) (Continued)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value Chi-square test	p-value Kruskal-Wallis test
Monthly household income	Below $8,000	147	49.9%	35.5%	14.6%		0.000
	$8,000-$13,999	254	59.8%	34.4%	5.9%		
	$14,000-$19,999	300	57.6%	34.7%	7.8%		
	$20,000-$39,999	1 110	50.3%	43.8%	5.9%		
	$40,000 or above	1 485	43.9%	49.4%	6.7%		
Type of living quarters	Public rental flats	1 164	54.1%	36.8%	9.1%	0.000	
	Subsidised sale flats	671	50.4%	42.9%	6.6%		
	Private housing	2 151	43.1%	49.4%	7.5%		

4.9.6   Level of agreement to "Some cancer screening tests have potential risks" (Correct statement)

Level of agreement to "Some cancer screening tests have potential risks" is associated significantly with the respondents' gender, age and monthly household income.

Male respondents (72.8%), those aged 18-24 (72.3%) or 35-44 (73.3%) and those with monthly household income of $40,000 or above (73.7%) were more likely to strongly agree/agree to the statement "Some cancer screening tests have potential risks" (Table 4.9.6).

Table 4.9.6: Level of agreement to "Some cancer screening tests have potential risks" (Section 8: Q1g)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value Chi-square test	p-value Kruskal-Wallis test
Gender	Male	1 900	72.8%	17.3%	9.9%	0.022	
	Female	2 170	70.3%	17.0%	12.7%		
Age group	18-24	465	72.3%	21.4%	6.3%		0.009
	25-34	790	70.1%	17.4%	12.5%		
	35-44	845	73.3%	16.1%	10.6%		
	45-54	980	70.7%	16.9%	12.4%		
	55-64	913	71.9%	16.0%	12.1%		
Monthly household income	Below $8,000	147	66.9%	18.1%	15.0%		0.006
	$8,000-$13,999	254	71.8%	14.8%	13.4%		
	$14,000-$19,999	300	69.0%	16.7%	14.3%		
	$20,000-$39,999	1 110	71.8%	18.7%	9.5%		
	$40,000 or above	1 485	73.7%	16.4%	9.8%		

4.9.7 Level of agreement to "Cancer screening may be done without a doctor's instruction or advice" (Incorrect statement)

Level of agreement to "Cancer screening may be done without a doctor's instruction or advice" is associated significantly with the respondents' gender, educational attainment and occupation.

Male respondents (17.3%) and service/shop sales workers (19.2%) or blue collar workers (20.0%) were more likely to strongly agree/agree to the statement that "Cancer screening may be done without a doctor's instruction or advice". The lower the educational attainment of the respondents, the more likely that they strongly agreed/agreed to the statement (Table 4.9.7).

Table 4.9.7: Level of agreement to "Cancer screening may be done without a doctor's instruction or advice" (Section 8: Q1h)

Variable	Level	Base	Strongly agree/ Agree	Strongly disagree/ Disagree	Don't know	p-value	
						Chi-square test	Kruskal-Wallis test
Gender	Male	1 899	17.3%	79.2%	3.5%	0.009	
	Female	2 171	13.9%	82.9%	3.2%		
Educational attainment	Primary or below	268	20.4%	75.4%	4.2%		0.025
	Lower secondary (S1-S3)	524	18.5%	78.0%	3.5%		
	Upper secondary (S4-S6)/ Matriculation	1 405	15.4%	82.0%	2.6%		
	Tertiary (Non-degree, degree or above)	1 863	14.1%	82.3%	3.6%		
Occupation	Managerial/Professional worker	1 204	13.9%	82.5%	3.6%	0.011	
	Clerk	587	12.9%	83.5%	3.6%		
	Service/Shop sales worker	410	19.2%	78.5%	2.3%		
	Blue collar worker	455	20.0%	76.1%	3.9%		
	Not working	1 331	15.8%	81.3%	2.8%		

Chapter 5 Conclusion and Recommendations

5.1 Conclusion

5.1.1 Weight Status, Control and Perception

According to the locally adapted classification of weight status for Chinese adults in Hong Kong, about half (51.5%) of the respondents were classified as "normal", 18.5% as "overweight" and 21.1% as "obese", while the remaining 8.8% were classified as "underweight".

Regarding respondents' self-perceived current weight status, about half (50.3%) of the respondents perceived themselves as "just right", 41.9% considered themselves as "overweight", and 7.8% considered themselves as "underweight". Overall, 67.6% of the respondents perceived their weight status in a way consistent with the locally adapted classification, while 17.8% of the respondents overestimated and 14.5% underestimated their weight status.

