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# **Behavioural Risk Factor Survey (April 2015)**

## **Main Report**

**Commissioned by**



衛生署  
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 2015 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 9 areas:

1. Eating out habits
2. Consumption of sugary beverages and foods
3. Food handling practices
4. Sport participation and injury
5. Heat stroke and sunburn
6. Use of solarium
7. Use of mobile phone
8. Organ donation
9. 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 52 questions was used. Fieldwork took place between 15<sup>th</sup> April and 26<sup>th</sup> June 2015. A sample size of 4 253 successful interviews was achieved with an overall response rate of 15.6%. 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**

### **Eating out habits**

In the 30 days prior to the survey, more than a quarter (27.2%), nearly half (48.2%) and less than one-tenth (9.1%) of the respondents ate out for breakfast, lunch and dinner 5 times or more a week respectively.

About three-quarters (76.3%) of the respondents had heard of EatSmart Restaurants. Among those respondents who had heard of EatSmart restaurants, the majority (86.1%) of them had not patronised EatSmart Restaurants in the 30 days prior to the survey. The most frequently cited reasons for not patronising EatSmart Restaurants were 'few or no EatSmart Restaurants nearby' (48.3%) and 'not knowing which restaurants were EatSmart Restaurants' (30.4%).

In the 30 days prior to the survey, more than two-fifths (44.3%) of the respondents reported that they had not consumed EatSmart Dishes. The most frequently reported reasons for not consuming EatSmart Dishes were 'no EatSmart Dishes provided in restaurants' (34.0%) and 'not knowing which dishes were EatSmart Dishes' (23.6%).

### **Consumption of sugary beverages and foods**

In the 30 days prior to the survey, more than one-third (35.6%) of the respondents drank soft drinks or sugary beverages once a day or more while almost one-tenth (8.9%) of the respondents ate desserts or snacks that were high in sugar once a day or more. Less than three-tenths (29.3%) of the respondents reported they checked nutrition labels when choosing pre-packaged drinks and foods all/ most of the time.

### **Food handling practices**

Most respondents washed all food thoroughly before cooking, especially seafood (78.0%), kept raw and cooked food separately (70.3%), cooked/reheated food thoroughly, especially seafood (73.3%) and washed their hands before handling food (73.6%) all of the time.

### **Sport participation and injury**

In the 12 months prior to the survey, about three-fifths (61.2%) of the respondents reported that they participated in a sport or exercise activity at least once a week. Among those respondents who participated in a sport or exercise activity in the 12 months prior to the survey, about half (52.5%) of the respondents would warm up before taking part in a sport or exercise activity all/ most of the time; only about one-third (34.4%) of the respondents would cool down after taking part in a sport or exercise activity all/ most of the time. Overall, almost one-tenth (9.0%) of the respondents who participated in a sport or exercise

activity in the 12 months prior to the survey reported that they had been injured by taking part in a sport or exercise activity.

### **Heat stroke and sunburn**

In the 12 months prior to the survey, 3.4% and 12.7% of the respondents reported that they had a heat stroke and sunburn respectively.

### **Use of solarium**

Overall, 1.3% of the respondents had ever used a solarium. Among those who had ever used a solarium, 7.8% of them reported that they used a solarium for the first time when they were 14-17 years old.

### **Use of mobile phone**

Most respondents (99.0%) reported that they were currently using a mobile phone. Among them, 2.2% of respondents reported that they physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey.

### **Organ donation**

More than two-thirds (69.0%) of respondents had heard of the Centralised Organ Donation Register, while about half (52.6%) of the respondents reported that they were willing to donate their organs after death. Among those respondents who were willing to donate their organs, 59.3% of them expressed their wish to family members and 22.0% of them carried an organ donation card to express their wish of donating their organs. Overall, the vast majority (96.4%) of the respondents reported that they would not object to the transplant if their family members had expressed their will to donate organs after death.

## **Recommendations**

Some recommendations based on the survey findings are suggested below:

1. Among the respondents who had not patronised EatSmart Restaurants (86.1%) and had not consumed EatSmart Dishes (44.3%), the most frequently cited reason for not patronising EatSmart Restaurant and not consuming EatSmart Dishes was ‘few or no EatSmart Restaurants nearby’ ‘and ‘no EatSmart Dishes provided in restaurants’ respectively. Thus, more efforts are needed to recruit restaurants to join EatSmart campaign to provide more EatSmart Dishes.
2. Less than three-tenths (29.3%) of respondents reported they checked nutrition labels when choosing pre-packaged drinks and foods all/ most of the time. Promotional campaigns should be strengthened to educate the public the importance of and ways to checking nutrition labels of pre-packaged drinks and foods.
3. Warming up and cooling down can help reduce the risk of sport-related injuries and enhance performance. Among those who participated in a sport or exercise activity in the 12 months prior to the survey, however, only about half (52.5%) of respondents would warm up before taking part in a sport or exercise activity and only about one-third (34.4%) of respondents would cool down after taking part in a sport or exercise activity all/ most of the time. More education about the importance of warning up and cooling down before and after participating in a sport or exercise activity should be provided to the community.
4. More than two-thirds (69.0%) of respondents had heard of the Centralised Organ Donation Register, while only about half (52.6%) of the respondents reported that they were willing to donate their organs after death. More promotional campaigns are needed to raise the public’s awareness and to encourage the public to donate organs after death.

## **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 2015 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:

- Eating out habits
- Consumption of sugary beverages and foods
- Food handling practices
- Sport participation and injury
- Heat stroke and sunburn
- Use of solarium
- Use of mobile phone
- Organ donation
- 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)<sup>1</sup> 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<sup>2</sup>.

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 47 pre-coded questions and 5 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 51 successfully completed interviews was conducted on 10<sup>th</sup> and 11<sup>th</sup> March 2015 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.

### **2.5    Fieldwork**

Fieldwork took place in the call-centre of SSRC on all the weekdays and two Saturdays (16<sup>th</sup> May 2015 and 6<sup>th</sup> June 2015) between 15<sup>th</sup> April and 26<sup>th</sup> June 2015, except 1<sup>st</sup> May and 25<sup>th</sup> May, which are public holidays (a total of 51 weekdays and 2 Saturdays).

Because of the briefing on 15<sup>th</sup> April 2015, 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

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<sup>1</sup> 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.

<sup>2</sup> 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.

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 67 457 telephone numbers were attempted. The number of successful interviews was 4 253. Refusal and mid-way termination cases amounted to 2 194. All “not available” (16 018), and “no answer” (5 943) cases were attempted at least six times before being classified as non-contact cases. The contact rate was 43.5%<sup>3</sup> and the overall response rate was 15.6%<sup>4</sup>.

**Table 2.6: Final status of telephone numbers attempted**

Final status of contacts <sup>5</sup>	Number of cases
(A) No. of telephone numbers sampled	67 457
(B) No. of ineligible cases	38 740
a) Valid working telephone numbers	6 868
i) Claimed wrong number	0
ii) Language problem	265
iii) Non-residential line	3 840
iv) No target respondent	2 763
b) Invalid telephone numbers	31 872
i) Fax / data line	3 450
ii) Non-working / out of service number	28 422
(C) No. of eligible cases	22 465
a) Successfully completed interviews	4 253
b) Unsuccessful cases	18 212
i) Mid-way termination cases	196
ii) Non-contact cases such as selected eligible person not-at-home / not available	16 018
iii) Refusal cases	1 998

<sup>3</sup> 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)) / Total = (265 + 3 840 + 2 763 + 4 253 + 196 + 16 018 + 1 998) / 67 457 = 43.5%.

<sup>4</sup> 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% = 4 253 \* (1 / (22 465 + 6 252 \* 22 465 / (6 868 + 22 465))) \* 100% = 15.6%.

<sup>5</sup> “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.

(D) No. of cases with unknown eligibility status <sup>6</sup>	6 252
a) Answering machine	3
b) Busy line	0
c) Call blocking, password needed	0
d) Immediate disconnection <sup>7</sup>	306
e) No answer	5 943

## 2.7 Sample size and sampling error

A sample size of 4 253 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  $\pm 1.5\%$ <sup>8</sup>. 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, 69.0% of the respondents reported that they had heard of the Centralised Organ Donation Register, and then the *conservative* 95% confidence interval for the true percentage of the population falls between  $69.0\% \pm 1.5\%$ , i.e. 67.5% and 70.5%.

## 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.

## 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 2015. The proportions of respondents among age groups 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).

<sup>6</sup> 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.

<sup>7</sup> Including those cases which the calls disconnected before the cases could be classified as eligible.

<sup>8</sup> 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:

$$\pm 1.96 \times \sqrt{\frac{0.5 \times 0.5}{4253}} \times 100\% = \pm 1.5\%$$

**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	2.01%	0.82%	2.52%	5.35%
	25-29	1.04%	0.39%	1.33%	2.76%
	30-34	0.82%	0.12%	1.04%	1.98%
	35-39	0.82%	0.36%	2.20%	3.39%
	40-44	0.82%	0.46%	2.78%	4.06%
	45-49	0.77%	0.51%	2.56%	3.85%
	50-54	1.23%	0.85%	3.02%	5.10%
	55-59	1.45%	1.04%	3.48%	5.97%
	60-64	1.86%	0.85%	3.00%	5.71%
	Total	10.84%	5.39%	21.94%	38.17%
Female	18-24	2.44%	0.77%	2.81%	6.02%
	25-29	1.16%	0.34%	1.38%	2.88%
	30-34	1.16%	0.63%	2.25%	4.04%
	35-39	0.99%	0.56%	3.19%	4.74%
	40-44	1.67%	0.99%	4.81%	7.47%
	45-49	2.25%	0.92%	4.09%	7.26%
	50-54	3.36%	1.64%	6.07%	11.08%
	55-59	2.64%	1.48%	4.11%	8.22%
	60-64	3.77%	1.69%	4.64%	10.11%
	Total	19.45%	9.02%	33.36%	61.83%
Overall	18-24	4.45%	1.60%	5.32%	11.37%
	25-29	2.20%	0.73%	2.71%	5.64%
	30-34	1.98%	0.75%	3.29%	6.02%
	35-39	1.81%	0.92%	5.39%	8.13%
	40-44	2.49%	1.45%	7.60%	11.54%
	45-49	3.02%	1.43%	6.65%	11.10%
	50-54	4.60%	2.49%	9.10%	16.18%
	55-59	4.09%	2.52%	7.60%	14.20%
	60-64	5.64%	2.54%	7.64%	15.82%
	Total	30.29%	14.42%	55.30%	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 2015**

Gender/ Age group		Hong Kong population data- from the C&SD (2 <sup>nd</sup> quarter of 2015)			
		Public rental housing	Subsidised home ownership housing	Private housing	Total
		% of Total	% of Total	% of Total	% of Total
Male	18 - 24	2.25%	1.06%	2.78%	6.09%
	25 - 29	1.58%	0.94%	2.12%	4.65%
	30 - 34	1.35%	0.94%	2.52%	4.80%
	35 - 39	1.08%	0.67%	2.90%	4.64%
	40 - 44	1.19%	0.68%	3.07%	4.94%
	45 - 49	1.37%	0.81%	2.93%	5.11%
	50 - 54	1.64%	1.17%	3.50%	6.31%
	55 - 59	1.91%	1.22%	3.05%	6.18%
	60 - 64	1.52%	1.00%	2.30%	4.82%
	Total	13.90%	8.48%	25.17%	47.55%
Female	18 - 24	2.19%	0.99%	2.70%	5.89%
	25 - 29	1.52%	0.88%	2.56%	4.96%
	30 - 34	1.40%	1.04%	3.12%	5.55%
	35 - 39	1.41%	0.77%	3.38%	5.55%
	40 - 44	1.61%	0.88%	3.61%	6.10%
	45 - 49	1.92%	1.03%	3.25%	6.20%
	50 - 54	2.07%	1.42%	3.51%	7.00%
	55 - 59	1.92%	1.31%	3.05%	6.28%
	60 - 64	1.66%	1.03%	2.22%	4.91%
	Total	15.69%	9.35%	27.40%	52.45%
Overall	18 - 24	4.44%	2.05%	5.49%	11.98%
	25 - 29	3.10%	1.82%	4.69%	9.61%
	30 - 34	2.75%	1.98%	5.64%	10.36%
	35 - 39	2.49%	1.43%	6.27%	10.20%
	40 - 44	2.80%	1.56%	6.68%	11.04%
	45 - 49	3.29%	1.84%	6.18%	11.30%
	50 - 54	3.71%	2.59%	7.02%	13.32%
	55 - 59	3.84%	2.53%	6.10%	12.47%
	60 - 64	3.18%	2.03%	4.52%	9.73%
	Total	29.59%	17.83%	52.58%	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	1.120654911	1.289766848	1.106019641
	25 - 29	1.521756162	2.430278451	1.596178078
	30 - 34	1.639918395	7.759761328	2.420070336
	35 - 39	1.314957607	1.838589513	1.315788072
	40 - 44	1.440911401	1.478564956	1.103749524
	45 - 49	1.769178476	1.590616482	1.142519734
	50 - 54	1.330072062	1.380165686	1.158653987
	55 - 59	1.318988129	1.171194533	0.876113597
	60 - 64	0.817554625	1.184397503	0.766002218
	Missing	1.000000000	1.000000000	1.000000000
Female	18 - 24	0.898038079	1.276699142	0.963546522
	25 - 29	1.309709532	2.593928416	1.858724442
	30 - 34	1.202648808	1.650382249	1.386954421
	35 - 39	1.418424041	1.377824979	1.057630190
	40 - 44	0.965718769	0.885731654	0.750608659
	45 - 49	0.851881035	1.124701087	0.794149849
	50 - 54	0.614944479	0.865302563	0.578725065
	55 - 59	0.729191578	0.890183600	0.740608307
	60 - 64	0.439223486	0.608104916	0.478204570
	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 23.0 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 2015.

Overall, 53.0% of the respondents were females and 42.8% were aged between 30 and 49.

#### **3.1.2 Marital status**

Over three-fifths (63.1%) of the respondents were married – 55.9% had children and 7.2% did not have a child. Nearly one-third (32.8%) of the respondents were never married, 2.9% were divorced or separated and 1.3% were widowed.

#### **3.1.3 Educational attainment**

Most (79.1%) of the respondents had upper secondary education or above – 36.0% had upper secondary (S4-S6)/ matriculation and 43.2% attained tertiary education or above. The rest of the respondents (20.9%) had lower secondary (S1-S3) or primary education or below.

#### **3.1.4 Occupation**

More than one-third (35.3%) of the respondents were not working. Of these, 8.4% were students, 15.2% were homemakers, 3.7% were unemployed persons, 7.5% were retired persons and 0.5% were other non-working persons.

A relatively higher proportion of the respondents were clerks (13.6%), followed by associate professionals (9.8%), professionals (9.4%), employers/ managers/ administrators (9.1%) and service workers (7.9%).

### 3.1.5 Income

Almost half (47.8%) of the respondents had a monthly personal income below \$20,000 – 37.5% had a monthly personal income of \$10,000-\$19,999 and 10.3% had a monthly personal income below \$10,000.

For the monthly household income, about two-fifths (40.0%) of the respondents had a monthly household income below \$30,000 – 18.6% had a monthly household income of \$20,000-\$29,999, 15.4% had a monthly household income of \$10,000-\$19,999 and 6.0% 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 2015.

More than half (52.6%) of the respondents were living in private housing, followed by public rental flats (29.6%) and Housing Authority/ Housing Society subsidised sale flats (17.8%).

**Table 3.1: Demographic information (Q1, Q37-Q43)**

<b>Gender</b> <b>Base = 4 253</b>		<b>Age</b> <b>Base = 4 199</b>	
Male	47.0%	18-24	12.0%
Female	53.0%	25-29	9.5%
		30-34	10.3%
		35-39	10.1%
<b>Marital Status</b> <b>Base = 4 235</b>		40-44	11.1%
Never married	32.8%	45-49	11.2%
Married and with child(ren)	55.9%	50-54	13.5%
Married and without child	7.2%	55-59	12.5%
Divorced/ Separated	2.9%	60-64	9.7%
Widowed	1.3%		
<b>Educational Attainment</b> <b>Base = 4 245</b>		<b>Occupation</b> <b>Base = 4 110</b>	
Primary or below	7.7%	Employer/ Manager/	9.1%
Lower secondary (S1- S3)	13.2%	Administrator	
Upper secondary (S4- S6)/Matriculation	36.0%	Professional	9.4%
Tertiary (Non-degree, degree or above)	43.2%	Associate professional	9.8%
		Clerk	13.6%
		Service worker	7.9%
		Shop sales worker	3.4%



**Table 3.1: Demographic information (Q1, Q37-Q43)<sup>9</sup> (Continued)**

Type of Living Quarters		Base = 4 184		
Public rental flats	29.6%	Skilled agricultural/fishery worker	0.1%	
Housing Authority subsidised sale flats	16.8%	Craft and related worker	3.7%	
Housing Society subsidised sale flats	1.0%	Plant and machine operator and assembler	3.0%	
Private residential flats	46.6%	Unskilled worker	4.6%	
Villas/ Bungalows/ Modern village houses	2.5%	Student	8.4%	
Simple stone structures/ Traditional village houses	1.8%	Homemaker	15.2%	
Staff quarters	1.7%	Unemployed person	3.7%	
Non-domestic quarters	0.1%	Retired person	7.5%	
		Other non-working person	0.5%	
Monthly Personal Income		Base =2 508 <sup>10</sup>	Monthly Household Income	
Below \$10,000	10.3%		Below \$10,000	6.0%
\$10,000-\$19,999	37.5%		\$10,000-\$19,999	15.4%
\$20,000-\$29,999	22.3%		\$20,000-\$29,999	18.6%
\$30,000-\$49,999	18.0%		\$30,000-\$49,999	28.1%
\$50,000 or above	11.9%		\$50,000 or above	31.9%

<sup>9</sup> Refers to the question number in the survey questionnaire, see the Annex.<sup>10</sup> For non-working respondents, they did not need to answer question Q41 (monthly personal income).

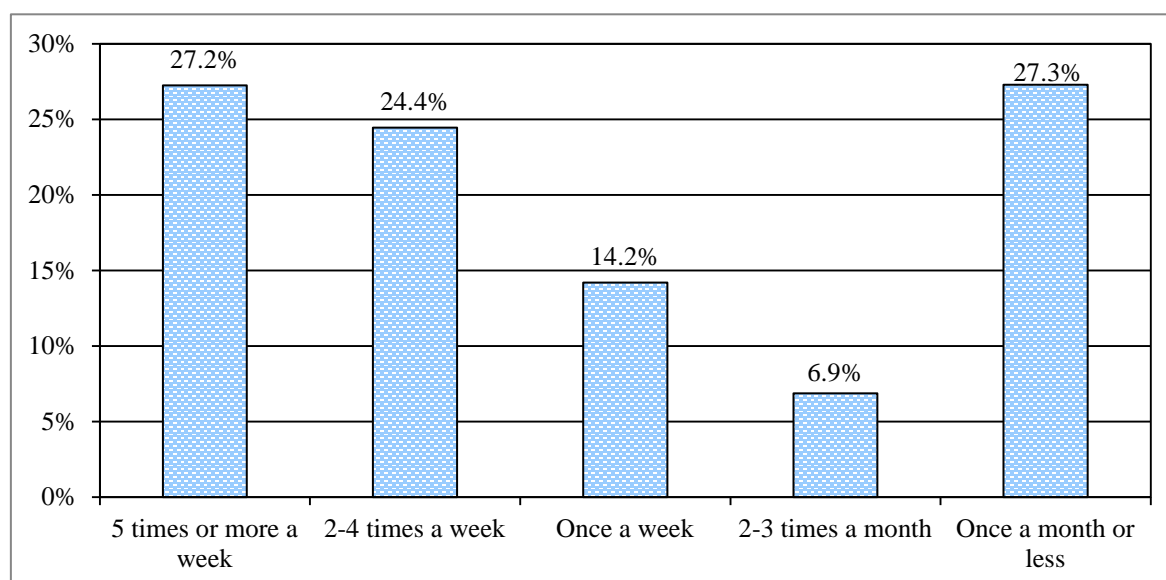
## 3.2 Eating out habits

In this survey, three questions were asked about respondents' frequency of eating out for breakfast, lunch and dinner in the 30 days prior to the survey. Respondents who skipped breakfast, lunch or dinner were excluded in the analysis. Also, five questions were asked about respondents' habit of patronising EatSmart Restaurants and consuming EatSmart Dishes.

### 3.2.1 Frequency of eating out for breakfast<sup>11</sup>

Nearly two-thirds of the respondents (65.9%) ate out for breakfast once a week or more, of which 27.2% ate out for breakfast 5 times or more a week in the 30 days prior to the survey (Fig. 3.2.1).