5.1.2 Physical Activity and Leisure-time Exercise

During the seven days prior to the survey, more than half (55.4%) and over two-fifths (43.1%) of the respondents had not engaged in any vigorous and moderate physical activity for at least 10 minutes a day respectively. On the other hand, close to three-quarters (71.9%) of the respondents had spent at least 10 minutes on walking every day during the seven days prior to the survey.

Overall, more than two-fifths (43.8%) of the respondents' level of physical activity met the WHO's recommended physical activity level for adults. Over one-third (37.7%) of the respondents reported they exercised one to three times a week in their leisure-time.

5.1.3 Fruit and Vegetable Consumption

While about half (50.2%) of the respondents had eaten fruit every day, about four-fifths of the respondents (80.3%) had eaten vegetables daily. Regular fruit or vegetable juice consumption was found to be uncommon amongst respondents - 2.0% of the respondents drank fruit or vegetable juice daily.

Excluding fruit or vegetable juice, the average (mean) daily intake of fruit and vegetables by the respondents was 3.4 servings. About one-fifth (20.5%) of the respondents had a daily intake of 5 or more servings of fruit and vegetables.

5.1.4 Meat Consumption

During the thirty days prior to the survey, respondents on average consumed 2.7 taels of red meat and 2.1 taels of white meat per day. Overall, about a quarter (25.2%) of respondents consumed more than 6 taels of meat on average per day and 48.5% of respondents consumed less than 4 taels of meat per day. It was also found that 10.4% of respondents had consumed processed meat on four or more days per week on average during the thirty days prior to the survey.

5.1.5 Smoking Pattern

About one-tenth (10.9%) of the respondents were current smokers at the time of this survey. Among the current smokers, the vast majority (95.9%) were daily smokers and almost half (47.1%) of them reported smoking at least 11 cigarettes a day.

5.1.6 Pattern of Alcohol Consumption

During the past year prior to the survey, about seven-tenths (70.5%) of the respondents reported having drunk at least one alcoholic drink. While about two-fifths (40.0%) of these drinkers drank less than monthly, 4.0% drank daily.

Among those who had drunk alcohol during the past year prior to the survey, more than a quarter (27.4%) reported that they had engaged in binge drinking (drinking 5 or more glasses/cans of alcohol on one occasion) during the past year prior to the survey.

5.1.7 Cervical Cancer Screening (for female respondents only)

Nearly two-thirds (63.4%) of the female respondents reported that they had a cervical smear before.

Among those female respondents who had a cervical smear before, about two-thirds (66.6%) had a cervical smear at a regular interval. Among those who had cervical smears regularly, 35.7% had the test once a year.

5.1.8 Awareness of Cancer Prevention and Screening

Over 90% of the respondents strongly agreed/agreed to the (correct) statements "Some cancer cases can be prevented by adopting healthy lifestyle" and "Processed meat can cause colorectal cancer". Over 60% of the respondents strongly agreed/agreed to the (correct) statements "Obesity is a risk factor for cancers" and "Cancer screening is to conduct test on people who have no symptom".

However, about two-fifths (41.6%) of them strongly disagreed/disagreed to the (correct) statement "Alcohol is a human cancer-causing agent (carcinogen)" Furthermore, less than one-fifth (17.1%) of them strongly disagreed/disagreed to the (correct) statement "Some cancer screening tests have potential risks".

5.2   Recommendations

Some recommendations based on the survey findings are suggested below:

1. The benefits of regular physical activity are well-known, such as improving cardiorespiratory and muscular fitness, bone health and reducing the risk of developing chronic diseases and depression. However, only about two-fifths of respondents (43.8%) achieved the recommended amount of physical activities suggested by the WHO. Thus, education about the health benefits and recommended level of physical activities would continue be reinforced to facilitate the public to engage in a more active lifestyle.

2. 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, the survey found that only about one-fifth (20.5%) of the respondents had a daily average intake of 5 or more servings of fruit and vegetables. Health promotion campaigns would continue be strengthened to educate the public about health benefits of at least 5 servings of fruit and vegetable intake a day and to encourage the public to consume more fruits or vegetables.

3. More than a quarter (27.4%) of the respondents who had drunk alcohol during the past year prior to the survey reported that they had engaged in binge drinking (drinking 5 or more glasses/cans of alcohol on one occasion). However, about two-fifths (41.6%) of respondents strongly disagreed/disagreed to the (correct) statement "Alcohol is a human cancer-causing agent (carcinogen)". Information of the harms of alcohol use, and in particular those of binge drinking, would continue be publicised and educate the public to quit drinking or drink less.

4. Regarding the awareness of cancer screening, about two-fifths (44.8%) of the respondents strongly disagreed/disagreed to the (incorrect) statement "Cancer screening results are 100% accurate" and less than one-fifth (17.1%) of them strongly disagreed/disagreed to the (correct) statement "Some cancer screening tests have potential risks". More education about cancer screening would continue be introduced to help the public understand about both strengths and limitations of cancer screening.

5.3   Limitations

1.   Although the data were weighted by the distribution of age, gender and type of living quarters in order to correct for over- or under-representation of all groups in the population, the data were not weighted for the number of eligible respondents in a household and the number of phones in a household, or to account directly for non-response.

2.   The use of the 'Next Birthday' rule to select respondent when there is more than one eligible respondent resided in a household by the time of the telephone contact cannot cover people who are always not at home in the evening and weekends.

3.   A household telephone survey, by definition, excludes the institutionalised population and households without fixed line telephones, so the findings cannot be generalised to these sub-populations. However, as the fixed line telephone coverage in households is still around 80%, a household telephone survey should only exclude a small proportion of households.

4.   The response rate is unsatisfactory. The possible reason was that there was still under the impact of telephone deceptions that reduced people's willingness in taking part in this telephone survey.

5.   The survey relied on self-reported data and had certain limitations.

    i.   Respondents might not be willing to disclose to interviewers and deliberately under-report those behaviours that are socially undesirable or considered as unhealthy (such as binge drinking). Conversely, respondents might over-report those behaviours that are considered desirable.

    ii.   Self-reporting behaviour or practices are also subject to recall bias and recall error. However, the recall period was kept quite short in this survey which should reduce such bias.

6.   Finally, this was a cross-sectional study. The causal or time relationship between various factors could not be identified.

Annex   Survey Questionnaire

Behavioural Risk Factor Survey 2016

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. Questions related to your personal health and the risks of diseases will be asked. All the information provided by you will be kept strictly confidential and for collective analysis only. This survey will take approximately 15 minutes to complete. You can choose to terminate the interview at any time without negative consequences. If you have any queries on this survey, you can call the (SSRC) at phone number: 3917-1600 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)

Section 1: Weight Status, Control and Perception

Q1a. Your height is?

_____cm   /or   _____ ft _____ in

Q1b. Your weight is?

_____ kg   /or   _____ lb

Q1c. Your waist circumference is?

_____ cm   /or   _____ in

Q2. What do you think about your current weight; is it overweight, just right, or underweight?

1.   Overweight
2.   Just right
3.   Underweight

Section 2: Physical Activity and Leisure-time Exercise

Q1a. 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 and your heart beat much faster than normal, e.g., running, aerobics, football, swimming, heavy physical work, jogging, etc., and you did these activities for at least 10 minutes at a time.

_____ Days

Q1b. [Only ask those whose answers in Q1a 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

Q2a. 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 and your heart beat somewhat faster 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

Q2b. [Only ask those whose answers in Q2a 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

Q3a. 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

Q3b. [Only ask those whose answers in Q3a 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

Q4. 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 or other places, visiting friends, traveling on public transport, reading and lying down to watch television. (Interviewer's prompts: If the respondent cannot answer the daily average time, then say: Please try to make an estimate as accurate as possible.)

_____Hours _____ Minutes

Q5. During the past 30 days, how often did you <u>exercise in your leisure time</u>, 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

Section 3: Fruit and Vegetable Consumption

Q1a. 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 Q2a)

Q1b. On average, how many fruit did you eat on one of those days?
(Interviewer's prompts: 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.)

_____ Pieces

Q2a. 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 Q3)

Q2b. 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

Q3. On average, how many days in the week do you drink at least one cup of fruit or vegetable juice? "Juice" refers to freshly squeezed juice or those that 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

Section 4: Meat Consumption

Q1a. In the past 30 days, how many days on average did you eat <u>red meat</u> each week?
Common examples of red meat include pork, beef, and lamb.

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

Q1b. [Only ask those who answers "1" to "7" in Q1a]
Taking only the days you had eaten red meat into account, on average, how many taels / slices of red meat about the size of a mah-jong tile did you eat in one day? (Interviewer's prompts: A tael of meat also equates to 40 grams, 1.33 ounces or 4 slices, and 1 pound is equivalent to 12 taels. The numbers can be recorded as half such as 0.5 or 1.5 taels.)