**Fig.3.2.1: Frequency of eating out for breakfast in the 30 days prior to the survey (Q2)**



*Base: All respondents excluding “don’t know”, refusal and those “skipped breakfast” = 4 074*

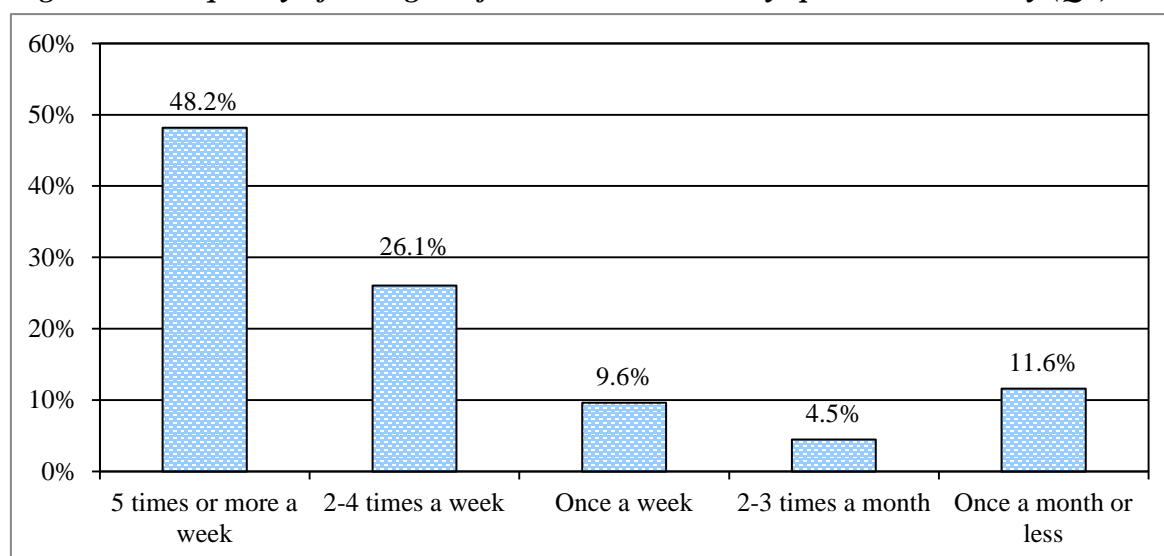
### 3.2.2 Frequency of eating out for lunch<sup>12</sup>

More than four-fifths (83.9%) of the respondents ate out for lunch once a week or more, of which nearly half (48.2%) of the respondents ate out for lunch 5 times or more a week in the 30 days prior to the survey (Fig. 3.2.2).

<sup>11</sup> Respondents were told that “Eat out for breakfast” refers to the breakfast that is not made at home and excludes the bread that is bought from a bakery.

<sup>12</sup> Respondents were told that “Eat out for lunch” refers to the lunch that is not made at home.

**Fig. 3.2.2: Frequency of eating out for lunch in the 30 days prior to the survey (Q3)**

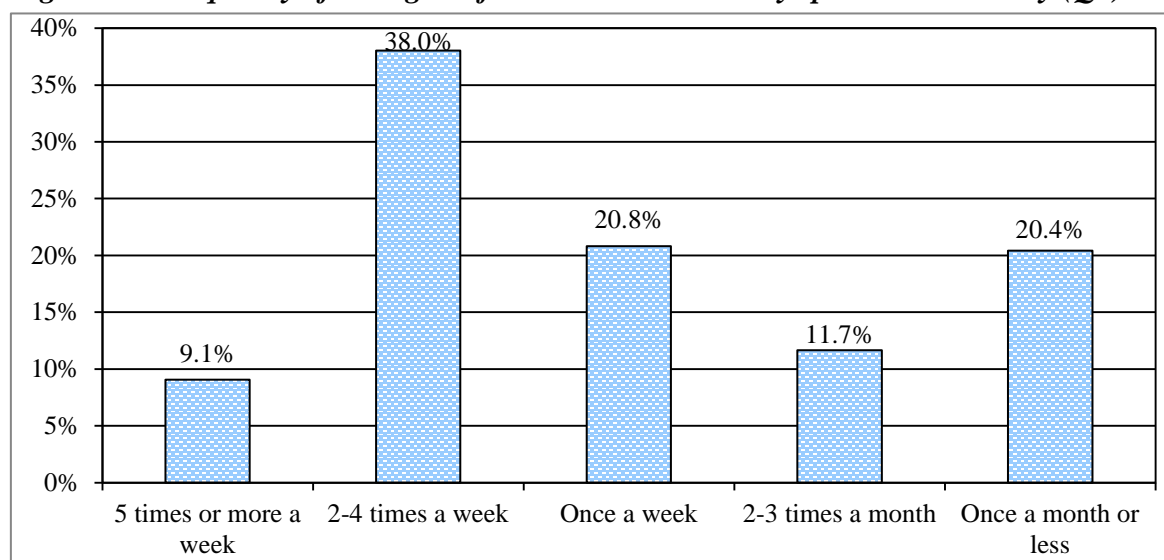


Base: All respondents excluding “don’t know”, refusal and those “skipped lunch” = 4 203

### 3.2.3 Frequency of eating out for dinner<sup>13</sup>

More than two-thirds (67.9%) of the respondents ate out for dinner once a week or more. Among them, less than one-tenth (9.1%) of the respondents ate out for dinner 5 times or more a week in the 30 days prior to the survey (Fig. 3.2.3).

**Fig. 3.2.3: Frequency of eating out for dinner in the 30 days prior to the survey (Q4)**



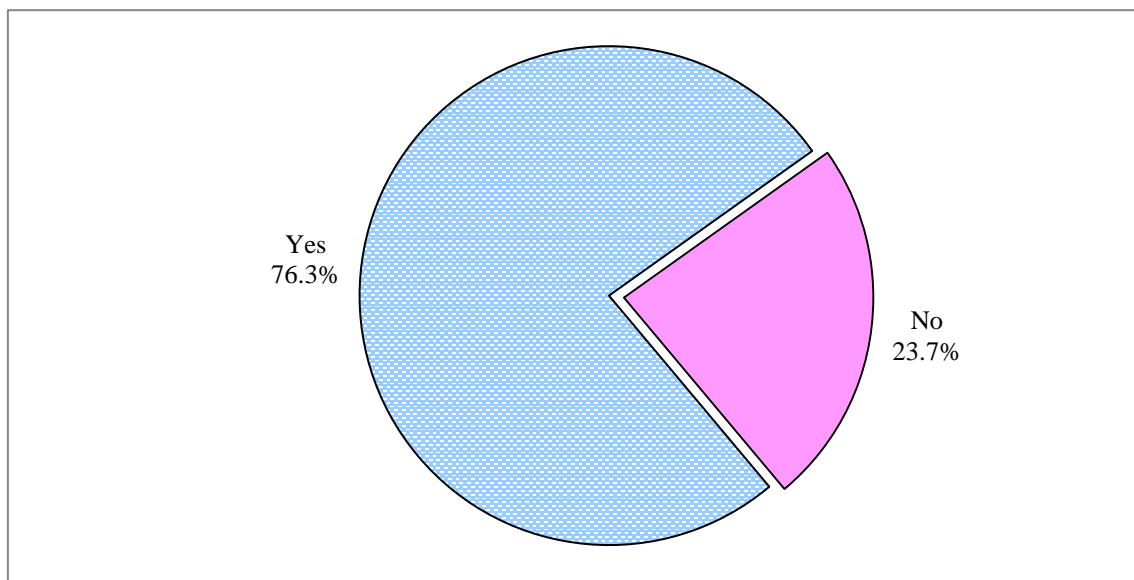
Base: All respondents excluding “don’t know” and those “skipped dinner” = 4 245

<sup>13</sup> Respondents were told that “Eat out for dinner” refers to the dinner that is not made at home.

### 3.2.4 Ever heard of EatSmart Restaurants

About three-quarters (76.3%) of the respondents had heard of EatSmart Restaurants (Fig. 3.2.4).

**Fig. 3.2.4: Ever heard of EatSmart Restaurants (Q5)**

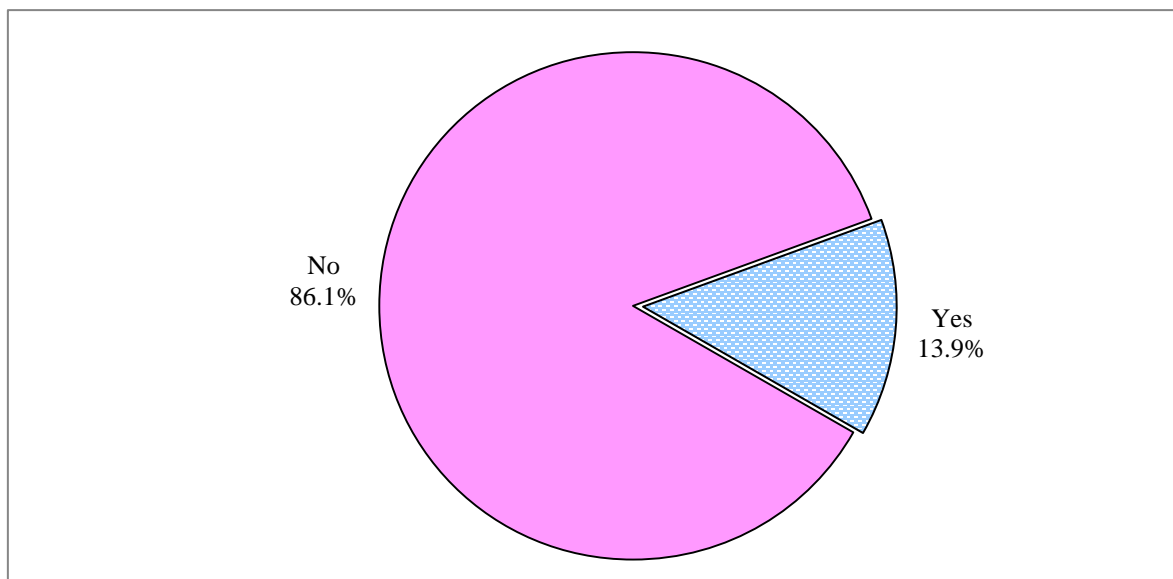


*Base: All respondents excluding “don’t remember/don’t know” = 4 160*

### 3.2.5 Whether had patronised EatSmart Restaurants in the 30 days prior to the survey

Among those respondents who had heard of EatSmart Restaurants, the majority (86.1%) of them had not patronised EatSmart Restaurants in the 30 days prior to the survey (Fig. 3.2.5).

**Fig. 3.2.5: Whether had patronised EatSmart Restaurants in the 30 days prior to the survey (Q6a)**

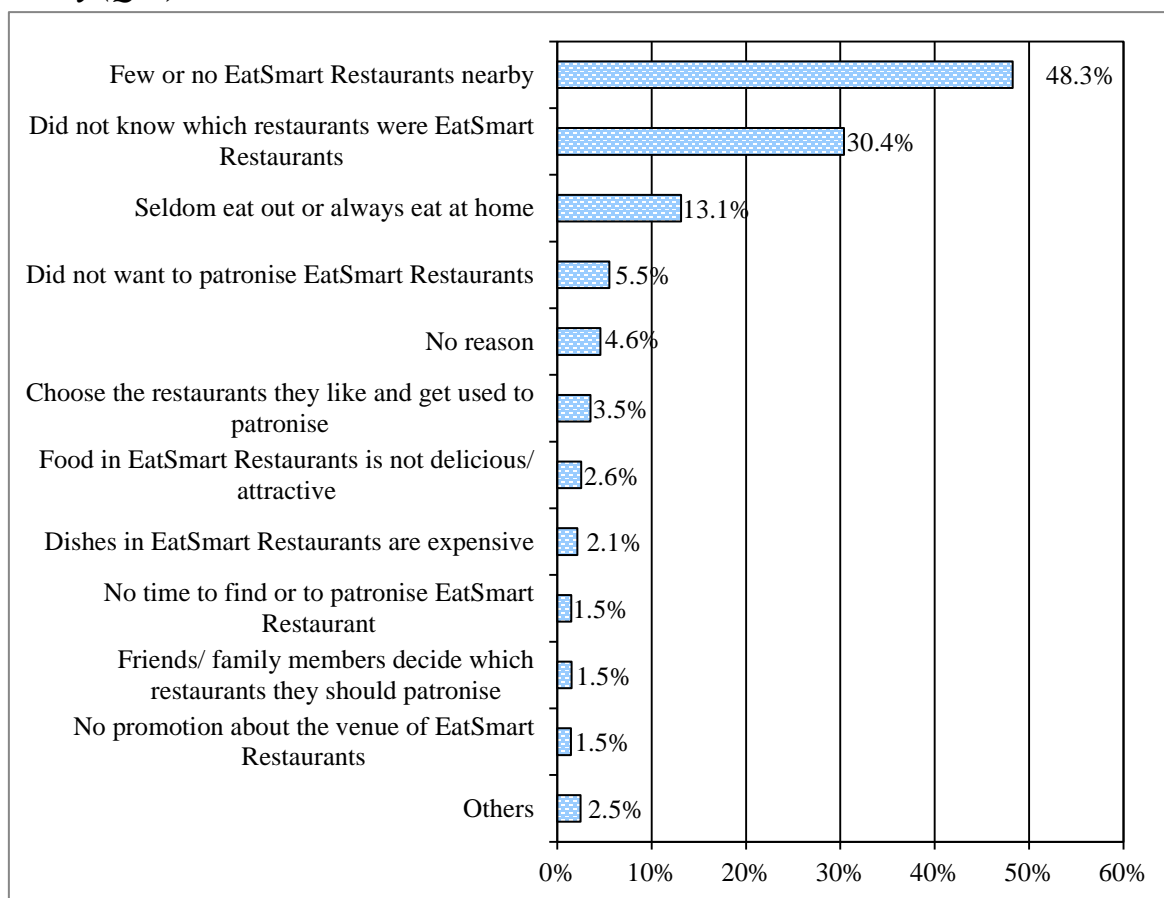


*Base: Respondents who had heard of EatSmart Restaurants excluding “don’t remember/don’t know” = 2 795*

### **3.2.6 Reasons for not patronising EatSmart Restaurants in the 30 days prior to the survey**

Among those respondents who had heard of EatSmart Restaurants but had not patronised EatSmart Restaurants in the 30 days prior to the survey, the most frequently cited reasons for not patronising EatSmart Restaurants (48.3%) were ‘few or no EatSmart Restaurants nearby’ and ‘not knowing which restaurants were EatSmart Restaurants’ (30.4%) (Fig. 3.2.6).

**Fig. 3.2.6: Reasons for not patronising EatSmart Restaurants in the 30 days prior to the survey (Q6b)**



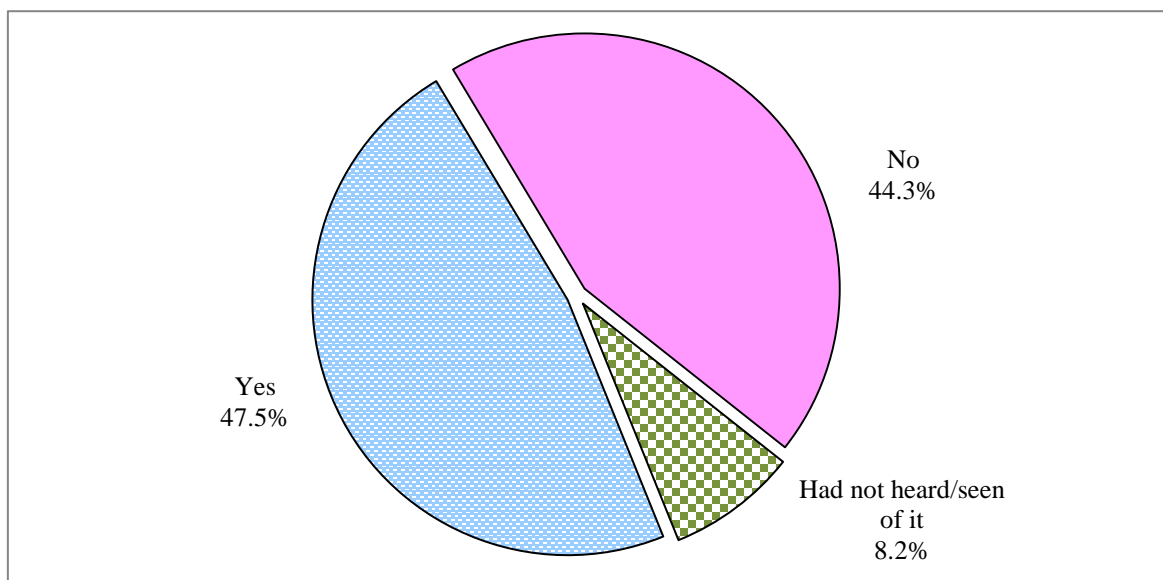
*Base: Respondents who had heard of EatSmart Restaurants but had not patronised EatSmart Restaurants in the 30 days prior to the survey = 2 408*

*Notes: Multiple answers were allowed. Others included 'Respondents think that they have already had healthy diets, so they do not need to patronise EatSmart Restaurants', 'Food in EatSmart Restaurants is not healthy or nutritious', 'Limited choice of dishes in EatSmart Restaurants', 'Environment of EatSmart Restaurants is not good, i.e. crowded and small', 'Because of health problem, they cannot patronise EatSmart Restaurants' and 'Not in Hong Kong'.*

### 3.2.7 Whether had consumed any EatSmart Dishes in the 30 days prior to the survey

Nearly half (47.5%) of the respondents had consumed EatSmart Dishes in the 30 days prior to the survey (Fig. 3.2.7).

**Fig. 3.2.7: Whether had consumed EatSmart Dishes in the 30 days prior to the survey (Q7a)**

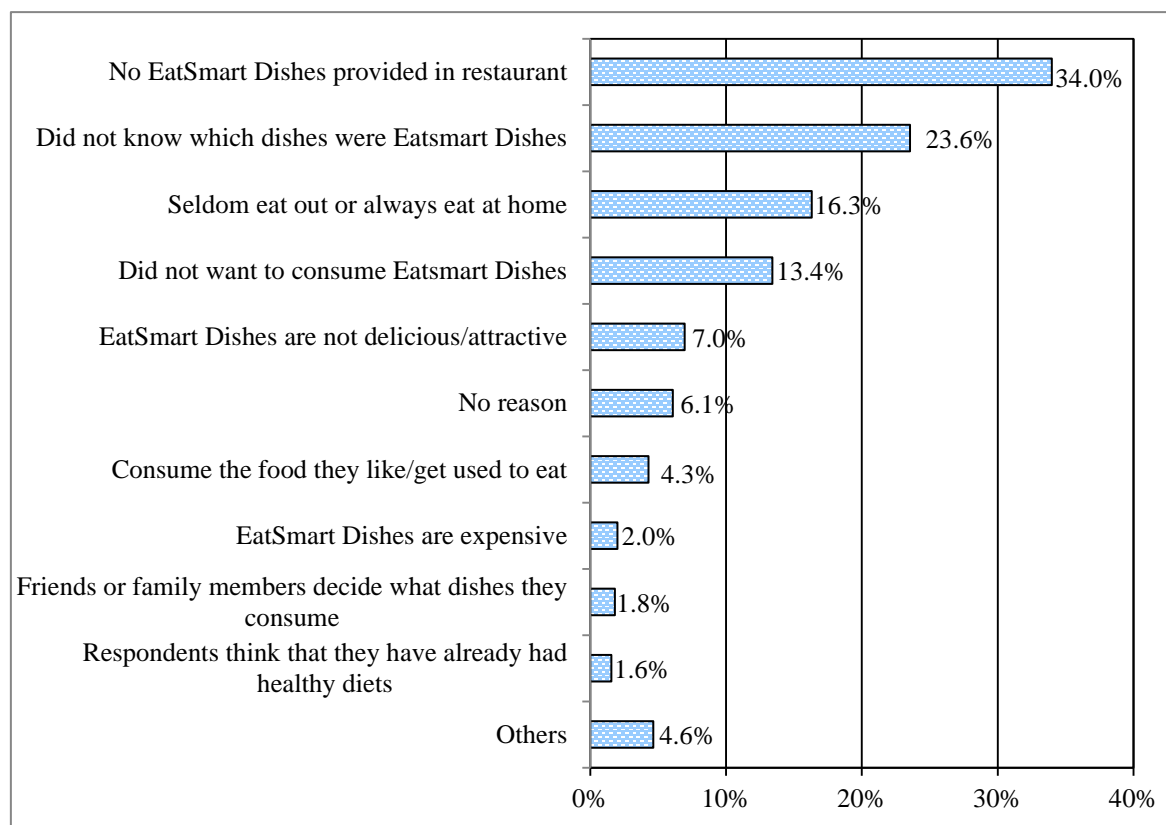


*Base: All respondents excluding "don't remember/don't know" = 4 025*

### 3.2.8 Reasons for not consuming EatSmart Dishes in the 30 days prior to the survey

Among those respondents who had not consumed EatSmart Dishes in the 30 days prior to the survey, the most frequently cited reasons for not consuming EatSmart Dishes were 'no EatSmart Dishes provided in restaurants' (34.0%) and 'not knowing which dishes were EatSmart Dishes' (23.6%) (Fig. 3.2.8).