_____ Taels

Q2a. In the past 30 days, how many days on average did you eat <u>white meat</u> each week?
Common examples of white meat include poultry and fish.

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

Q2b. [Ask those who answers "1" to "7" in Q2a]
Taking only the days you had eaten white meat into account, on average, how many taels / slices of white meat about the size of a mahjong tile did you eat in one day? (Interviewer's prompts: A tael of meat also equates to 40 grams, 1.33 ounces or 4 slices, and 1 pound is equivalent to 12 taels. The numbers can be recorded as half such as 0.5 or 1.5 taels.)

_____ Taels

Q3. In the past 30 days, how many days on average did you eat <u>processed meat</u> each week? They include canned meat, cured meat or smoked meat, such as luncheon meat, ham, sausages, bacon and Chinese preserved meat.

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

Section 5: Smoking Pattern

Q1. 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 Q3a)
3. Never (skip to next section)

Q2. How long have you stopped smoking? (Interviewer: read out the answers one by one)

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

Q3a. 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

Q3b. In the next 6 months, are you planning to quit smoking or smoke less?

1. Yes, plan to quit smoking
2. Yes, plan to smoke less
3. No plan to change
4. Not sure/Don't know

Section 6: Pattern of Alcohol Consumption

Q1a. During the past year, did you have a drink containing alcohol?

    1.   Yes (skip to Q2a)
    2.   No

Q1b. In the next 6 months, will you have a drink containing alcohol?

    1.   Yes (skip to next section)
    2.   No (skip to next section)
    3.   Not sure/Don't know (skip to next section)

Q2a. How often do you have a drink containing alcohol?

    1.   Less than monthly
    2.   Once a month
    3.   2 to 3 times a month
    4.   Once a week
    5.   2 times a week
    6.   3 times a week
    7.   4 times a week
    8.   5 times a week
    9.   6 times a week
    10.   Once a day

Q2b. On a typical day when you are drinking, what type of drinks containing alcohol and how much do you have?

    (Interviewer: please make reference of the following pictures for calculating the number of drinks appropriately. One unit equals to 10 grams of ethanol.)

	Beer			Red/White wine	Spirit		Rice wine		Shorgum	Sake
1 can ~330 ml	1 pint ~568 ml	Half pint ~284 ml	1 glass ~180 ml	1 glass ~125 ml	1 peg ~40-50 ml	1shot ~22 ml	1 glass ~180 ml	1 small glass ~ 20 ml	1 small glass ~20 ml	1 small glass ~20ml
( ) can/	( ) glass	( ) glass	( ) glass	( ) glass	( ) glass	( ) glass	( ) glass	( ) glass	( ) glass	( ) glass
1.3 units	2.2 units	1.1 units	0.7 units	1.2 units	1.3 units	0.7 units	5.7 units	0.6 units	0.8 units	0.3 units

_____ Units of drinks

Q2c. How often do you have at least 5 or more drinks 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. Never
2. Less than monthly
3. Once a month
4. 2 times a month
5. 3 times a month
6. Once a week
7. 2-3 times a week
8. 4-6 times a week
9. Daily or almost daily

Q2d. In the next 6 months, are you planning to change your drinking habit?

1. Yes, plan to drink more
2. Yes, plan to drink less
3. Yes, plan to stop drinking completely
4. No plan to change
5. Not sure/Don't know

Section 7: Cervical Cancer Screening (for female respondents only)

Q1a. Have you ever had a cervical smear before?

  1. Yes
  2. No (skip to Q2)
  3. Not sure (skip to Q2)

Q1b. 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 or above
  7. Cannot remember

Q1c. Do you have your cervical smear <u>at a regular interval</u>?

  1. Yes, at a regular interval
  2. No, not at a regular interval (skip to Q2)

Q1d. 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

Q2. Have you had a total hysterectomy (surgical removal of the entire uterus) before?

  1. Yes
  2. No

Section 8: Awareness of Cancer Prevention and Screening

Q1. The following statements are related to cancer prevention and screening. Please state how much you agree or disagree with each one.