**Fig. 3.2.8: Reasons for not consuming EatSmart Dishes in the 30 days prior to the survey (Q7b)**



*Base: Respondents who had not consumed EatSmart Dishes in the 30 days prior to the survey excluding refusal = 1 781*

*Notes: Multiple answers were allowed. Others included 'Limited choice of EatSmart Dishes', 'As respondents did not patronise EatSmart restaurants, they did not consume EatSmart Dishes', 'No promotion/no information about the restaurants which provide EatSmart Dishes', 'No time/not convenient to find or to consume EatSmart Dishes', 'Food in EatSmart restaurants is not healthy or nutritious', 'EatSmart Dishes cannot make respondents full', 'Because of health problem, they cannot consume EatSmart Dishes' and 'Environment of restaurants which provide EatSmart Dishes is not good'.*



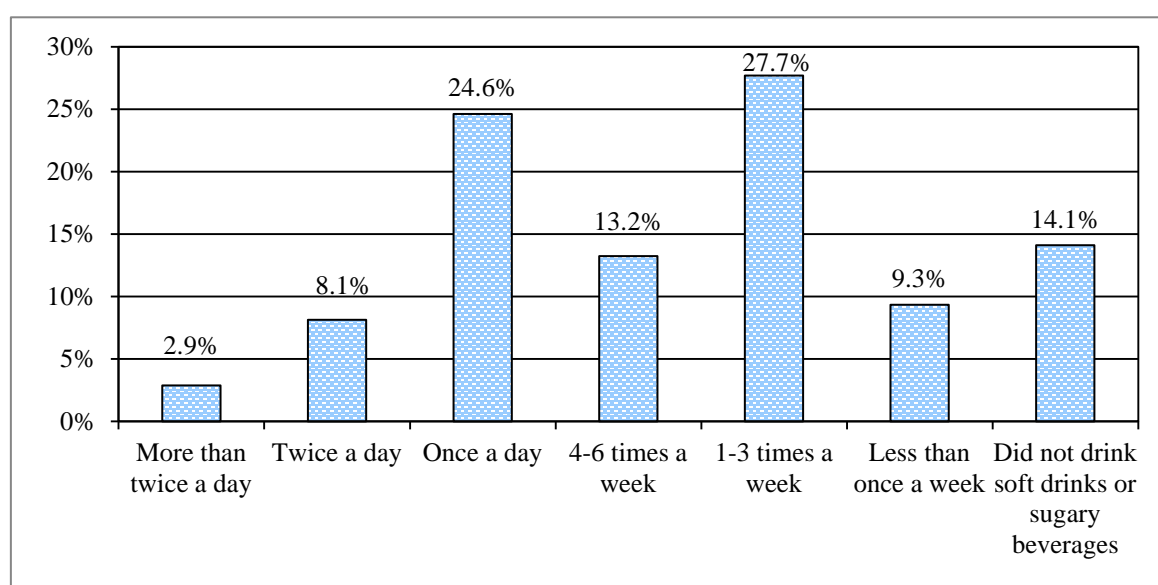
### 3.3 Consumption of sugary beverages and foods

Three questions were asked in this survey to gauge respondents' consumption of sugary beverages and foods as well as their habit of checking nutrition labels when choosing pre-packaged drinks and foods.

#### 3.3.1 Frequency of drinking soft drinks or sugary beverages in the 30 days prior to the survey<sup>14</sup>

In the 30 days prior to the survey, more than one-third (35.6%) of the respondents drank soft drinks or sugary beverages once or more a day (Fig. 3.3.1).

**Fig. 3.3.1: Frequency of drinking soft drinks or sugary beverages in the 30 days prior to the survey (Q8)**



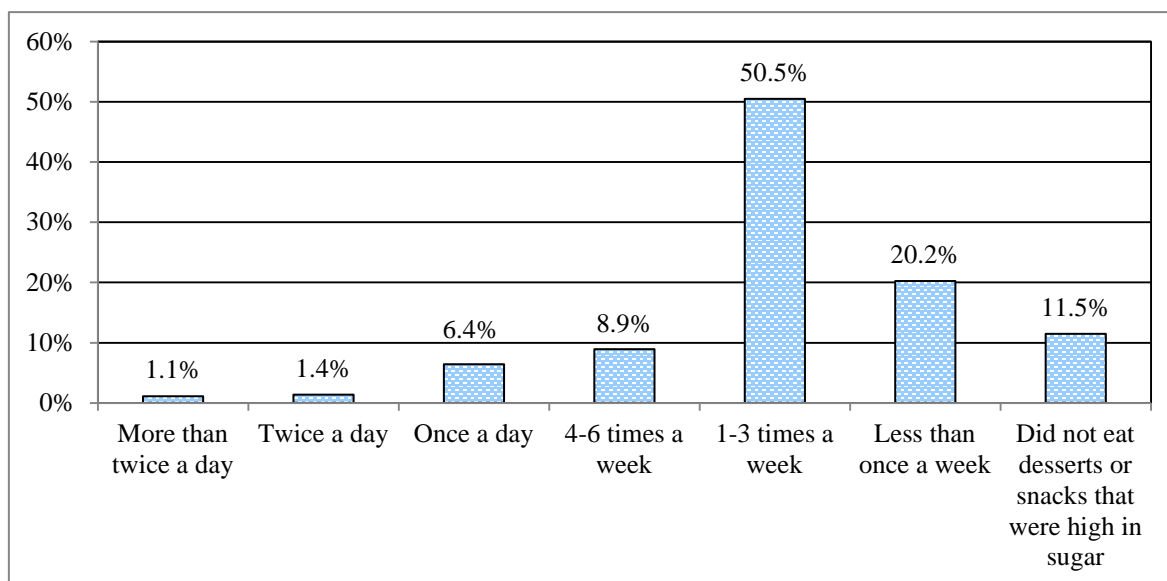
Base: All respondents excluding "don't know" and refusal = 4 247

#### 3.3.2 Frequency of eating desserts or snacks that were high in sugar in the 30 days prior to the survey

In the 30 days prior to the survey, almost one-tenth (8.9%) of the respondents ate desserts or snacks that were high in sugar once or more a day (Fig. 3.3.2).

<sup>14</sup> Soft drinks and sugary beverages include milk tea or coffee with added sugar, lemon tea, chrysanthemum tea, Yakult, Vitasoy, soy drinks or cordials in tetra-packs, cans or bottles etc, but exclude pure milk and pure fruit juice.

**Fig. 3.3.2: Frequency of eating desserts or snacks that were high in sugar in the 30 days prior to the survey (Q9)**

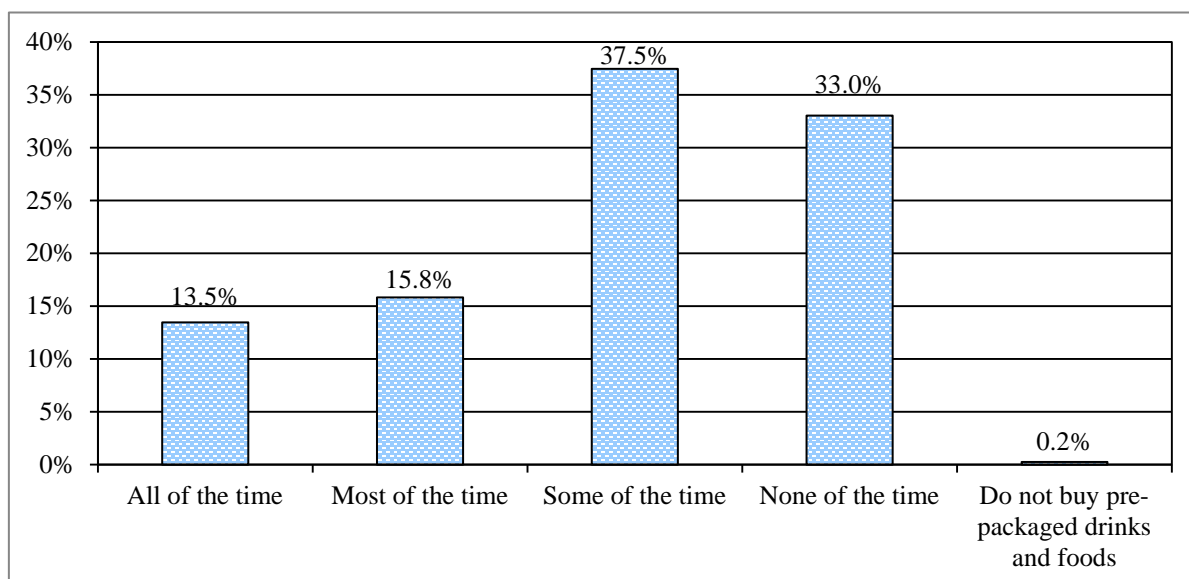


Base: All respondents excluding “don’t know” and refusal = 4 246

### 3.3.3 Habit of checking nutrition labels when choosing pre-packaged drinks and foods

Less than three-tenths (29.3%) of the respondents checked nutrition labels when choosing pre-packaged drinks and foods all/ most of the time (Fig. 3.3.3).

**Fig. 3.3.3: Habit of checking nutrition labels when choosing pre-packaged drinks and foods (Q10)**



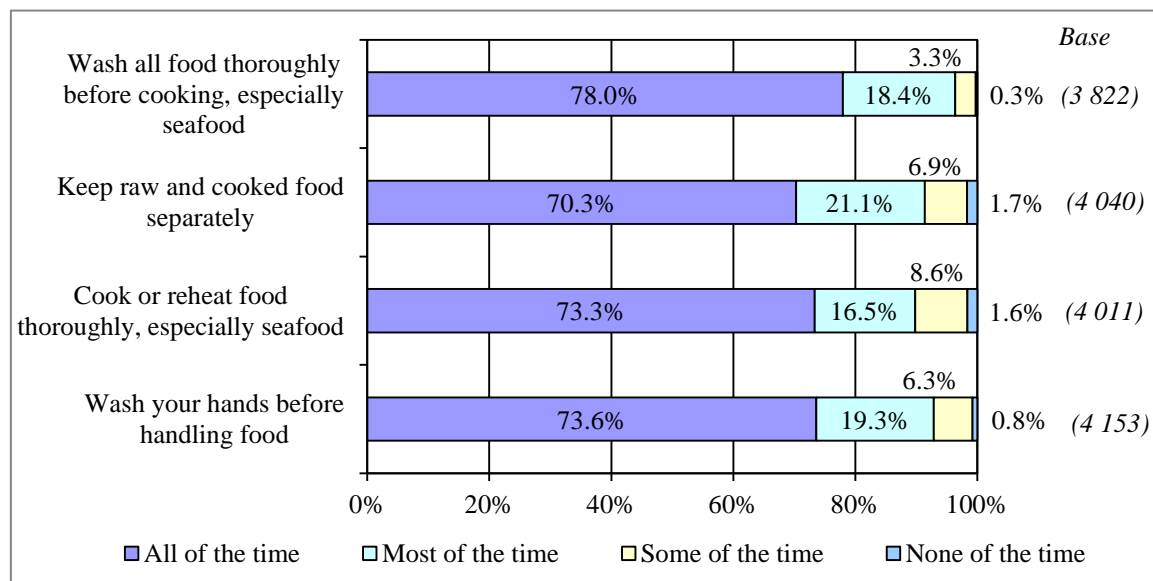
Base: All respondents excluding “don’t know” and refusal = 4 247

### 3.4 Food handling practices

Four questions were asked to understand the respondents' food handling practices.

Most of the respondents conformed to good food handling practices, i.e. 'washed all food thoroughly before cooking, especially seafood' (78.0%), 'kept raw and cooked food separately' (70.3%), 'cooked/reheated food thoroughly, especially seafood' (73.3%), and 'washed their hands before handling food' (73.6%) all of the time (Fig. 3.4).

**Fig. 3.4: Food handling practices (Q11, Q12, Q13 and Q14)**



*Base: All respondents excluding "do not cook food", "do not keep raw or cooked food" or "do not handle food", "don't know" and refusal*

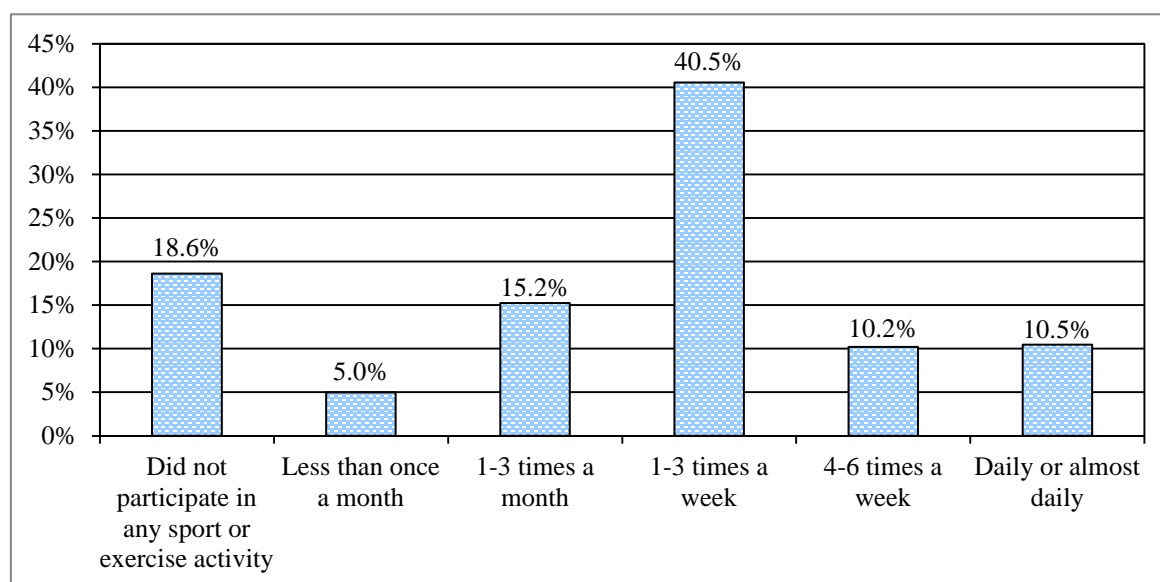
### 3.5 Sport participation and injury

In this survey, five questions were asked to assess respondents' sport participation and injury pattern.

#### 3.5.1 Frequency of participating in a sport or exercise activity in the 12 months prior to the survey

In the 12 months prior to the survey, about three-fifths (61.2%) of the respondents participated in a sport or exercise activity at least once a week. However, almost one-fifth (18.6%) of the respondents did not participate in any sport or exercise activity (Fig. 3.5.1).

**Fig. 3.5.1: Frequency of participating in a sport or exercise activity in the 12 months prior to the survey (Q15)**

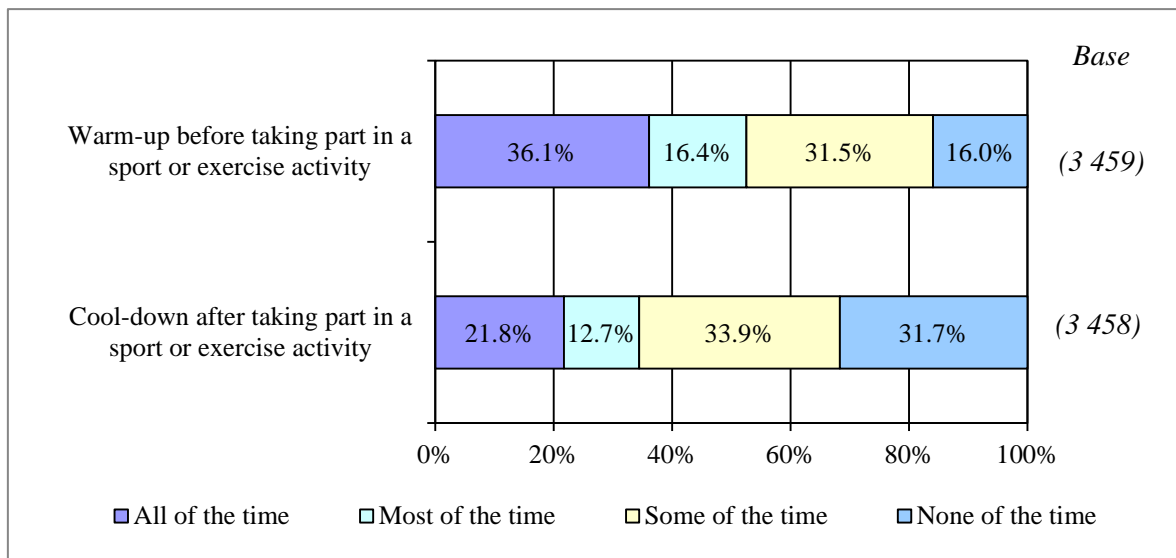


Base: All respondents = 4 253

#### 3.5.2 Practice of warming up before taking part in a sport or exercise activity and cooling down after taking part in a sport or exercise activity

Among those respondents who participated in a sport or exercise activity in the 12 months prior to the survey, about half (52.5%) of them would warm up all/ most of the time. On the other hand, only about one-third (34.4%) of them would cool down all/ most of the time (Fig. 3.5.2).

**Fig. 3.5.2: Practice of warming up before taking part in a sport or exercise activity and cooling down after taking part in a sport or exercise activity (Q16 and Q17)**

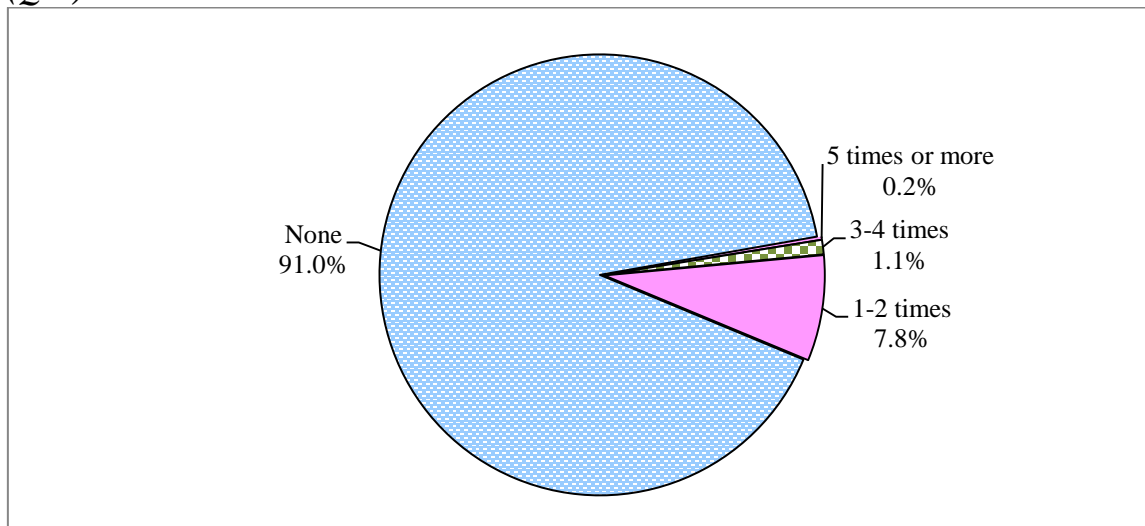


Base: Respondents who participated in a sport or exercise activity in the 12 months prior to the survey excluding “don’t know” and refusal

### 3.5.3 Frequency of having been injured by taking part in sport or exercise activity

Among those respondents who participated in a sport or exercise activity in the 12 months prior to the survey, almost one-tenth (9.0%) of them had been injured at least once by taking part in sport or exercise activity (Fig. 3.5.3).

**Fig. 3.5.3: Frequency of having been injured by taking part in sport or exercise activity (Q18)**

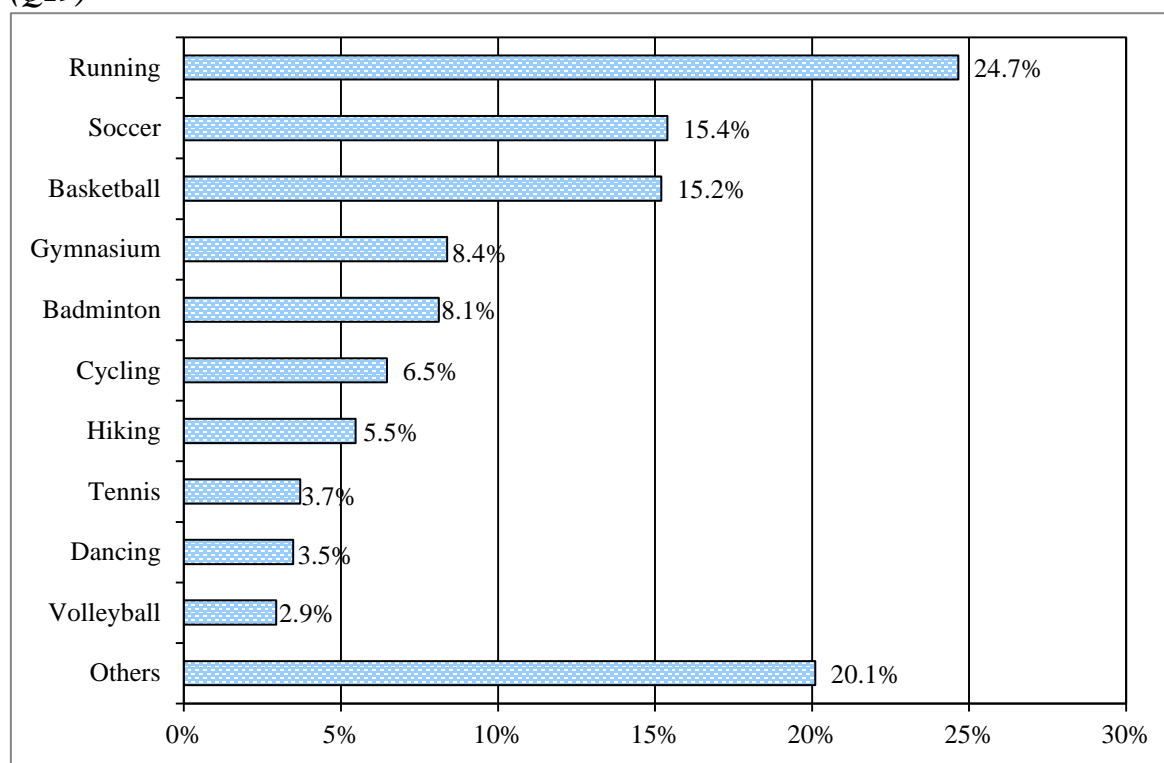


Base: Respondents who participated in a sport or exercise activity in the 12 months prior to the survey = 3 462

### 3.5.4 What kind of sport the respondents were engaged in at the time of the injury

Among those respondents who had been injured by taking part in sport or exercise activity in the 12 months prior to the survey, about one-quarter (24.7%) of them got injured when they were engaged in running, followed by soccer (15.4%) and basketball (15.2%) (Fig. 3.5.4).

**Fig. 3.5.4: What kind of sport the respondents were engaged in at the time of the injury (Q19)**



*Base: Respondents who had been injured by taking part in sport or exercise activity in the 12 months prior to the survey excluding “don’t know” = 311*

*Note: Multiple answers were allowed. Others included ‘Swimming’, ‘Table tennis’, ‘Jogging’, ‘Yoga’, ‘Martial arts’, ‘Boxing’, ‘Field and track’, ‘Rowing’, ‘Rugby’, ‘Skiing’, ‘Dragon boat’, ‘Canoeing’, ‘Wakeboard’, ‘Ice skating’, ‘Golf’, ‘Rope skipping’, ‘Skateboard’, ‘Shuttlecock’, ‘Sailing’, ‘Motorcycle’, ‘Paragliding’, ‘Diving’, ‘Mountain climbing’, ‘Netball’ and ‘Bowling’.*

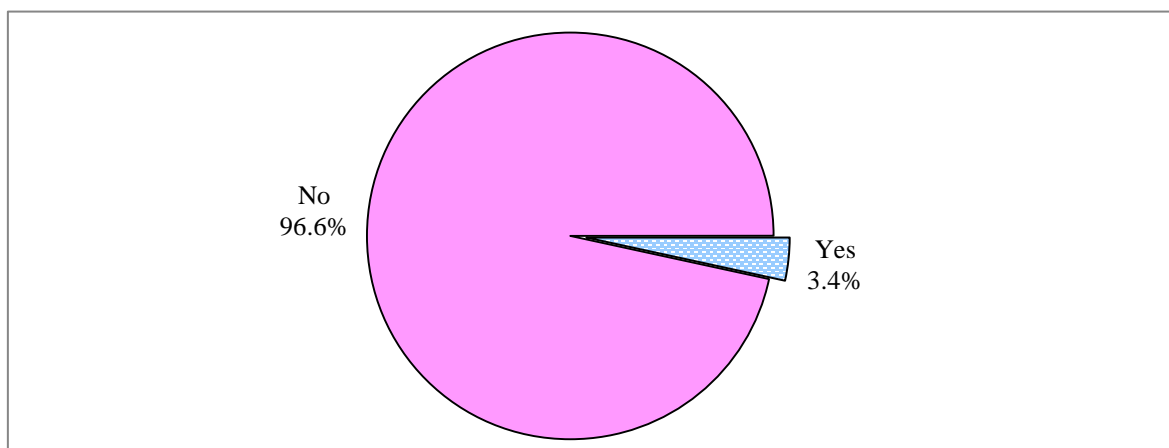
### 3.6 Heat stroke and sunburn

Four questions were asked to understand how often respondents had heat stroke or sunburn during the 12 months prior to survey.

#### 3.6.1 Whether had heat stroke<sup>15</sup>

Overall, 3.4% of the respondents had heat stroke in the 12 months prior to the survey (Fig. 3.6.1).

**Fig. 3.6.1: Whether had heat stroke in the 12 months prior to the survey (Q20)**



Base: All respondents = 4 253

#### 3.6.2 Frequency of having heat stroke

Among those respondents who had heat stroke in the 12 months prior to the survey, about two-thirds (66.8%) of them reported that they had heat stroke once (Table 3.6.2).

**Table 3.6.2: Frequency of having heat stroke in the 12 months prior to the survey (percentage, mean and median) (Q21)**

Frequency	Number and percentage of respondents	
	Number	Percentage
Once	95	66.8%
2-5 times	47	33.2%
<b>Total</b>	<b>142*</b>	<b>100.0%</b>
<b>Mean</b>	1.6 times	
<b>Median</b>	1.0 time	

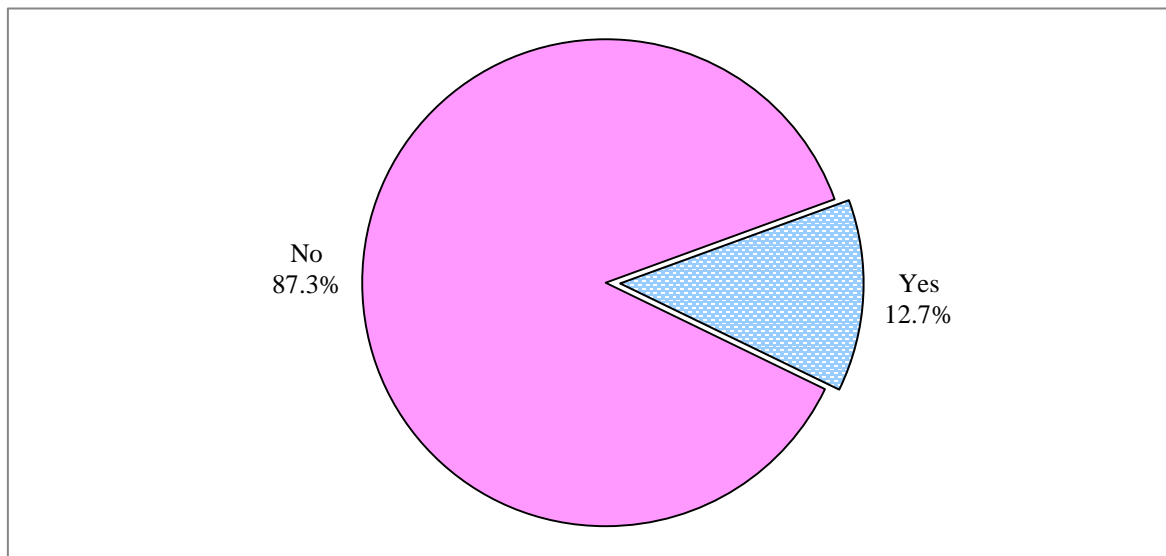
Note: \*Respondents who had heat stroke in the 12 months prior to the survey excluding outliers and “don’t know”

<sup>15</sup> Respondents were informed that the symptoms of heat stroke may include high fever (>39°C); red, hot and dry skin; rapid pulses; throbbing headache; nausea; muscle cramps and dizziness.

### 3.6.3 Whether had sunburn<sup>16</sup>

Overall, about one-eighth (12.7%) of the respondents had sunburn in the 12 months prior to the survey (Fig. 3.6.3).

**Fig. 3.6.3: Whether had sunburn in the 12 months prior to the survey (Q22)**



Base: All respondents = 4 253

### 3.6.4 Frequency of having sunburn

Among those respondents who had sunburn in the 12 months prior to the survey, over half (51.9%) of them reported that they had sunburn once (Table 3.6.4).

**Table 3.6.4: Frequency of having sunburn in the 12 months prior to the survey (percentage, mean and median) (Q23)**

Frequency	Number and percentage of respondents	
	Number	Percentage
Once	265	51.9%
2-5 times	245	48.1%
<b>Total</b>	<b>510*</b>	<b>100.0%</b>
<b>Mean</b>	1.7 times	
<b>Median</b>	1.0 time	

Note: \*Respondents who had sunburn in the 12 months prior to the survey excluding outliers, “don’t know” and refusal

<sup>16</sup> Respondents were informed that a sunburn refers to even a small part of the skin being red or sore for more than 12 hours at any time.



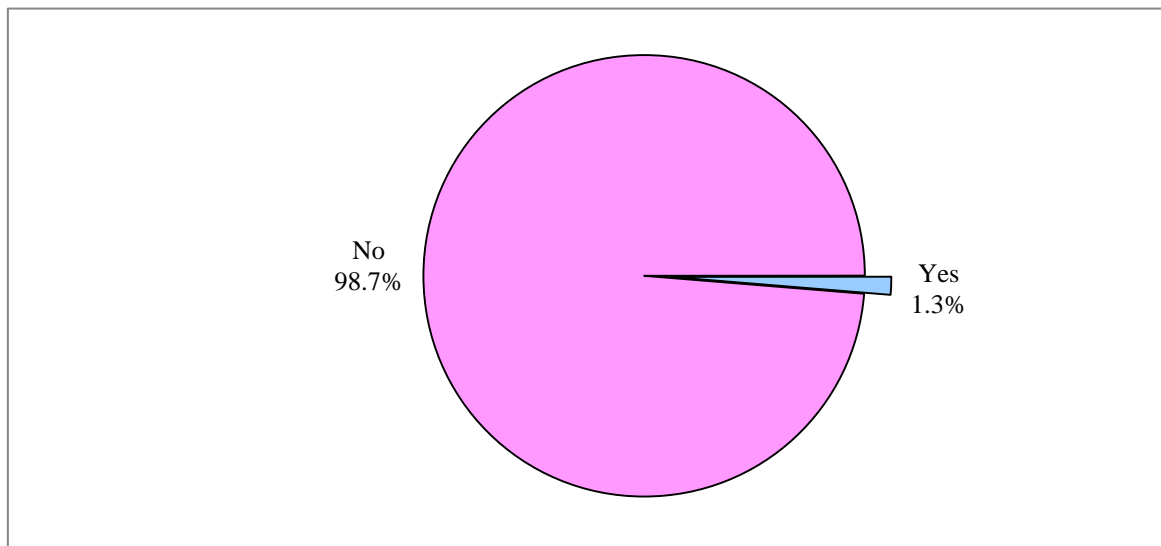
### 3.7 Use of solarium

Five questions were asked to understand whether respondents had ever used a solarium and their usage pattern.

#### 3.7.1 Ever used a solarium

Overall, 1.3% of the respondents had ever used a solarium (Fig. 3.7.1).

**Fig. 3.7.1: Ever used a solarium (Q24)**



Base: All respondents = 4 253

#### 3.7.2 Age of using a solarium for the first time

Among those respondents who had ever used a solarium, 7.8% of them reported that they used a solarium for the first time when they were 14-17 years old (Table 3.7.2).

**Table 3.7.2: Age of using a solarium for the first time (percentage, mean and median) (Q25)**

Age	Number and percentage of respondents	
	Number	Percentage
14-17	3	7.8%
18-24	15	34.0%
25-34	17	38.2%
35 or above	9	20.0%
<b>Total</b>	<b>44*</b>	<b>100.0%</b>
<b>Mean</b>	27.4 years old	
<b>Median</b>	25.2 years old	

Note: \*Respondents who had ever used a solarium excluding outliers and “don’t know”

### 3.7.3 Frequency of using a solarium

Among those respondents who had ever used a solarium, over half (51.6%) of them had used a solarium more than 5 times. However, nearly four-fifths (78.8%) of them reported that they had not used a solarium in the 12 months prior to the survey (Table 3.7.3).

**Table 3.7.3: Frequency of using a solarium (Q26 and Q27)**

Frequency	Number and percentage of respondents			
	Until Now		In the past 12 months	
	Number	Percentage	Number	Percentage
None	--	--	43	78.8%
Once	13	23.2%	4	6.5%
2-5 times	14	25.3%	2	3.7%
More than 5 times	29	51.6%	6	10.9%
<b>Total</b>	<b>55*</b>	<b>100.0%</b>	<b>54*</b>	<b>100.0%</b>

*Note: \*Respondents who had ever used a solarium excluding “don’t know”*

### 3.7.4 Length of time spent in the last tanning session

Among the respondents who had used a solarium in the 12 months prior to the survey, one-quarter (25.0%) of them reported that they spent more than 15 minutes in the last tanning session.

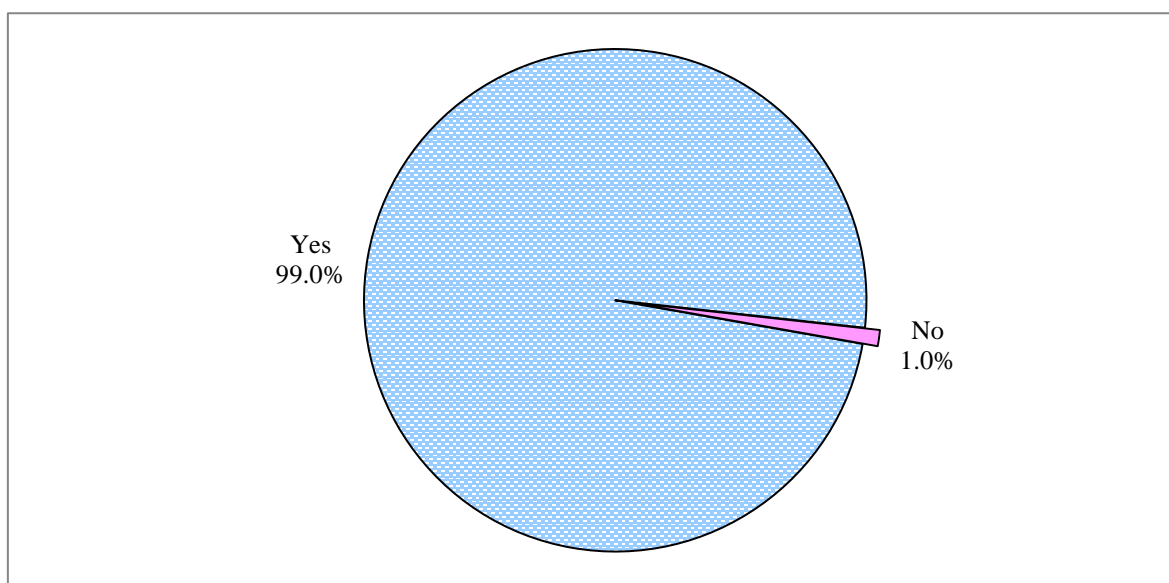
### 3.8 Use of mobile phone

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

#### 3.8.1 Whether currently using a mobile phone

Most respondents (99.0%) reported that they were currently using a mobile phone (Fig. 3.8.1).

**Fig. 3.8.1: Whether currently using a mobile phone (Q29)**

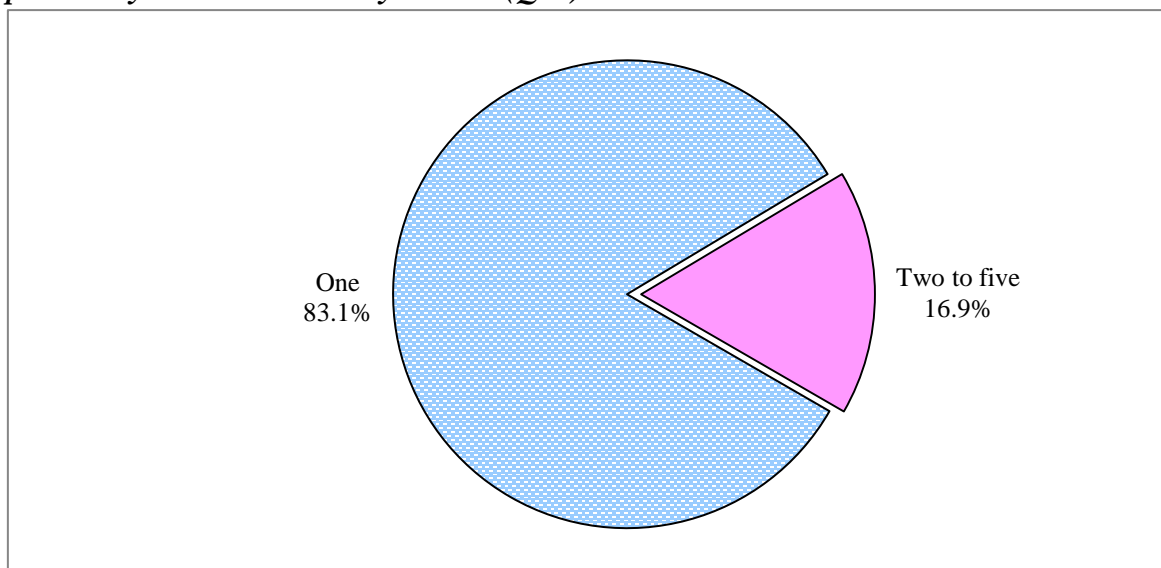


*Base: All respondents = 4 253*

#### 3.8.2 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 (83.1%) of them had only one mobile phone number which they were using personally and would usually answer (Fig. 3.8.2).

**Fig. 3.8.2: Number of mobile phone numbers in total which the respondents were using personally and would usually answer (Q30)**

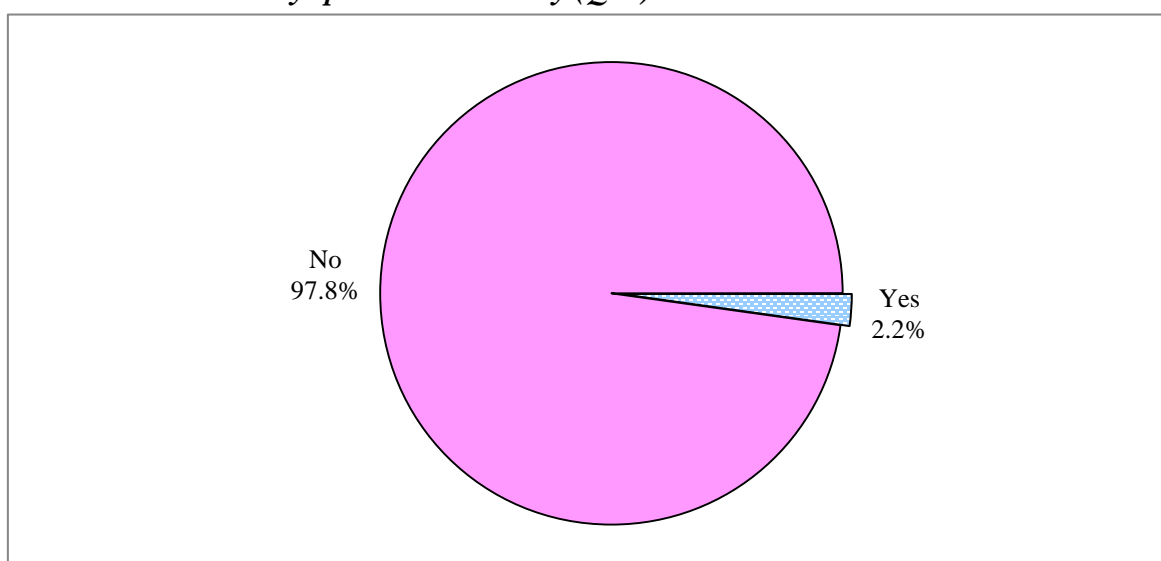


Base: Respondents who were currently using a mobile phone excluding outliers, “don’t know” and refusal = 4 194

### 3.8.3 Whether physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey

Among those respondents who were currently using a mobile phone, 2.2% of them physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey (Fig. 3.8.3).

**Fig. 3.8.3: Whether physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey (Q31)**

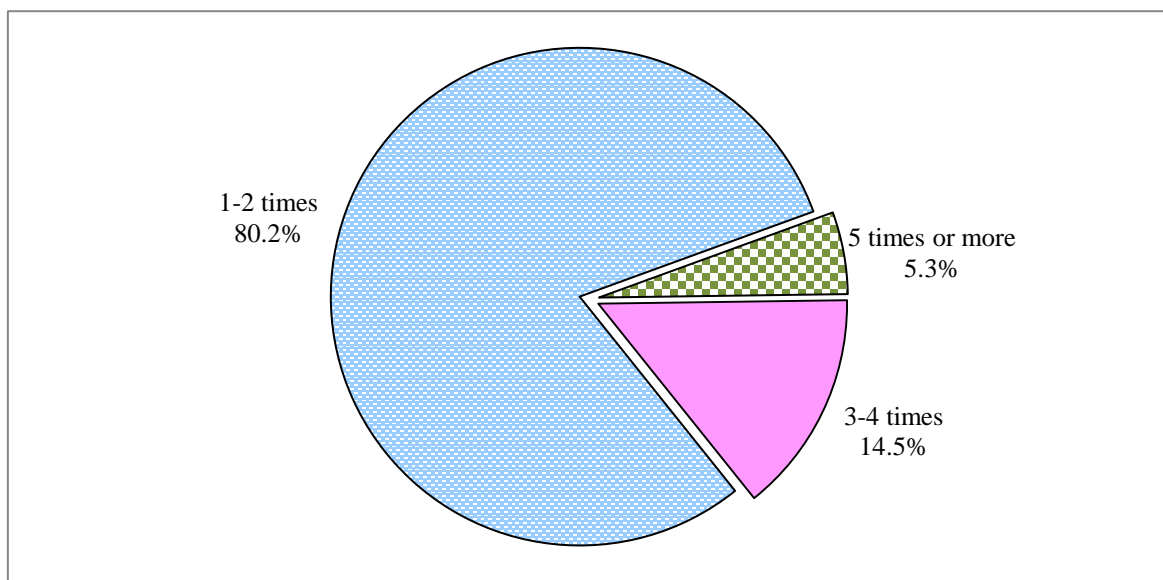


Base: Respondents who were currently using a mobile phone = 4 209

### 3.8.4 Number of times that respondents physically got injured when using a mobile phone and walking on the street

Among those respondents who physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey, the majority (80.2%) of them got injured 1-2 times (Fig. 3.8.4).