(Interviewer: Please offer the first four options of "Strongly agree", "Agree", "Disagree" and "Strongly disagree", and then read out the statements one by one. Do not prompt the option of "Don't Know".)

a.	Some cancer cases can be prevented by adopting healthy lifestyle.	Strongly agree	Agree	Disagree	Strongly disagree	Don't Know
b.	Alcohol is a human cancer-causing agent (carcinogen).	Strongly agree	Agree	Disagree	Strongly disagree	Don't Know
c.	Processed meat can cause colorectal cancer.	Strongly agree	Agree	Disagree	Strongly disagree	Don't Know
d.	Obesity is a risk factor for cancers.	Strongly agree	Agree	Disagree	Strongly disagree	Don't Know
e.	Cancer screening is to conduct test on people who have no symptom.	Strongly agree	Agree	Disagree	Strongly disagree	*Don't Know*

* After Q1e, Interviewer explains the meaning of cancer screening: Cancer screening means offering test for those without symptoms to detect cancer or to find people at increased risk of developing cancer, for early treatment and hence better treatment outcome.

f.	Cancer screening results are 100% accurate.	Strongly agree	Agree	Disagree	Strongly disagree	Don't Know
g.	Some cancer screening tests have potential risks.	Strongly agree	Agree	Disagree	Strongly disagree	Don't Know
h.	Cancer screening may be done without a doctor's instruction or advice.	Strongly agree	Agree	Disagree	Strongly disagree	Don't Know

Q2. Through what <u>promotional channels (e.g. media channel, advertisement location, internet site or physical media)</u> do you usually get health information on cancer?

(Interviewer: Do not read out answers. A maximum of three answers are allowed.)

(Please note that health professionals or relatives and friends are not considered as promotional channels.)

1. Television	Yes	No
2. Outdoor billboards	Yes	No
3. Roadside banners	Yes	No
4. Advertisements inside MTR stations or trains	Yes	No
5. Advertisements on the bodies of trams	Yes	No
6. Advertisements on the bodies of buses	Yes	No
7. Stickers on the seats of buses	Yes	No
8. Radio	Yes	No
9. Bus Roadshow	Yes	No
10. Newspapers (printed version)	Yes	No
11. Newspapers (online version)	Yes	No
12. Magazines (printed version)	Yes	No
13. Magazines (online version)	Yes	No
14. Posters	Yes	No
15. Internet websites	Yes	No
16. You Tube	Yes	No
17. Facebook Page	Yes	No
18. Mobile Apps	Yes	No
19. Booklets / Pamphlets	Yes	No
20. Video CD / DVD	Yes	No
21. Talks	Yes	No
22. Exhibitions	Yes	No
23. Other channels 　(a) ＿＿＿＿＿＿＿＿＿ 　(b) ＿＿＿＿＿＿＿＿＿ 　(c) ＿＿＿＿＿＿＿＿＿	Yes	No

Section 9: Use of Mobile Phone

Q1. Do you currently use a mobile phone?

1. Yes
2. No (skip to Next Section)

Q2. How many mobile phone numbers in total which you are using personally and would usually answer?

_____

Q3. Of all the telephone calls that you received on your residential telephone and mobile phone, what percentage, between 1 and 100 are received on your mobile phone?

_____

Section 10: Demographic Characteristics

Q1. Record the gender

1. Male

2. Female

Q2. What is your age?

_____ Years

Q3. What is your highest educational attainment? (Interviewer: read out the answers one by one)

1. Primary or below
2. Lower secondary (S1-S3)
3. Upper secondary (S4-S6) / Matriculation
4. Tertiary (Non-degree, degree or above)
5. Refuse to answer

Q4. What is your marital status? (Interviewer: read out the answers one by one)

1. Never married
2. Married and with child(ren)
3. Married and without child
4. Divorced or Separated
5. Widowed
6. Refuse to answer

Q5a. Are you currently engaged in a job?

1. Yes
2. No (skip to Q5c)

Q5b. What is your occupation? (Interviewer: record the details of occupation)

1. Employer/Manager/Administrator
2. Professional
3. Associate Professional
4. Clerk
5. Service worker
6. Shop sales worker   (skip to Q6)
7. Skilled agricultural/fishery worker
8. Craft and related worker
9. Plant and machine operator and assembler
10. Un-skilled worker
11. Other (Please specify : _____)

Q5c. You are a …   (Interviewer: read out the answers one by one)

1. Student
2. Homemaker
3. Unemployed person   (skip to Q7)
4. Retired person
5. Others (Please specify_____)

Q6. 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

Q7. 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

Q8. What is the type of your living quarter?

1. Public rental flats
2. Housing Authority subsidised sale flats
3. Housing Society subsidised 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