**Fig. 3.8.4: Number of times that respondents physically got injured when using a mobile phone and walking on the street (Q32a)**

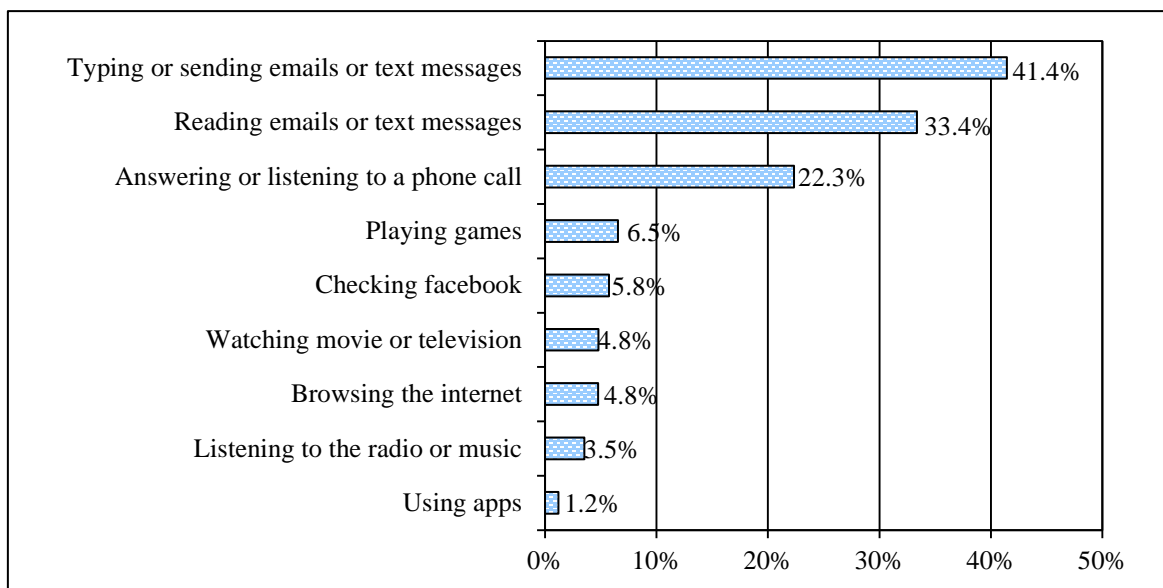


*Base: Respondents who physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey = 93*

### 3.8.5 What the respondents were using the mobile phone for at the time of the injury

Among those respondents who physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey, more than two-fifths (41.4%) of them got injured when they were using the mobile phone at that time for typing or sending emails or text messages, followed by reading emails or text messages (33.4%) and answering or listening to a phone call (22.3%) (Fig. 3.8.5).

**Fig. 3.8.5: What the respondents were using the mobile phone for at the time of the injury (Q32b)**



*Base: Respondents who physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey = 93*

*Note: Multiple answers were allowed*

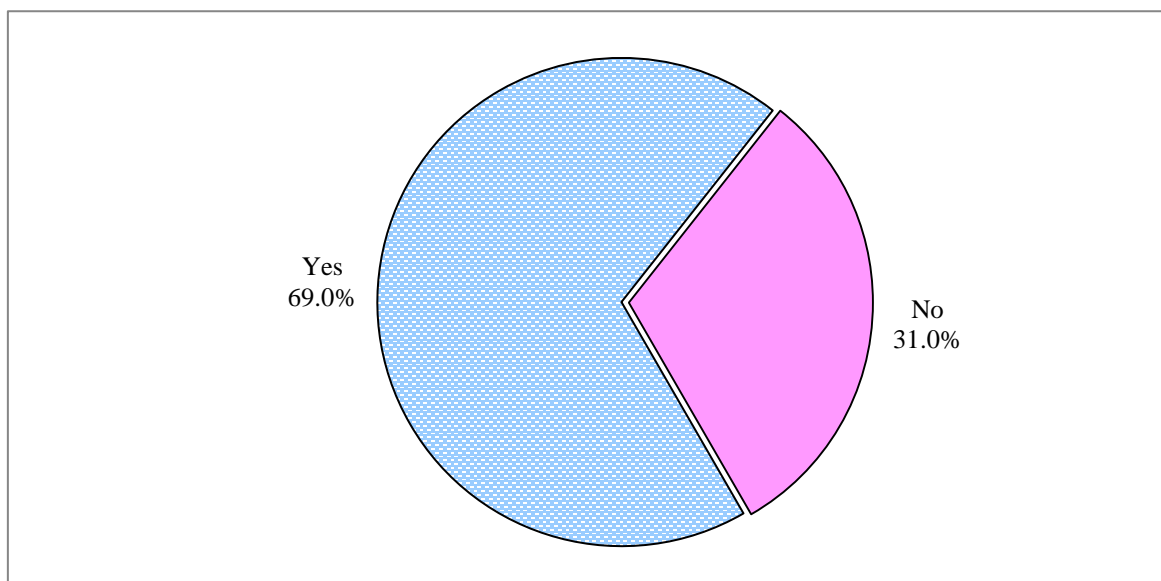
### 3.9 Organ donation

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

#### 3.9.1 Ever heard of the Centralised Organ Donation Register

More than two-thirds (69.0%) of the respondents had heard of the Centralised Organ Donation Register (Fig. 3.9.1).

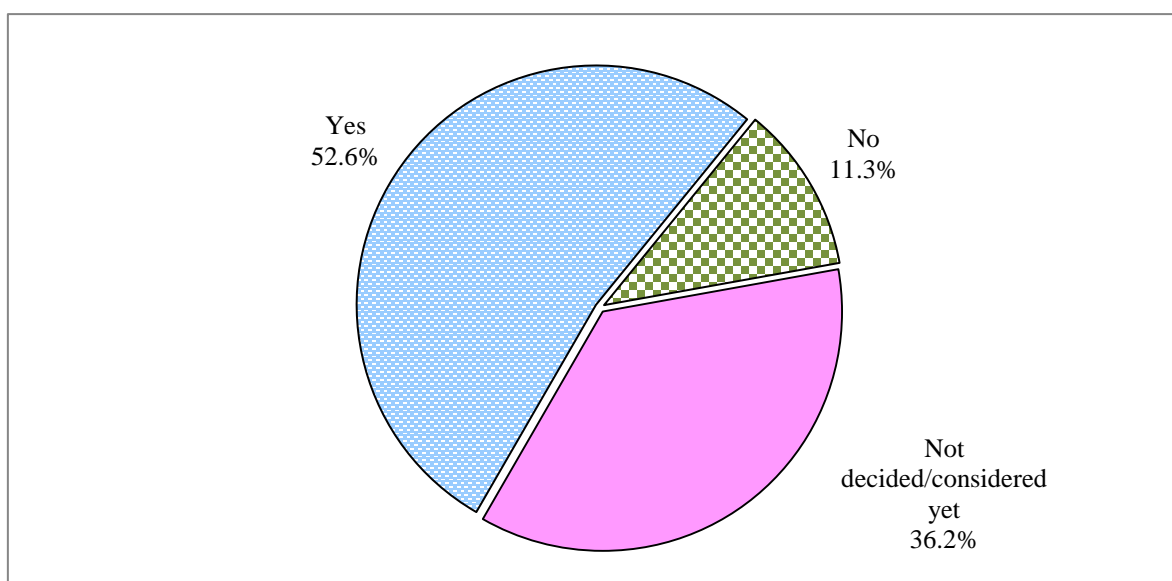
**Fig. 3.9.1: Ever heard of the Centralised Organ Donation Register (Q33)**



*Base: All respondents excluding "don't remember/don't know" = 4 166*

#### 3.9.2 Willingness to donate organs (after death)

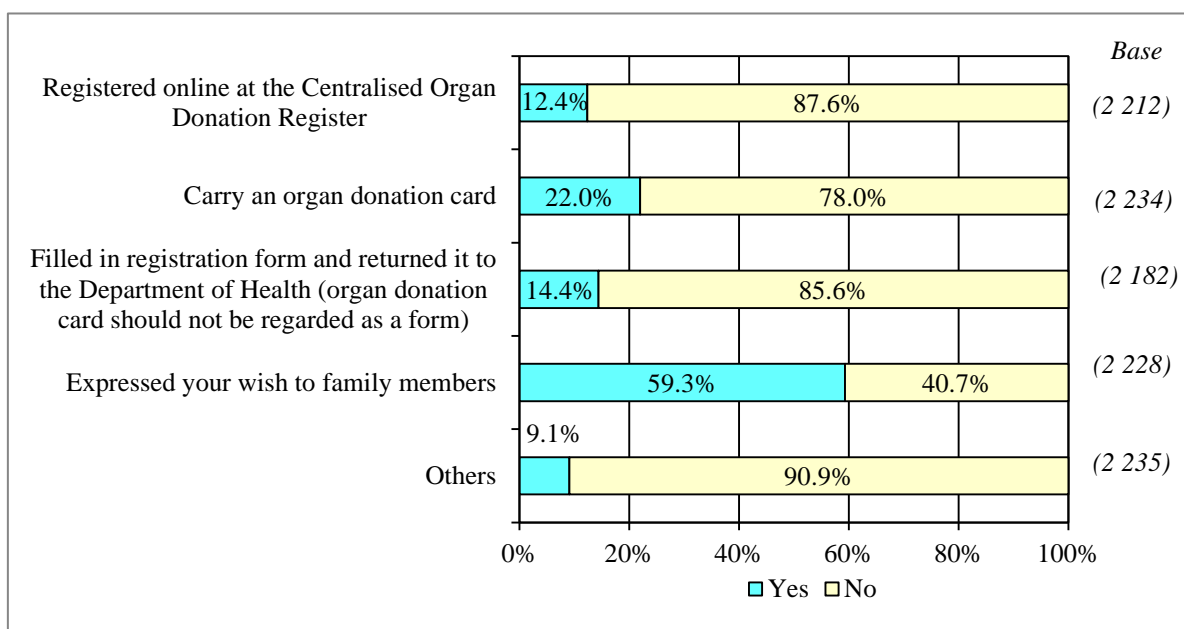
When being asked if the respondents were willing to donate their organs after death, about half (52.6%) of them reported that they were willing to donate their organs after death. On the other hand, about one-ninth (11.3%) of them reported that they were not willing to do so (Fig. 3.9.2).

**Fig. 3.9.2: Willingness to donate organs (after death) (Q34)**

Base: All respondents= 4 253

### 3.9.3 Ways to express wish to donate organ

Among those respondents who were willing to donate their organs after death, 59.3% of them expressed their wish to family members while 22.0% of them carried an organ donation card to express wish to donate organ (Fig. 3.9.3).

**Fig. 3.9.3: Ways to express wish to donate organs (Q35i-Q35v)**

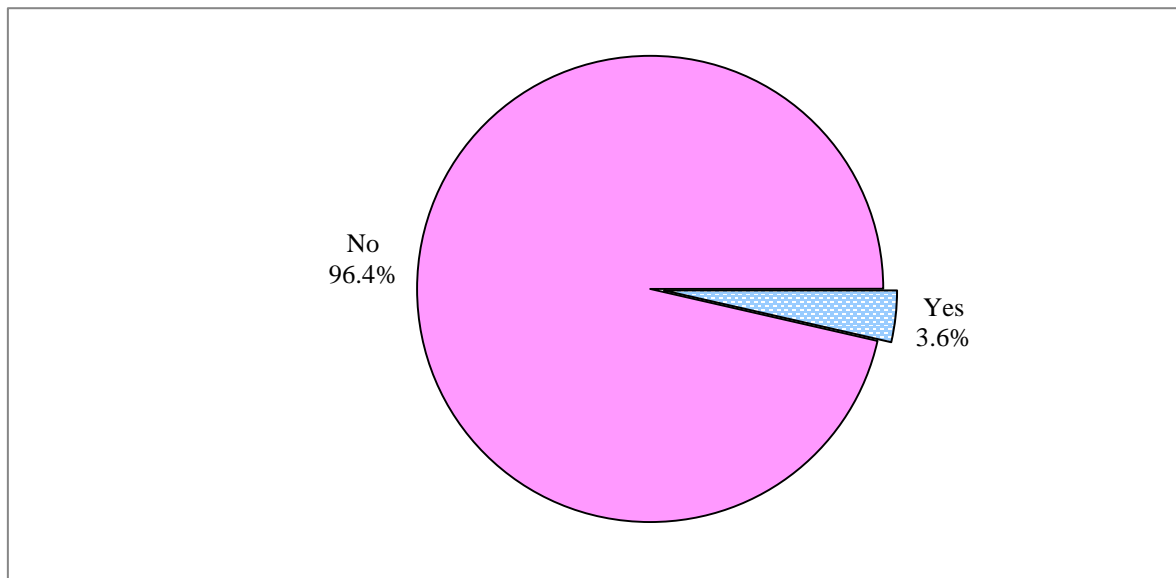
Base: Respondents who were willing to donate their organs excluding “don’t know”



### 3.9.4 Attitude towards organ donation of family members

Overall, the vast majority (96.4%) of the respondents reported that they would not object if their family members had expressed their will to donate their organs after death (Fig. 3.9.4).

**Fig. 3.9.4: Whether the respondents would object if their family members express their will of donating their organs after death (Q36)**



*Base: All respondents excluding "don't know" and refusal = 3 953*

## 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 “don't know”, “not applicable”, “refuse to answer”, “don't remember”, outliers and those responses that respondents did not have regarding behaviour<sup>17</sup> have been excluded from all the sub-group analyses in this chapter.

**Table 4.1a: Re-grouping the responses of demographic information (Q1, Q37-Q40, Q42 and Q43)**

Demographic variable	Original level	Re-grouped level	Sample size after re-grouping (weighted)
<b>Gender</b>	Male	Male	1 999
	Female	Female	2 254
<b>Age group</b>	No grouping	18 – 24	503
		25 – 34	833
		35 – 44	892
		45 – 54	1 037
		55 – 64	934
<b>Educational attainment</b>	Primary or below	Primary or below	325
	Lower secondary (S1 – S3)	Lower secondary (S1 – S3)	561
	Upper secondary (S4 – S6)/ Matriculation	Upper secondary (S4 – S6)/ Matriculation	1 526
	Tertiary (Non-degree, degree or above)	Tertiary (Non-degree, degree or above)	1 833
<b>Marital status</b>	Never married	Never married	1 388
	Married with child(ren)	Married	2 673
	Married without child		
	Divorced/ Separated	Divorced/ Separated/ Widowed	174
	Widowed		

<sup>17</sup> Those responses refer to “Skipped breakfast/ lunch/dinner (Q2-Q4)”, “Did not drink soft drinks or sugary beverages (Q8)”, “Did not eat desserts or snacks that were high in sugar (Q9)”, “Do not buy pre-packaged drinks and foods (Q10)”, “Do not cook food (Q11 and Q13)”, “Do not keep raw or cooked food (Q12)” and “Do not handle food (Q14)”

**Table 4.1a: Re-grouping the responses of demographic information (Q1, Q37-Q40, Q42 and Q43) (Continued)**

Demographic variable	Original level	Re-grouped level	Sample size after re-grouping (weighted)
<b>Occupation</b>	Employer/ Manager/ Administrator	Managerial/ Professional worker	1 167
	Professional		
	Associate professional		
	Clerk	Clerk	559
	Service worker	Service/ Shop sales worker	463
	Shop sales worker		
	Skilled agricultural/ Fishery worker	Blue collar worker	469
	Craft and related worker		
	Plant and machine operator and assembler		
	Unskilled worker		
	Student	Not working	1 452
	Homemaker		
	Unemployed person		
	Retired person		
	Other non-working person		
<b>Monthly household income</b>	Less than \$2,000	Below \$8,000	140
	\$2,000 - \$3,999		
	\$4,000 - \$5,999		
	\$6,000 - \$7,999		
	\$8,000 - \$9,999	\$8,000 - \$13,999	283
	\$10,000 - \$11,999		
	\$12,000 - \$13,999		
	\$14,000 - \$15,999	\$14,000 - \$19,999	268
	\$16,000 - \$17,999		
	\$18,000 - \$19,999		
	\$20,000 - \$24,999	\$20,000 - \$39,999	1 120
	\$25,000 - \$29,999		
	\$30,000 - \$34,999		
	\$35,000 - \$39,999		
	\$40,000 - \$44,999	\$40,000 or above	1 416
	\$45,000 - \$49,999		
	\$50,000 - \$54,999		
	\$55,000 - \$59,999		
	\$60,000 or above		
<b>Type of living quarters</b>	Public rental flats	Public rental flats	1 238
	Housing Authority subsidised sale flats	Subsidised sale flats	743
	Housing Society subsidised sale flats		
	Private residential flats	Private housing	2 200
	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
<b>Q8</b>	Frequency of drinking soft drinks or sugary beverages in the 30 days prior to the survey	More than twice a day	4 times a week or more
		Twice a day	
		Once a day	
		4-6 times a week	
		1-3 times a week	1-3 times a week
		Less than once a week	Less than once a week or none
		Did not drink soft drinks or sugary beverages	
<b>Q9</b>	Frequency of eating desserts or snacks in the 30 days prior to the survey	More than twice a day	4 times a week or more
		Twice a day	
		Once a day	
		4-6 times a week	
		1-3 times a week	1-3 times a week
		Less than once a week	Less than once a week or none
		Did not eat desserts or snacks that were high in sugar	
<b>Q10</b>	Frequency of checking nutrition labels when choosing pre-packaged drinks and foods	All of the time	All/ Most of the time
		Most of the time	
		Some of the time	Some of the time
		None of the time	None of the time
<b>Q11-Q14</b>	Frequency of washing all food thoroughly before cooking	All of the time	All of the time
	Frequency of keeping raw and cooked food separately	Most of the time	Most of the time
	Frequency of cooking or reheating food thoroughly	Some of the time	Some/ None of the time
	Frequency of washing your hands before handling food	None of the time	
<b>Q18</b>	Whether had been injured by taking part in sport or exercise activity in the 12 months prior to the survey	5 times or more	Yes
		3-4 times	
		1-2 times	
		None	No

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<sup>18</sup>.

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  $\geq 5$  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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<sup>18</sup> The statistical tests have been performed using SPSS. Formulae of the statistical tests are included for reference.

**Pearson's Chi-square test:**

$$\chi^2 = \sum_i \sum_j \frac{(O_{ij} - e_{ij})^2}{e_{ij}}$$

where  $O_{ij}$  is the observed value corresponding to the  $i^{\text{th}}$  column and the  $j^{\text{th}}$  row,  $e_{ij}$  is the expected value corresponding to the  $i^{\text{th}}$  column and the  $j^{\text{th}}$  row. The calculation of  $e_{ij}$  is as follow: expected value = (i<sup>th</sup> column total x j<sup>th</sup> row total) / Overall total.

**Kruskal-Wallis test:**

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

where N is the total number of observations,  $R_i$  is the sum of the ranks of the values of the  $i^{\text{th}}$  sample,  $n_i$  is the number of observations of the  $i^{\text{th}}$  sample.

**Spearman's rank correlation coefficient:**

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

where N is the sample size and  $S_x$  and  $S_y$  are the standard deviations of the rank of the two variables,  $X_i$  and  $Y_i$  are the  $i^{\text{th}}$  rank of X and Y respectively and  $\bar{X}$  and  $\bar{Y}$  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 Eating out habits

### 4.2.1 Frequency of eating out for breakfast

Frequency of eating out for breakfast in the 30 days prior to the survey is associated significantly with the respondents' gender, age, marital status, occupation and monthly household income.

A relatively higher proportion of male respondents (33.6%), respondents aged 45-54 (29.6%), married respondents (29.6%), blue collar workers (40.7%) and those with monthly household income of \$20,000-\$39,999 (28.9%) reported that they ate out for breakfast 5 times or more a week when compared with their respective counterparts (Table 4.2.1).

**Table 4.2.1: Frequency of eating out for breakfast in the 30 days prior to the survey (Q2)**

Variable	Level	Base	5 times or more a week	2-4 times a week	Once a week	2-3 times a month	Once a month or less	p-value	
								Kruskal-Wallis test	Rank Correlation
Gender	Male	1 898	33.6%	25.3%	13.6%	6.1%	21.2%	0.000	
	Female	2 176	21.6%	23.7%	14.7%	7.5%	32.5%		
Age group	18-24	463	14.2%	32.5%	14.8%	8.4%	30.0%		0.027
	25-34	781	28.7%	27.4%	13.8%	4.7%	25.4%		
	35-44	863	28.8%	25.9%	16.5%	7.2%	21.6%		
	45-54	1 007	29.6%	22.7%	16.5%	6.3%	24.8%		
	55-64	909	28.5%	18.8%	9.6%	8.2%	34.9%		
Marital status	Never married	1 302	22.7%	26.4%	15.3%	6.1%	29.6%	0.012	
	Married	2 588	29.6%	23.6%	13.8%	7.1%	25.8%		
	Divorced/ Separated/ Widowed	166	26.6%	21.1%	14.0%	9.5%	28.8%		
Occupation	Managerial/ Professional worker	1 114	28.4%	25.8%	16.6%	6.2%	23.0%	0.000	
	Clerk	543	29.6%	21.9%	16.4%	6.6%	25.5%		
	Service/ Shop sales worker	445	35.1%	22.0%	14.5%	5.4%	23.0%		
	Blue collar worker	453	40.7%	20.1%	8.8%	5.5%	24.9%		
	Not working	1 384	18.3%	26.6%	12.9%	8.7%	33.5%		

**Table 4.2.1: Frequency of eating out for breakfast in the 30 days prior to the survey (Q2)(Continued)**

Variable	Level	Base	5 times or more a week	2-4 times a week	Once a week	2-3 times a month	Once a month or less	p-value	
								Kruskal-Wallis test	Rank Correlation
Monthly household income	Below \$8,000	132	20.9%	15.3%	16.7%	11.2%	35.9%		0.000
	\$8,000-\$13,999	268	23.1%	21.9%	10.8%	7.4%	36.8%		
	\$14,000-\$19,999	260	27.8%	22.0%	15.9%	5.3%	28.9%		
	\$20,000-\$39,999	1 079	28.9%	24.5%	13.5%	6.9%	26.3%		
	\$40,000 or above	1 357	27.1%	28.2%	15.6%	6.6%	22.5%		

#### 4.2.2 Frequency of eating out for lunch

Frequency of eating out for lunch in the 30 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.

A relatively higher proportion of male respondents (63.7%), respondents aged 25-44 (ranging from 53.0% to 54.1%), never married respondents (53.2%), managerial/professional workers (62.7%) and those living in subsidised sale flats or private housing (ranging from 49.4% to 49.8%) reported that they ate out for lunch 5 times or more a week when compared with their respective counterparts.

The higher the educational attainment and the higher the monthly household income of the respondents, the more likely that they ate out for lunch 5 times or more a week (Table 4.2.2).

**Table 4.2.2: Frequency of eating out for lunch in the 30 days prior to the survey (Q3)**

Variable	Level	Base	5 times or more a week	2-4 times a week	Once a week	2-3 times a month	Once a month or less	p-value	
								Kruskal-Wallis test	Rank Correlation
Gender	Male	1 974	63.7%	20.8%	5.6%	2.7%	7.2%	0.000	
	Female	2 229	34.5%	30.8%	13.2%	6.0%	15.5%		
Age group	18-24	500	49.4%	36.2%	7.8%	2.0%	4.7%		0.000
	25-34	826	54.1%	28.6%	7.8%	2.8%	6.7%		
	35-44	886	53.0%	24.9%	10.2%	3.4%	8.5%		
	45-54	1 022	48.9%	23.4%	11.0%	5.0%	11.8%		
	55-64	915	37.0%	23.0%	10.2%	8.1%	21.8%		

**Table 4.2.2: Frequency of eating out for lunch in the 30 days prior to the survey (Q3)(Continued)**

Variable	Level	Base	5 times or more a week	2-4 times a week	Once a week	2-3 times a month	Once a month or less	p-value	
								Kruskal-Wallis test	Rank Correlation
<b>Educational attainment</b>	Primary or below	317	31.8%	14.8%	11.1%	9.1%	33.2%	0.000	0.000
	Lower secondary (S1-S3)	547	40.2%	22.3%	10.3%	6.5%	20.7%		
	Upper secondary (S4-S6) / Matriculation	1 508	47.7%	27.3%	9.1%	4.8%	11.1%		
	Tertiary (Non-degree, degree or above)	1 821	53.8%	28.2%	9.6%	2.9%	5.5%		
<b>Marital status</b>	Never married	1 375	53.2%	28.8%	8.0%	2.5%	7.5%	0.000	0.000
	Married	2 639	46.0%	24.9%	10.4%	5.4%	13.4%		
	Divorced/ Separated/ Widowed	171	43.3%	21.3%	11.0%	7.3%	17.1%		
<b>Occupation</b>	Managerial/ Professional worker	1 162	62.7%	22.1%	8.1%	2.3%	4.8%	0.000	0.000
	Clerk	558	54.7%	25.9%	8.5%	3.8%	7.1%		
	Service/ Shop sales worker	458	53.7%	24.2%	8.7%	2.7%	10.8%		
	Blue collar worker	460	59.5%	13.9%	5.6%	3.5%	17.6%		
	Not working	1 424	27.5%	34.2%	12.9%	7.8%	17.6%		
<b>Monthly household income</b>	Below \$8,000	137	28.7%	26.0%	10.7%	10.4%	24.1%	0.000	0.000
	\$8,000-\$13,999	278	33.9%	30.8%	8.3%	8.6%	18.5%		
	\$14,000-\$19,999	264	41.7%	22.7%	9.7%	6.7%	19.2%		
	\$20,000-\$39,999	1 108	49.2%	26.4%	9.5%	3.7%	11.3%		
	\$40,000 or above	1 405	54.9%	26.4%	9.9%	3.3%	5.5%		
<b>Type of living quarters</b>	Public rental flats	1 226	45.1%	23.4%	9.4%	4.8%	17.2%	0.000	0.000
	Subsidised sale flats	732	49.4%	24.1%	9.1%	5.5%	12.0%		
	Private housing	2 172	49.8%	28.1%	10.0%	3.9%	8.2%		



### 4.2.3 Frequency of eating out for dinner

Frequency of eating out for dinner in the 30 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.

A relatively higher proportion of male respondents (12.3%), respondents aged 25-44 (ranging from 10.7% to 11.4%), never married respondents (11.8%), managerial/professional workers (13.1%), those with monthly household income of below \$8,000 (10.9%) or \$40,000 or above (10.3%) and those living in private housing (9.8%) reported that they ate out for dinner 5 times or more a week when compared with their respective counterparts.

The higher the educational attainment of the respondents, the more likely that they ate out for dinner 5 times or more a week (Table 4.2.3).

**Table 4.2.3: Frequency of eating out for dinner in the 30 days prior to the survey (Q4)**

Variable	Level	Base	5 times or more a week	2-4 times a week	Once a week	2-3 times a month	Once a month or less	p-value	
								Kruskal - Wallis test	Rank Correlation
Gender	Male	1 995	12.3%	39.4%	19.7%	10.9%	17.7%	0.000	
	Female	2 250	6.2%	36.8%	21.8%	12.4%	22.8%		
Age group	18-24	503	9.8%	50.3%	17.3%	9.1%	13.5%		0.000
	25-34	832	10.7%	49.9%	18.9%	8.5%	11.9%		
	35-44	891	11.4%	39.4%	23.2%	10.9%	15.0%		
	45-54	1 032	8.2%	34.3%	23.8%	11.8%	22.0%		
	55-64	933	5.7%	24.0%	18.9%	16.6%	34.8%		
Educational attainment	Primary or below	325	4.8%	14.3%	12.1%	18.4%	50.3%		0.000
	Lower secondary (S1-S3)	559	6.9%	22.5%	19.3%	15.1%	36.2%		
	Upper secondary (S4-S6) / Matriculation	1 525	9.1%	36.5%	20.7%	13.4%	20.3%		
	Tertiary (Non-degree, degree or above)	1 827	10.5%	48.4%	23.0%	7.9%	10.2%		
Marital status	Never married	1 385	11.8%	47.2%	17.8%	8.9%	14.3%	0.000	
	Married	2 668	7.6%	33.9%	22.5%	12.8%	23.2%		
	Divorced/ Separated/ Widowed	174	8.5%	28.9%	20.8%	16.5%	25.3%		

**Table 4.2.3: Frequency of eating out for dinner in the 30 days prior to the survey (Q4)**  
(Continued)

Variable	Level	Base	5 times or more a week	2-4 times a week	Once a week	2-3 times a month	Once a month or less	p-value	
								Kruskal - Wallis test	Rank Correlation
<b>Occupation</b>	Managerial/ Professional worker	1 163	13.1%	44.7%	24.3%	8.2%	9.7%	0.000	
	Clerk	559	8.9%	47.9%	22.0%	9.9%	11.2%		
	Service/ Shop sales worker	461	10.8%	37.2%	17.1%	14.2%	20.6%		
	Blue collar worker	469	7.7%	25.4%	19.5%	12.9%	34.5%		
	Not working	1 450	5.7%	32.4%	19.5%	13.8%	28.5%		
<b>Monthly household income</b>	Below \$8,000	139	10.9%	21.9%	13.9%	15.9%	37.4%	0.000	
	\$8,000-\$13,999	283	6.8%	27.7%	13.7%	14.1%	37.7%		
	\$14,000-\$19,999	268	6.9%	26.6%	15.0%	16.0%	35.5%		
	\$20,000-\$39,999	1 119	8.7%	39.4%	20.1%	12.3%	19.6%		
	\$40,000 or above	1 412	10.3%	45.9%	25.0%	8.9%	10.0%		
<b>Type of living quarters</b>	Public rental flats	1 235	7.8%	32.8%	18.1%	13.4%	28.0%	0.000	
	Subsidised sale flats	743	8.8%	36.7%	20.4%	15.2%	18.8%		
	Private housing	2 196	9.8%	41.5%	22.5%	9.5%	16.6%		

#### 4.2.4 Ever heard of EatSmart Restaurants

Whether the respondents had ever heard of EatSmart Restaurants is associated significantly with their gender, age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

A relatively higher proportion of male respondents (27.1%), respondents aged 55-64 (33.3%), those with primary education or below (43.2%), divorced/ separated/ widowed respondents (31.2%), blue collar workers (31.8%) and those living in public rental flats (26.2%) reported that they had not heard of EatSmart Restaurants when compared with their respective counterparts.

The lower the monthly household income of the respondents, the more likely that they had not heard of EatSmart Restaurants (Table 4.2.4).

Table 4.2.4: Ever heard of EatSmart Restaurants (Q5)

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	1 965	72.9%	27.1%	0.000	
	Female	2 195	79.3%	20.7%		
Age group	18-24	500	78.4%	21.6%		0.000
	25-34	820	78.9%	21.1%		
	35-44	877	82.1%	17.9%		
	45-54	1 014	75.9%	24.1%		
	55-64	898	66.7%	33.3%		
Educational attainment	Primary or below	306	56.8%	43.2%		0.000
	Lower secondary (S1-S3)	543	70.5%	29.5%		
	Upper secondary (S4-S6) / Matriculation	1 503	79.5%	20.5%		
	Tertiary (Non-degree, degree or above)	1 800	78.8%	21.2%		
Marital status	Never married	1 369	79.5%	20.5%	0.000	
	Married	2 604	75.0%	25.0%		
	Divorced/ Separated/ Widowed	170	68.8%	31.2%		
Occupation	Managerial/ Professional worker	1 151	78.6%	21.4%	0.000	
	Clerk	549	85.1%	14.9%		
	Service/ Shop sales worker	453	75.5%	24.5%		
	Blue collar worker	454	68.2%	31.8%		
	Not working	1 413	73.7%	26.3%		
Monthly household income	Below \$8,000	136	66.2%	33.8%		0.000
	\$8,000-\$13,999	275	68.9%	31.1%		
	\$14,000-\$19,999	262	75.3%	24.7%		
	\$20,000-\$39,999	1 105	79.0%	21.0%		
	\$40,000 or above	1 390	80.4%	19.6%		
Type of living quarters	Public rental flats	1 207	73.8%	26.2%	0.021	
	Subsidised sale flats	725	79.1%	20.9%		
	Private housing	2 156	77.0%	23.0%		

#### 4.2.5 Whether patronised EatSmart Restaurants in the 30 days prior to the survey

Among those respondents who had heard of EatSmart Restaurants, whether the respondents had patronised any EatSmart Restaurants in the 30 days prior to the survey is associated significantly with their age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

A relatively higher proportion of those aged 55-64 (93.6%), divorced/ separated/ widowed respondents (89.3%), blue collar workers (94.2%), those with monthly household income of below \$8,000 (93.6%) and those living in public rental flats (88.9%) reported that they had not patronised EatSmart Restaurants in the 30 days prior to the survey when compared with their respective counterparts.

The lower the educational attainment of the respondents, the more likely that they had not patronised EatSmart Restaurants in the 30 days prior to the survey (Table 4.2.5).

**Table 4.2.5: Whether patronised EatSmart Restaurants in the 30 days prior to the survey (Q6a)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Age group	18-24	320	18.3%	81.7%		0.000
	25-34	555	20.3%	79.7%		
	35-44	613	15.6%	84.4%		
	45-54	705	11.2%	88.8%		
	55-64	563	6.4%	93.6%		
Educational attainment	Primary or below	166	5.7%	94.3%		0.000
	Lower secondary (S1-S3)	356	9.7%	90.3%		
	Upper secondary (S4-S6) / Matriculation	1 054	11.1%	88.9%		
	Tertiary (Non-degree, degree or above)	1 218	18.6%	81.4%		
Marital status	Never married	904	17.9%	82.1%	0.000	
	Married	1 771	12.1%	87.9%		
	Divorced/ Separated/ Widowed	107	10.7%	89.3%		

**Table 4.2.5: Whether patronised EatSmart Restaurants in the 30 days prior to the survey (Q6a)(Continued)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
<b>Occupation</b>	Managerial/ Professional worker	772	18.2%	81.8%	0.000	
	Clerk	401	15.6%	84.4%		
	Service/ Shop sales worker	317	11.8%	88.2%		
	Blue collar worker	275	5.8%	94.2%		
	Not working	936	12.8%	87.2%		
<b>Monthly household income</b>	Below \$8,000	86	6.4%	93.6%		0.001
	\$8,000-\$13,999	168	13.1%	86.9%		
	\$14,000-\$19,999	176	7.7%	92.3%		
	\$20,000-\$39,999	772	13.4%	86.6%		
	\$40,000 or above	984	16.3%	83.7%		
<b>Type of living quarters</b>	Public rental flats	786	11.1%	88.9%	0.011	
	Subsidised sale flats	519	13.1%	86.9%		
	Private housing	1 449	15.6%	84.4%		

#### 4.2.6 Whether consumed EatSmart Dishes in the 30 days prior to the survey

Whether the respondents had consumed any EatSmart Dishes in the 30 days prior to the survey is associated significantly with their gender, age, educational attainment, marital status, monthly household income and type of living quarters.

A relatively higher proportion of male respondents (46.6%), respondents aged 18-24 (48.1%), those with upper secondary education (S4-S6) / matriculation (46.3%), never married or divorced/ separated/ widowed respondents (ranging from 48.4% to 48.5%), those with monthly household income of \$8,000-\$19,999 (ranging from 47.8% to 48.4%) and those living in public rental flats (47.0%) reported that they had not consumed EatSmart Dishes in the 30 days prior to the survey when compared with their respective counterparts (Table 4.2.6).

**Table 4.2.6: Whether consumed EatSmart Dishes in the 30 days prior to the survey (Q7a)**

Variable	Level	Base	Yes	No	Had not heard/seen of it	p-value	
						Chi-square test	Kruskal-Wallis test
<b>Gender</b>	Male	1 890	44.4%	46.6%	9.0%	0.001	
	Female	2 134	50.2%	42.2%	7.6%		
<b>Age group</b>	18-24	465	45.7%	48.1%	6.2%		0.000
	25-34	790	46.5%	46.4%	7.1%		
	35-44	846	52.2%	40.8%	6.9%		
	45-54	999	48.0%	44.3%	7.7%		
	55-64	874	44.0%	43.7%	12.3%		
<b>Educational attainment</b>	Primary or below	310	38.5%	45.4%	16.1%		0.000
	Lower secondary (S1-S3)	536	49.0%	42.2%	8.9%		
	Upper secondary (S4-S6) / Matriculation	1 448	45.8%	46.3%	7.8%		
	Tertiary (Non-degree, degree or above)	1 723	50.2%	42.9%	6.9%		
<b>Marital status</b>	Never married	1 301	45.3%	48.5%	6.2%	0.000	
	Married	2 547	48.9%	41.7%	9.4%		
	Divorced/ Separated/ Widowed	160	44.8%	48.4%	6.8%		
<b>Monthly household income</b>	Below \$8,000	128	48.8%	45.7%	5.5%		0.008
	\$8,000-\$13,999	269	38.9%	47.8%	13.4%		
	\$14,000-\$19,999	256	42.2%	48.4%	9.4%		
	\$20,000-\$39,999	1 072	46.9%	46.2%	6.9%		
	\$40,000 or above	1 344	49.7%	43.4%	7.0%		
<b>Type of living quarters</b>	Public rental flats	1 180	44.0%	47.0%	9.0%	0.015	
	Subsidised sale flats	703	46.7%	46.3%	7.0%		
	Private housing	2 074	49.7%	42.2%	8.1%		

### 4.3 Consumption of sugary beverages and foods

#### 4.3.1 Frequency of drinking soft drinks or sugary beverages in the 30 days prior to the survey

Frequency of drinking soft drinks or sugary beverages in the 30 days prior to the survey is associated significantly with the respondents' gender, age, educational attainment, marital status, occupation and monthly household income.

A relatively higher proportion of male respondents (57.6%), respondents aged 25-34 (60.7%), those with upper secondary education (S4-S6) / matriculation (52.3%), never married respondents (55.1%), service/ shop sales workers (57.7%), those with monthly household income of \$20,000-\$39,999 (52.2%) reported that they drank soft drinks or sugary beverages 4 times a week or more in the 30 days prior to the survey when compared with their respective counterparts (Table 4.3.1).

**Table 4.3.1: Frequency of drinking soft drinks or sugary beverages in the 30 days prior to the survey (Q8)**

Variable	Level	Base	4 times a week or more	1-3 times a week	Less than once a week or none	p-value	
						Kruskal-Wallis test	Rank Correlation
Gender	Male	1 997	57.6%	24.2%	18.1%	0.000	
	Female	2 250	41.1%	30.8%	28.2%		
Age group	18-24	502	51.9%	35.9%	12.2%		0.000
	25-34	832	60.7%	27.6%	11.7%		
	35-44	891	53.5%	29.3%	17.1%		
	45-54	1 036	46.1%	26.1%	27.7%		
	55-64	932	36.0%	23.6%	40.4%		
Educational attainment	Primary or below	324	31.2%	20.7%	48.1%		0.000
	Lower secondary (S1-S3)	559	46.8%	26.2%	27.0%		
	Upper secondary (S4-S6) / Matriculation	1 526	52.3%	26.3%	21.4%		
	Tertiary (Non-degree, degree or above)	1 830	49.9%	30.5%	19.6%		
Marital status	Never married	1 385	55.1%	30.2%	14.8%	0.000	
	Married	2 670	46.0%	26.7%	27.3%		
	Divorced/ Separated/ Widowed	174	45.2%	21.2%	33.6%		

**Table 4.3.1: Frequency of drinking soft drinks or sugary beverages in the 30 days prior to the survey (Q8)(Continued)**

Variable	Level	Base	4 times a week or more	1-3 times a week	Less than once a week or none	p-value	
						Kruskal-Wallis test	Rank Correlation
<b>Occupation</b>	Managerial/ Professional worker	1 167	50.6%	29.0%	20.4%	0.000	
	Clerk	559	51.3%	31.3%	17.3%		
	Service/ Shop sales worker	461	57.7%	21.6%	20.7%		
	Blue collar worker	468	54.7%	20.3%	25.0%		
	Not working	1 448	40.6%	30.2%	29.3%		
<b>Monthly Household Income</b>	Below \$8,000	138	36.3%	24.2%	39.5%		0.000
	\$8,000-\$13,999	281	40.5%	27.0%	32.4%		
	\$14,000-\$19,999	268	49.6%	24.2%	26.2%		
	\$20,000-\$39,999	1 119	52.2%	29.3%	18.5%		
	\$40,000 or above	1 416	49.9%	28.3%	21.8%		

#### **4.3.2 Frequency of eating desserts or snacks that were high in sugar in the 30 days prior to the survey**

Frequency of eating desserts or snacks that were high in sugar in the 30 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.

A relatively higher proportion of female respondents (20.6%), respondents aged 25-34 (24.6%), never married respondents (22.5%), clerks (23.3%), those with monthly household income of \$20,000-\$39,999 (19.7%) and those living in private housing (18.1%) reported they ate desserts or snacks that were high in sugar 4 times a week or more in the 30 days prior to the survey when compared with their respective counterparts.

The higher the educational attainment of the respondents, the more likely that they ate desserts or snacks that were high in sugar 4 times a week or more in the 30 days prior to the survey (Table 4.3.2).



**Table 4.3.2: Frequency of eating desserts or snacks that were high in sugar in the 30 days prior to the survey (Q9)**

Variable	Level	Base	4 times a week or more	1-3 times a week	Less than once a week or none	p-value	
						Kruskal-Wallis test	Rank Correlation
<b>Gender</b>	Male	1 999	14.7%	51.7%	33.6%	0.000	
	Female	2 247	20.6%	49.4%	30.0%		
<b>Age group</b>	18-24	503	23.0%	56.1%	20.9%		0.000
	25-34	829	24.6%	53.5%	21.9%		
	35-44	891	15.2%	56.3%	28.5%		
	45-54	1 035	15.9%	48.5%	35.6%		
	55-64	933	14.0%	41.1%	44.9%		
<b>Educational attainment</b>	Primary or below	325	10.3%	34.5%	55.2%		0.000
	Lower secondary (S1-S3)	559	13.6%	45.7%	40.7%		
	Upper secondary (S4-S6) / Matriculation	1 525	18.2%	49.3%	32.5%		
	Tertiary (Non-degree, degree or above)	1 829	20.1%	55.8%	24.1%		
<b>Marital status</b>	Never married	1 385	22.5%	54.0%	23.6%	0.000	
	Married	2 670	15.4%	49.4%	35.2%		
	Divorced/ Separated/ Widowed	173	16.4%	39.1%	44.5%		
<b>Occupation</b>	Managerial/ Professional worker	1 166	18.5%	55.3%	26.2%	0.000	
	Clerk	558	23.3%	50.2%	26.5%		
	Service/ Shop sales worker	461	16.3%	50.8%	32.9%		
	Blue collar worker	469	11.6%	41.8%	46.7%		
	Not working	1 449	17.6%	48.9%	33.5%		
<b>Monthly household income</b>	Below \$8,000	138	15.4%	37.2%	47.5%		0.000
	\$8,000-\$13,999	282	16.9%	47.2%	35.9%		
	\$14,000-\$19,999	268	11.7%	50.8%	37.5%		
	\$20,000-\$39,999	1 118	19.7%	50.7%	29.6%		
	\$40,000 or above	1 416	17.3%	54.0%	28.7%		
<b>Type of living quarters</b>	Public rental flats	1 235	16.8%	45.6%	37.6%	0.000	
	Subsidised sale flats	742	17.9%	51.5%	30.6%		
	Private housing	2 197	18.1%	53.1%	28.8%		

### 4.3.3 Habit of checking nutrition labels when choosing pre-packaged drinks and foods

Frequency of checking nutrition labels when choosing pre-packaged drinks and foods is associated significantly with the respondents' gender, age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

A relatively higher proportion of male respondents (39.8%), divorced/ separated/ widowed respondents (38.6%), blue collar workers (55.3%), those with monthly household income of \$8,000-\$19,999 (ranging from 42.8% to 43.4%) and those living in public rental flats (39.0%) reported that they never checked nutrition labels when choosing pre-packaged drinks and foods when compared with their respective counterparts.

The older and the lower the educational attainment of the respondents, the more likely that they never checked nutrition labels when choosing pre-packaged drinks and foods (Table 4.3.3).

**Table 4.3.3: Habit of checking nutrition labels when choosing pre-packaged drinks and foods (Q10)**

Variable	Level	Base	All/ Most of the time	Some of the time	None of the time	p-value	
						Kruskal-Wallis test	Rank Correlation
Gender	Male	1 995	22.7%	37.5%	39.8%	0.000	
	Female	2 242	35.3%	37.6%	27.1%		
Age group	18-24	503	27.1%	48.8%	24.1%		0.000
	25-34	833	31.2%	40.9%	27.9%		
	35-44	888	32.4%	36.7%	30.9%		
	45-54	1 030	29.4%	36.2%	34.3%		
	55-64	928	25.1%	31.7%	43.2%		
Educational attainment	Primary or below	320	14.9%	25.9%	59.2%		0.000
	Lower secondary (S1-S3)	556	17.6%	37.0%	45.4%		
	Upper secondary (S4-S6) / Matriculation	1 524	27.1%	37.5%	35.4%		
	Tertiary (Non-degree, degree or above)	1 829	37.3%	39.9%	22.8%		

**Table 4.3.3: Habit of checking nutrition labels when choosing pre-packaged drinks and foods (Q10)(Continued)**

Variable	Level	Base	All/ Most of the time	Some of the time	None of the time	p-value	
						Kruskal-Wallis test	Rank Correlation
<b>Marital status</b>	Never married	1 385	31.2%	40.5%	28.3%	0.001	
	Married	2 661	28.5%	36.3%	35.2%		
	Divorced/ Separated/ Widowed	173	28.7%	32.7%	38.6%		
<b>Occupation</b>	Managerial/ Professional worker	1 164	37.4%	36.4%	26.2%	0.000	
	Clerk	559	29.6%	40.8%	29.6%		
	Service/ Shop sales worker	461	22.5%	40.2%	37.3%		
	Blue collar worker	467	15.6%	29.1%	55.3%		
	Not working	1 443	29.8%	38.8%	31.4%		
<b>Monthly household income</b>	Below \$8,000	138	26.6%	35.8%	37.5%	0.000	
	\$8,000-\$13,999	281	21.2%	36.0%	42.8%		
	\$14,000-\$19,999	266	17.9%	38.6%	43.4%		
	\$20,000-\$39,999	1 113	28.4%	37.3%	34.3%		
	\$40,000 or above	1 416	34.7%	38.8%	26.5%		
<b>Type of living quarters</b>	Public rental flats	1 230	23.8%	37.1%	39.0%	0.000	
	Subsidised sale flats	741	23.6%	43.0%	33.4%		
	Private housing	2 194	34.3%	36.3%	29.4%		

## 4.4 Food handling practices

### 4.4.1 Practice of washing all food thoroughly before cooking especially seafood

The practice of washing all food thoroughly before cooking especially seafood is associated significantly with the respondents' gender, age, marital status, occupation, monthly household income and type of living quarters.

A relatively higher proportion of male respondents (5.0%), respondents aged 18-24 (5.1%), never married respondents (5.1%), blue collar workers (4.5%) or managerial/ professional workers (4.4%), those with monthly household income of below \$14,000 (ranging from 5.0% to 5.5%) and those living in public rental flats (4.8%) reported that they would wash all food thoroughly before cooking some/ none of the time when compared with their respective counterparts (Table 4.4.1).

**Table 4.4.1: Practice of washing all food thoroughly before cooking especially seafood (Q11)**

Variable	Level	Base	All of the time	Most of the time	Some/ None of the time	p-value	
						Kruskal-Wallis test	Rank Correlation
<b>Gender</b>	Male	1 722	75.2%	19.8%	5.0%	0.000	
	Female	2 101	80.2%	17.3%	2.5%		
<b>Age group</b>	18-24	411	72.7%	22.2%	5.1%		0.016
	25-34	715	75.6%	19.6%	4.8%		
	35-44	805	79.9%	17.7%	2.4%		
	45-54	964	79.1%	17.5%	3.4%		
	55-64	877	79.0%	17.5%	3.5%		
<b>Marital status</b>	Never married	1 136	75.2%	19.8%	5.1%	0.006	
	Married	2 505	79.3%	17.9%	2.9%		
	Divorced/ Separated/ Widowed	164	77.9%	17.1%	4.9%		
<b>Occupation</b>	Managerial/ Professional worker	1 017	80.3%	15.3%	4.4%	0.028	
	Clerk	493	72.9%	24.0%	3.2%		
	Service/ Shop sales worker	430	80.1%	17.3%	2.6%		
	Blue collar worker	428	74.0%	21.5%	4.5%		
	Not working	1 333	78.8%	17.8%	3.4%		

**Table 4.4.1: Practice of washing all food thoroughly before cooking especially seafood (Q11)(Continued)**

Variable	Level	Base	All of the time	Most of the time	Some/ None of the time	p-value	
						Kruskal-Wallis test	Rank Correlation
Monthly household income	Below \$8,000	124	78.8%	16.2%	5.0%		0.002
	\$8,000-\$13,999	262	73.2%	21.4%	5.5%		
	\$14,000-\$19,999	239	70.8%	25.6%	3.6%		
	\$20,000-\$39,999	1 023	76.3%	20.0%	3.6%		
	\$40,000 or above	1 269	80.0%	17.0%	3.0%		
Type of living quarters	Public rental flats	1 100	74.8%	20.4%	4.8%	0.018	
	Subsidised sale flats	676	81.1%	16.0%	2.9%		
	Private housing	1 979	78.5%	18.3%	3.2%		

#### 4.4.2 Practice of keeping raw and cooked food separately

The practice of keeping raw and cooked food separately is associated significantly with the respondents' gender, educational attainment, marital status, occupation, monthly household income and type of living quarters.

A relatively higher proportion of male respondents (10.0%), divorced/ separated/ widowed respondents (10.4%), blue collar workers (14.5%), those with monthly household income of \$8,000 to \$13,999 (13.2%) and those living in public rental flats (12.6%) reported that they would keep raw and cooked food separately some/ none of the time when compared with their respective counterparts.

The lower the educational attainment of the respondents, the more likely that they kept raw and cooked food separately some/ none of the time (Table 4.4.2).

**Table 4.4.2: Practice of keeping raw and cooked food separately (Q12)**

Variable	Level	Base	All of the time	Most of the time	Some/ None of the time	p-value	
						Kruskal-Wallis test	Rank Correlation
<b>Gender</b>	Male	1 851	68.7%	21.4%	10.0%	0.010	
	Female	2 190	71.7%	20.8%	7.5%		
<b>Educational attainment</b>	Primary or below	309	62.8%	24.6%	12.6%		0.000
	Lower secondary (S1-S3)	540	65.0%	24.1%	10.9%		
	Upper secondary (S4-S6) / Matriculation	1 437	69.7%	20.9%	9.5%		
	Tertiary (Non-degree, degree or above)	1 745	73.9%	19.6%	6.5%		
<b>Marital status</b>	Never married	1 277	67.4%	23.2%	9.4%	0.033	
	Married	2 578	72.0%	20.0%	8.0%		
	Divorced/ Separated/ Widowed	167	67.2%	22.4%	10.4%		
<b>Occupation</b>	Managerial/ Professional worker	1 103	74.2%	19.7%	6.0%	0.000	
	Clerk	535	67.7%	23.0%	9.3%		
	Service/ Shop sales worker	445	70.8%	18.7%	10.5%		
	Blue collar worker	438	66.5%	19.0%	14.5%		
	Not working	1 391	69.0%	22.9%	8.1%		
<b>Monthly household income</b>	Below \$8,000	131	64.0%	25.1%	10.9%		0.000
	\$8,000-\$13,999	273	59.5%	27.3%	13.2%		
	\$14,000-\$19,999	247	64.1%	24.1%	11.8%		
	\$20,000-\$39,999	1 064	69.6%	22.1%	8.3%		
	\$40,000 or above	1 363	75.0%	18.7%	6.3%		
<b>Type of living quarters</b>	Public rental flats	1 181	65.9%	21.5%	12.6%	0.000	
	Subsidised sale flats	698	71.3%	22.5%	6.2%		
	Private housing	2 092	72.4%	20.4%	7.2%		

#### 4.4.3 Practice of cooking or reheating food thoroughly especially seafood

The practice of cooking or reheating food thoroughly especially seafood is associated significantly with respondents' gender, age and marital status.

A relatively higher proportion of male respondents (12.1%), respondents aged 18-34 (ranging from 12.3% to 12.4%) and never married respondents (12.2%) reported that they would cook or reheat food thoroughly some/ none of the time when compared with their respective counterparts (Table 4.4.3).

**Table 4.4.3: Practice of cooking or reheating food thoroughly especially seafood (Q13)**

Variable	Level	Base	All of the time	Most of the time	Some/ None of the time	p-value	
						Kruskal-Wallis test	Rank Correlation
<b>Gender</b>	Male	1 829	70.3%	17.6%	12.1%	0.000	
	Female	2 182	75.9%	15.5%	8.6%		
<b>Age group</b>	18-24	454	64.8%	22.8%	12.3%		0.001
	25-34	774	71.2%	16.3%	12.4%		
	35-44	841	76.2%	16.1%	7.7%		
	45-54	990	74.6%	16.2%	9.2%		
	55-64	901	75.6%	14.0%	10.4%		
<b>Marital status</b>	Never married	1 257	68.4%	19.4%	12.2%	0.000	
	Married	2 567	75.8%	15.0%	9.2%		
	Divorced/ Separated/ Widowed	168	72.8%	16.1%	11.1%		

#### 4.4.4 Practice of washing hands before handling food

The practice of washing hands before handling food is associated significantly with respondents' gender, educational attainment, marital status, occupation, monthly household income and type of living quarters.

A relatively higher proportion of male respondents (9.7%), never married respondents (9.3%), blue collar workers (14.5%) and those living in subsidised sale flats (8.1%) reported that they would wash hands before handling food some/ none of the time when compared with their respective counterparts.

The lower the educational attainment and the lower the monthly household income of the respondents, the more likely that they washed hands before handling food some/ none of the time (Table 4.4.4).

**Table 4.4.4: Practice of washing hands before handling food (Q14)**

Variable	Level	Base	All of the time	Most of the time	Some/ None of the time	p-value	
						Kruskal-Wallis test	Rank Correlation
<b>Gender</b>	Male	1 930	69.1%	21.2%	9.7%	0.000	
	Female	2 224	77.6%	17.6%	4.8%		
<b>Educational attainment</b>	Primary or below	318	65.3%	21.1%	13.6%		0.000
	Lower secondary (S1-S3)	554	71.2%	19.5%	9.2%		
	Upper secondary (S4-S6) / Matriculation	1 491	73.5%	18.9%	7.6%		
	Tertiary (Non-degree, degree or above)	1 782	75.9%	19.2%	4.9%		
<b>Marital status</b>	Never married	1 338	69.0%	21.8%	9.3%	0.000	
	Married	2 626	75.9%	18.1%	6.0%		
	Divorced/ Separated/ Widowed	171	74.5%	17.8%	7.7%		
<b>Occupation</b>	Managerial/ Professional worker	1 129	77.0%	18.5%	4.5%	0.000	
	Clerk	548	72.7%	19.9%	7.4%		
	Service/ Shop sales worker	456	71.9%	18.6%	9.5%		
	Blue collar worker	458	66.2%	19.3%	14.5%		
	Not working	1 426	73.9%	19.7%	6.5%		
<b>Monthly household income</b>	Below \$8,000	136	72.5%	13.9%	13.6%		0.000
	\$8,000-\$13,999	277	68.6%	21.8%	9.7%		
	\$14,000-\$19,999	263	68.4%	22.1%	9.6%		
	\$20,000-\$39,999	1 095	71.8%	20.5%	7.8%		
	\$40,000 or above	1 380	76.7%	18.3%	5.0%		
<b>Type of living quarters</b>	Public rental flats	1 208	71.3%	20.8%	7.9%	0.008	
	Subsidised sale flats	724	71.7%	20.2%	8.1%		
	Private housing	2 152	75.4%	18.4%	6.2%		



## 4.5 Sport participation and injury

### 4.5.1 Frequency of participating in a sport or exercise activity in the 12 months prior to the survey

Frequency of participating in a sport or exercise activity in the 12 months prior to the survey is associated significantly with the respondents' gender, age, educational attainment, occupation, monthly household income and type of living quarters.

A relatively higher proportion of female respondents (20.8%), blue collar workers (30.9%), those with monthly household income of \$8,000 to \$13,999 (31.4%) and those living in public rental flats (22.3%) or subsidised sale flats (22.8%) reported that they had not participated in any sport or exercise activity in the 12 months prior to the survey when compared with their respective counterparts.

The older and the lower the educational attainment of the respondents, the more likely that they had not participate in any sport or exercise activity in the 12 months prior to the survey (Table 4.5.1).

**Table 4.5.1: Frequency of participating in a sport or exercise activity in the 12 months prior to the survey (Q15)**

Variable	Level	Base	Did not participate in any sport or exercise activity	Less than once a week	1-3 times a week	4 times a week or more	p-value	
							Kruskal-Wallis test	Rank Correlation
Gender	Male	1 999	16.1%	18.0%	44.6%	21.3%	0.000	
	Female	2 254	20.8%	22.2%	36.9%	20.1%		
Age group	18-24	503	5.6%	24.0%	51.6%	18.7%		0.000
	25-34	833	13.2%	27.3%	46.6%	12.9%		
	35-44	892	20.2%	24.3%	41.1%	14.4%		
	45-54	1 037	21.9%	18.5%	40.0%	19.6%		
	55-64	934	25.5%	9.5%	29.4%	35.5%		
Educational attainment	Primary or below	325	39.1%	10.9%	20.0%	30.1%		0.000
	Lower secondary (S1-S3)	561	32.5%	15.0%	27.2%	25.3%		
	Upper secondary (S4-S6) / Matriculation	1 526	18.9%	20.9%	39.8%	20.4%		
	Tertiary (Non-degree, degree or above)	1 833	10.5%	23.0%	48.9%	17.7%		

**Table 4.5.1: Frequency of participating in a sport or exercise activity in the 12 months prior to the survey (Q15)(Continued)**

Variable	Level	Base	Did not participate in any sport or exercise activity	Less than once a week	1-3 times a week	4 times a week or more	p-value	
							Kruskal-Wallis test	Rank Correlation
Occupation	Managerial/ Professional worker	1 167	10.7%	22.7%	50.4%	16.2%	0.000	
	Clerk	559	18.1%	27.6%	39.9%	14.4%		
	Service/ Shop sales worker	463	26.8%	22.7%	35.6%	14.9%		
	Blue collar worker	469	30.9%	16.6%	29.3%	23.2%		
	Not working	1 452	18.4%	15.5%	37.6%	28.5%		
Monthly household income	Below \$8,000	140	30.8%	8.5%	31.4%	29.3%	0.000	
	\$8,000-\$13,999	283	31.4%	14.4%	34.7%	19.5%		
	\$14,000-\$19,999	268	26.6%	17.5%	34.1%	21.9%		
	\$20,000-\$39,999	1 120	19.6%	22.1%	38.1%	20.2%		
	\$40,000 or above	1 416	12.5%	22.1%	46.4%	19.0%		
Type of living quarters	Public rental flats	1 238	22.3%	20.1%	37.8%	19.8%	0.000	
	Subsidised sale flats	743	22.8%	17.1%	38.7%	21.3%		
	Private housing	2 200	14.9%	21.6%	42.8%	20.7%		

#### 4.5.2 Practice of warming up before taking part in a sport or exercise activity

Among those respondents who participated in a sport or exercise activity in the 12 months prior to the survey, practice of warming up before taking part in a sport or exercise activity is associated significantly with their gender, age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

A relatively higher proportion of female respondents (19.0%), divorced/ separated/ widowed respondents (21.3%), blue collar workers (25.8%), those with monthly household income of \$8,000-\$13,999 (25.0%) and those living in public rental flats (19.0%) reported that they would not warm up before taking part in a sport or exercise activity when compared with their respective counterparts.

The older and the lower the educational attainment of the respondents, the more likely that they would not warm up before taking part in a sport or exercise activity (Table 4.5.2).

**Table 4.5.2: Practice of warming up before taking part in a sport or exercise activity (Q16)**

Variable	Level	Base	All of the time	Most of the time	Some of the time	None of the time	p-value	
							Kruskal-Wallis test	Rank Correlation
<b>Gender</b>	Male	1 675	38.5%	17.4%	31.3%	12.7%	0.000	
	Female	1 784	33.8%	15.5%	31.7%	19.0%		
<b>Age group</b>	18-24	475	38.2%	21.7%	33.3%	6.9%		0.000
	25-34	723	36.8%	17.7%	35.9%	9.7%		
	35-44	712	32.6%	16.3%	34.0%	17.0%		
	45-54	808	36.7%	13.8%	31.9%	17.5%		
	55-64	695	37.1%	14.3%	23.3%	25.3%		
<b>Educational attainment</b>	Primary or below	197	31.5%	9.2%	21.4%	37.9%		0.000
	Lower secondary (S1-S3)	378	29.9%	13.6%	31.7%	24.9%		
	Upper secondary (S4-S6) / Matriculation	1 236	36.2%	14.9%	32.7%	16.2%		
	Tertiary (Non-degree, degree or above)	1 641	38.1%	19.1%	31.7%	11.2%		
<b>Marital status</b>	Never married	1 232	36.8%	18.1%	34.8%	10.4%	0.002	
	Married	2 088	35.8%	15.7%	29.5%	19.0%		
	Divorced/ Separated/ Widowed	124	34.1%	11.6%	33.0%	21.3%		
<b>Occupation</b>	Managerial/ Professional worker	1 043	38.6%	18.1%	32.2%	11.1%	0.000	
	Clerk	458	31.6%	16.9%	32.8%	18.6%		
	Service/ Shop sales worker	339	36.4%	14.5%	36.1%	13.1%		
	Blue collar worker	323	30.1%	13.5%	30.6%	25.8%		
	Not working	1 184	37.5%	16.0%	29.3%	17.2%		
<b>Monthly household income</b>	Below \$8,000	96	41.9%	13.9%	24.0%	20.2%		0.000
	\$8,000-\$13,999	194	30.3%	9.8%	34.9%	25.0%		
	\$14,000-\$19,999	197	29.6%	20.4%	30.6%	19.3%		
	\$20,000-\$39,999	900	34.0%	18.7%	32.6%	14.7%		
	\$40,000 or above	1 239	38.8%	17.0%	30.2%	14.0%		
<b>Type of living quarters</b>	Public rental flats	962	32.7%	15.3%	33.0%	19.0%	0.002	
	Subsidised sale flats	573	34.3%	16.9%	34.2%	14.6%		
	Private housing	1 871	38.0%	17.1%	30.2%	14.6%		

### 4.5.3 Practice of cooling down after taking part in a sport or exercise activity

Among those respondents who participated in a sport or exercise activity in the 12 months prior to the survey, practice of cooling down after taking part in a sport or exercise activity is associated significantly with their age, educational attainment, marital status, occupation and monthly household income.

A relatively higher proportion of married respondents (35.3%), blue collar workers (44.0%) and those with monthly household income of below \$20,000 (ranging from 37.2% to 38.6%) reported that they would not cool down after taking part in a sport or exercise activity when compared with their respective counterparts.

The older and the lower the educational attainment of the respondents, the more likely that they would not cool down after taking part in a sport or exercise activity (Table 4.5.3).

**Table 4.5.3: Practice of cooling down after taking part in a sport or exercise activity (Q17)**

Variable	Level	Base	All of the time	Most of the time	Some of the time	None of the time	p-value	
							Kruskal-Wallis test	Rank Correlation
Age group	18-24	475	22.5%	15.8%	41.7%	20.0%		0.000
	25-34	723	23.5%	14.1%	39.2%	23.2%		
	35-44	712	19.5%	11.0%	35.6%	33.8%		
	45-54	809	21.8%	12.6%	30.7%	34.9%		
	55-64	693	21.8%	11.0%	25.7%	41.5%		
Educational attainment	Primary or below	198	17.8%	10.0%	23.3%	48.9%		0.000
	Lower secondary (S1-S3)	378	17.9%	8.8%	30.5%	42.9%		
	Upper secondary (S4-S6) / Matriculation	1 235	21.5%	10.7%	33.8%	34.1%		
	Tertiary (Non-degree, degree or above)	1 640	23.4%	15.5%	36.1%	25.0%		

**Table 4.5.3: Practice of cooling down after taking part in a sport or exercise activity (Q17)(Continued)**

Variable	Level	Base	All of the time	Most of the time	Some of the time	None of the time	p-value	
							Kruskal-Wallis test	Rank Correlation
<b>Marital status</b>	Never married	1 232	23.0%	14.6%	37.2%	25.2%	0.000	
	Married	2 087	21.2%	11.6%	31.9%	35.3%		
	Divorced/ Separated/ Widowed	124	19.3%	10.7%	36.1%	33.9%		
<b>Occupation</b>	Managerial/ Professional worker	1 041	23.2%	14.8%	37.5%	24.6%	0.000	
	Clerk	458	19.7%	12.3%	35.1%	32.9%		
	Service/ Shop sales worker	339	21.0%	8.8%	38.7%	31.5%		
	Blue collar worker	324	18.8%	8.3%	28.9%	44.0%		
	Not working	1 183	22.8%	12.9%	30.5%	33.8%		
<b>Monthly household income</b>	Below \$8,000	96	20.5%	15.4%	25.6%	38.4%	0.000	
	\$8,000-\$13,999	193	17.3%	10.7%	34.8%	37.2%		
	\$14,000-\$19,999	197	13.5%	9.5%	38.3%	38.6%		
	\$20,000-\$39,999	900	21.8%	12.5%	36.3%	29.4%		
	\$40,000 or above	1 239	22.7%	14.1%	34.6%	28.6%		

#### 4.5.4 Whether had been injured by taking part in sport or exercise activity in the 12 months prior to the survey

Among those respondents who participated in a sport or exercise activity in the 12 months prior to the survey, whether had been injured by taking part in sport or exercise activity is associated significantly with their respondents' gender, age, educational attainment, occupation, monthly household income and type of living quarters.

A relatively higher proportion of male respondents (12.5%), respondents aged 25-34 (12.4%), those with tertiary education (10.7%), service/shop sales workers (13.3%), those with monthly household income of \$40,000 or above (11.1%) and those living in subsidised sale flats or private housing (ranging from 9.8% to 10.2%) reported that they had been injured by taking part in sport or exercise activity in the 12 months prior to the survey when compared with their respective counterparts (Table 4.5.4).

**Table 4.5.4: Whether had been injured by taking part in sport or exercise activity in the 12 months prior to the survey (Q18)**

Variable	Level	Base	Yes	No	p-value	
					Kruskal-Wallis test	Rank Correlation
<b>Gender</b>	Male	1 676	12.5%	87.5%	0.000	
	Female	1 785	5.8%	94.2%		
<b>Age group</b>	18-24	475	10.4%	89.6%		0.002
	25-34	723	12.4%	87.6%		
	35-44	712	8.5%	91.5%		
	45-54	810	7.8%	92.2%		
	55-64	695	6.9%	93.1%		
<b>Educational attainment</b>	Primary or below	198	7.4%	92.6%		0.000
	Lower secondary (S1-S3)	378	5.6%	94.4%		
	Upper secondary (S4-S6) / Matriculation	1 237	8.2%	91.8%		
	Tertiary (Non-degree, degree or above)	1 641	10.7%	89.3%		
<b>Occupation</b>	Managerial/ Professional worker	1 043	11.0%	89.0%	0.014	
	Clerk	458	5.8%	94.2%		
	Service/ Shop sales worker	339	13.3%	86.7%		
	Blue collar worker	324	7.9%	92.1%		
	Not working	1 185	8.0%	92.0%		
<b>Monthly household income</b>	Below \$8,000	97	8.3%	91.7%		0.003
	\$8,000-\$13,999	194	7.5%	92.5%		
	\$14,000-\$19,999	197	4.4%	95.6%		
	\$20,000-\$39,999	900	8.3%	91.7%		
	\$40,000 or above	1 239	11.1%	88.9%		
<b>Type of living quarters</b>	Public rental flats	962	7.0%	93.0%	0.018	
	Subsidised sale flats	574	10.2%	89.8%		
	Private housing	1 871	9.8%	90.2%		

## 4.6 Heat stroke and sunburn

### 4.6.1 Whether had heat stroke

Whether had heat stroke in the 12 months prior to the survey is associated significantly with the respondents' age, educational attainment and marital status.

A relatively higher proportion of those aged 25-34 (5.3%), those with lower secondary education (4.6%) and divorced/ separated/ widowed respondents (6.2%) reported that they had heat stroke in the 12 months prior to the survey when compared with their respective counterparts (Table 4.6.1).

**Table 4.6.1: Whether had heat stroke in the 12 months prior to the survey (Q20)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Age group	18-24	503	3.6%	96.4%		0.045
	25-34	833	5.3%	94.7%		
	35-44	892	3.5%	96.5%		
	45-54	1 037	2.7%	97.3%		
	55-64	934	2.5%	97.5%		
Educational attainment	Primary or below	325	3.9%	96.1%		0.039
	Lower secondary (S1-S3)	561	4.6%	95.4%		
	Upper secondary (S4-S6) / Matriculation	1 526	3.4%	96.6%		
	Tertiary (Non-degree, degree or above)	1 833	3.0%	97.0%		
Marital status	Never married	1 388	3.9%	96.1%	0.022	
	Married	2 673	2.9%	97.1%		
	Divorced/ Separated/ Widowed	174	6.2%	93.8%		

#### 4.6.2 Whether had sunburn

Whether had sunburn in the 12 months 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.

A relatively higher proportion of male respondents (17.7%), never married respondents (18.5%), managerial/ professional workers (17.4%), those with monthly household income of \$40,000 or above (15.7%) and those living in private housing (14.2%) reported that they had sunburn in the 12 months prior to the survey when compared with their respective counterparts.

The younger and the higher the educational attainment of the respondents, the more likely that they had sunburn in the 12 months prior to the survey (Table 4.6.2).

**Table 4.6.2: Whether had sunburn in the 12 months prior to the survey (Q22)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
<b>Gender</b>	Male	1 999	17.7%	82.3%	0.000	
	Female	2 254	8.3%	91.7%		
<b>Age group</b>	18-24	503	23.0%	77.0%		0.000
	25-34	833	17.8%	82.2%		
	35-44	892	14.9%	85.1%		
	45-54	1 037	8.9%	91.1%		
	55-64	934	5.1%	94.9%		
<b>Educational attainment</b>	Primary or below	325	2.8%	97.2%		0.000
	Lower secondary (S1-S3)	561	8.9%	91.1%		
	Upper secondary (S4-S6) / Matriculation	1 526	12.7%	87.3%		
	Tertiary (Non-degree, degree or above)	1 833	15.8%	84.2%		
<b>Marital status</b>	Never married	1 388	18.5%	81.5%	0.000	
	Married	2 673	10.2%	89.8%		
	Divorced/ Separated/ Widowed	174	6.1%	93.9%		
<b>Occupation</b>	Managerial/ Professional worker	1 167	17.4%	82.6%	0.000	
	Clerk	559	11.5%	88.5%		
	Service/ Shop sales worker	463	11.1%	88.9%		
	Blue collar worker	469	13.0%	87.0%		
	Not working	1 452	10.0%	90.0%		
<b>Monthly household income</b>	Below \$8,000	140	6.3%	93.7%		0.000
	\$8,000-\$13,999	283	5.5%	94.5%		
	\$14,000-\$19,999	268	8.5%	91.5%		
	\$20,000-\$39,999	1 120	14.1%	85.9%		
	\$40,000 or above	1 416	15.7%	84.3%		
<b>Type of living quarters</b>	Public rental flats	1 238	12.0%	88.0%	0.007	
	Subsidised sale flats	743	10.0%	90.0%		
	Private housing	2 200	14.2%	85.8%		



### 4.6.3 Frequency of having sunburn

Among those respondents who had sunburn in the 12 months prior to the survey, frequency of having sunburn is associated significantly with their age.

A relatively higher proportion of those aged 18-24 (55.7%) reported that they had sunburn 2-5 times when compared with their respective counterparts (Table 4.6.3).

**Table 4.6.3: Frequency of having sunburn in the 12 months prior to the survey (Q23)**

Variable	Level	Base	Once	2-5 times	p-value
					Rank Correlation
Age group	18-24	116	44.3%	55.7%	0.020
	25-34	141	51.9%	48.1%	
	35-44	118	48.8%	51.2%	
	45-54	90	63.9%	36.1%	
	55-64	42	57.3%	42.7%	

## 4.7 Use of mobile phone

### 4.7.1 Whether currently using a mobile phone

Whether currently using a mobile phone is associated with the respondents' educational attainment and type of living quarters.

Compared with those living in public rental flats, a relatively higher proportion of those living in private housing (99.4%) or subsidised sale flats (99.0%) reported that they were currently using a mobile phone.

The higher the educational attainment of the respondents, the more likely that they were currently using a mobile phone (Table 4.7.1).

**Table 4.7.1: Whether currently using a mobile phone (Q29)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Educational attainment	Primary or below	325	95.4%	4.6%		0.000
	Lower secondary (S1-S3)	561	98.2%	1.8%		
	Upper secondary (S4-S6) / Matriculation	1 526	99.4%	0.6%		
	Tertiary (Non-degree, degree or above)	1 833	99.5%	0.5%		
Type of living quarters	Public rental flats	1 238	98.2%	1.8%	0.006	
	Subsidised sale flats	743	99.0%	1.0%		
	Private housing	2 200	99.4%	0.6%		

#### 4.7.2 Whether respondents physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey

Whether respondents physically get injured when using a mobile phone and walking on the street in the 30 days prior to the survey is associated with the respondents' gender and age.

A relatively higher proportion of female respondents (3.1%) and those aged 18-24 (6.6%) reported that they physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey when compared with their respective counterparts (Table 4.7.2).

**Table 4.7.2: Whether respondents physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey (Q31)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Gender	Male	1 978	1.2%	98.8%	0.000	
	Female	2 231	3.1%	96.9%		
Age group	18-24	500	6.6%	93.4%		0.000
	25-34	831	3.3%	96.7%		
	35-44	886	1.3%	98.7%		
	45-54	1 027	0.9%	99.1%		
	55-64	913	1.1%	98.9%		

## 4.8 Organ donation

### 4.8.1 Ever heard of the Centralised Organ Donation Register

Whether the respondents had ever heard of the Centralised Organ Donation Register is associated significantly with their age, educational attainment, marital status, occupation, monthly household income and type of living quarters.

A relatively higher proportion of those aged 25-34 (40.7%), divorced/ separated/ widowed respondents (37.1%), service/ shop sales workers or blue collar workers (ranging from 34.1% to 34.4%), those with monthly household income of \$8,000-\$19,999 (ranging from 37.0% to 37.3%) and those living in public rental flats (35.6%) reported that they had not heard of the Centralised Organ Donation Register when compared with their respective counterparts.

The lower the educational attainment of respondents, the more likely that they had not heard of the Centralised Organ Donation Register (Table 4.8.1).

**Table 4.8.1: Ever heard of the Centralised Organ Donation Register (Q33)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Age group	18-24	498	62.9%	37.1%		0.000
	25-34	815	59.3%	40.7%		
	35-44	877	68.9%	31.1%		
	45-54	1 017	74.9%	25.1%		
	55-64	906	74.4%	25.6%		
Educational attainment	Primary or below	310	59.9%	40.1%		0.000
	Lower secondary (S1-S3)	553	67.6%	32.4%		
	Upper secondary (S4-S6) / Matriculation	1 495	68.8%	31.2%		
	Tertiary (Non-degree, degree or above)	1 801	71.2%	28.8%		
Marital status	Never married	1 360	63.7%	36.3%	0.000	
	Married	2 616	72.0%	28.0%		
	Divorced/ Separated/ Widowed	172	62.9%	37.1%		

**Table 4.8.1: Ever heard of the Centralised Organ Donation Register (Q33) (Continued)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
<b>Occupation</b>	Managerial/ Professional worker	1 141	74.0%	26.0%	0.001	
	Clerk	554	67.1%	32.9%		
	Service/ Shop sales worker	458	65.6%	34.4%		
	Blue collar worker	460	65.9%	34.1%		
	Not working	1 414	67.7%	32.3%		
<b>Monthly household income</b>	Below \$8,000	136	73.7%	26.3%		0.000
	\$8,000-\$13,999	275	63.0%	37.0%		
	\$14,000-\$19,999	262	62.7%	37.3%		
	\$20,000-\$39,999	1 101	68.1%	31.9%		
	\$40,000 or above	1 393	74.5%	25.5%		
<b>Type of living quarters</b>	Public rental flats	1 208	64.4%	35.6%	0.000	
	Subsidised sale flats	723	72.3%	27.7%		
	Private housing	2 167	70.7%	29.3%		

#### 4.8.2 Willingness to donate organs (after death)

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

A relatively higher proportion of those aged 55-64 (13.5%), divorced/ separated/ widowed respondents (14.9%), blue collar workers (17.2%), those with monthly household income of \$8,000-\$13,999 (17.3%) and those living in public rental flats (14.2%) reported that they were not willing to donate organs after death when compared with their respective counterparts.

The lower the educational attainment of the respondents, the more likely that they were not willing to donate organs after death (Table 4.8.2).

**Table 4.8.2: Willingness to donate organs (after death) (Q34)**

Variable	Level	Base	Yes	No	Not decided/ considered yet	p-value	
						Chi-square test	Kruskal- Wallis test
<b>Age group</b>	18-24	503	60.3%	12.4%	27.3%		0.000
	25-34	833	62.2%	9.7%	28.1%		
	35-44	892	58.0%	9.5%	32.5%		
	45-54	1 037	48.9%	11.6%	39.4%		
	55-64	933	39.2%	13.5%	47.3%		
<b>Educational attainment</b>	Primary or below	325	27.3%	17.4%	55.4%		0.000
	Lower secondary (S1-S3)	560	40.3%	14.2%	45.5%		
	Upper secondary (S4-S6) / Matriculation	1 526	51.7%	12.0%	36.3%		
	Tertiary (Non-degree, degree or above)	1 833	61.6%	8.7%	29.7%		
<b>Marital status</b>	Never married	1 388	60.1%	11.5%	28.5%	0.000	
	Married	2 673	49.4%	10.9%	39.7%		
	Divorced/ Separated/ Widowed	174	43.7%	14.9%	41.4%		
<b>Occupation</b>	Managerial/ Professional worker	1 167	61.3%	9.4%	29.3%	0.000	
	Clerk	559	59.1%	7.7%	33.2%		
	Service/ Shop sales worker	463	50.5%	12.7%	36.7%		
	Blue collar worker	469	34.7%	17.2%	48.1%		
	Not working	1 452	49.7%	12.2%	38.1%		
<b>Monthly household income</b>	Below \$8,000	140	45.7%	12.9%	41.5%		0.000
	\$8,000-\$13,999	283	38.1%	17.3%	44.7%		
	\$14,000-\$19,999	268	42.8%	13.7%	43.5%		
	\$20,000-\$39,999	1 120	55.1%	10.4%	34.5%		
	\$40,000 or above	1 416	63.8%	8.7%	27.5%		
<b>Type of living quarters</b>	Public rental flats	1 238	46.9%	14.2%	38.9%	0.000	
	Subsidised sale flats	743	55.2%	9.0%	35.8%		
	Private housing	2 199	55.3%	10.3%	34.3%		

### 4.8.3 Ways to express wish to donate organs

#### (A) Registered online at the Centralised Organ Donation Register

Among the respondents who were willing to donate organs after death, whether or not they had registered online at the Centralised Organ Donation Register to express their wish to donate an organ is significantly associated with their age.

A relatively higher proportion of those aged 55-64 (92.9%) report that they had not registered online at the Centralised Organ Donation Register to express their wish to donate an organ when compared with those in other age groups (Table 4.8.3a).

**Table 4.8.3a: Whether registered online at the Centralised Organ Donation Register to express their wish to donate an organ (Q35(i))**

Variable	Level	Base	Yes	No	p-value
					Kruskal-Wallis test
Age group	18-24	302	13.7%	86.3%	0.005
	25-34	511	13.1%	86.9%	
	35-44	515	13.3%	86.7%	
	45-54	502	13.0%	87.0%	
	55-64	362	7.1%	92.9%	

#### (B) Carried an organ donation card

Among the respondents who were willing to donate organs after death, whether or not they had carried an organ donation card to express their wish to donate an organ is significantly associated with their occupation.

A relatively higher proportion of those who were not working (82.7%) reported that they had not carried an organ donation card to express their wish to donate an organ when compared with those in other occupations (Table 4.8.3b).

**Table 4.8.3b: Whether carried an organ donation card to express their wish to donate an organ (Q35(ii))**

Variable	Level	Base	Yes	No	p-value
					Chi-square test
Occupation	Managerial/ Professional worker	715	25.8%	74.2%	0.004
	Clerk	330	22.8%	77.2%	
	Service/ Shop sales worker	234	21.5%	78.5%	
	Blue collar worker	163	21.7%	78.3%	
	Not working	721	17.3%	82.7%	

**(C) Filled in registration form and returned it to the Department of Health**

Among the respondents who were willing to donate organs after death, whether or not they had filled in registration form and returned it to the Department of Health to express their wish to donate an organ is significantly associated with their gender and occupation.

A relatively higher proportion of female respondents (87.2%) and those who were not working (88.2%) reported that they had not filled in registration form and returned it to the Department of Health to express their wish to donate an organ when compared with their respective counterparts (Table 4.8.3c).

**Table 4.8.3c: Whether filled in registration form and returned it to the Department of Health to express their wish to donate an organ (Q35(iii))**

Variable	Level	Base	Yes	No	p-value
					Chi-square test
Gender	Male	1 008	16.3%	83.7%	0.020
	Female	1 174	12.8%	87.2%	
Occupation	Managerial/ Professional worker	695	15.3%	84.7%	0.012
	Clerk	323	14.8%	85.2%	
	Service/ Shop sales worker	229	21.2%	78.8%	
	Blue collar worker	156	14.0%	86.0%	
	Not working	710	11.8%	88.2%	



**(D) Expressed their wish to family members**

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

A relatively higher proportion of male respondents (46.1%), divorced/ separated/ widowed respondents (50.9%), respondents with monthly household income of \$8,000-\$13,999 (50.4%) and those living in public rental flats (45.3%) reported that they had not expressed their wish to family members when compared with their respective counterparts.

The younger the respondents, the more likely that they had not expressed their wish to family members (Table 4.8.3d).

**Table 4.8.3d: Whether expressed their wish to family members (Q35(iv))**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
<b>Gender</b>	Male	1 033	53.9%	46.1%	0.000	
	Female	1 195	64.0%	36.0%		
<b>Age group</b>	18-24	304	51.0%	49.0%		0.000
	25-34	519	56.4%	43.6%		
	35-44	516	58.8%	41.2%		
	45-54	503	63.5%	36.5%		
	55-64	365	65.4%	34.6%		
<b>Marital status</b>	Never married	831	50.6%	49.4%	0.000	
	Married	1 315	65.5%	34.5%		
	Divorced/ Separated/ Widowed	76	49.1%	50.9%		
<b>Monthly household income</b>	Below \$8,000	64	57.8%	42.2%		0.009
	\$8,000-\$13,999	108	49.6%	50.4%		
	\$14,000-\$19,999	115	61.2%	38.8%		
	\$20,000-\$39,999	616	58.1%	41.9%		
	\$40,000 or above	899	63.0%	37.0%		
<b>Type of living quarters</b>	Public rental flats	578	54.7%	45.3%	0.001	
	Subsidised sale flats	410	55.7%	44.3%		
	Private housing	1 212	62.8%	37.2%		

#### 4.8.4 Attitude towards organ donation of family members

Whether the respondents would object if their family members express their will of donating their organs after death is significantly associated with their age, educational attainment, occupation, monthly household income and type of living quarters.

A relatively higher proportion of those aged 55-64 (4.6%), respondents who were not working (5.0%), those with monthly household income below \$8,000 (6.7%) and those living in public rental flats (5.3%) reported that they would object if their family members express their will of donating their organs after death when compared with their respective counterparts.

The lower the educational attainment of respondents, the more likely that they would object to the transplant (Table 4.8.4).

**Table 4.8.4: Whether respondents would object if their family members express their will of donating their organs after death (Q36)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
Age group	18-24	479	2.0%	98.0%		0.015
	25-34	789	3.7%	96.3%		
	35-44	845	3.0%	97.0%		
	45-54	957	3.7%	96.3%		
	55-64	837	4.6%	95.4%		
Educational attainment	Primary or below	271	9.1%	90.9%		0.000
	Lower secondary (S1-S3)	503	5.1%	94.9%		
	Upper secondary (S4-S6) / Matriculation	1 419	3.3%	96.7%		
	Tertiary (Non-degree, degree or above)	1 754	2.5%	97.5%		
Occupation	Managerial/ Professional worker	1 119	1.9%	98.1%	0.001	
	Clerk	534	2.8%	97.2%		
	Service/ Shop sales worker	427	4.1%	95.9%		
	Blue collar worker	422	4.2%	95.8%		
	Not working	1 329	5.0%	95.0%		

**Table 4.8.4: Whether respondents would object if their family members express their will of donating their organs after death (Q36)(Continued)**

Variable	Level	Base	Yes	No	p-value	
					Chi-square test	Kruskal-Wallis test
<b>Monthly household income</b>	Below \$8,000	129	6.7%	93.3%		0.000
	\$8,000-\$13,999	239	4.5%	95.5%		
	\$14,000-\$19,999	245	3.2%	96.8%		
	\$20,000-\$39,999	1 059	4.1%	95.9%		
	\$40,000 or above	1 375	1.9%	98.1%		
<b>Type of living quarters</b>	Public rental flats	1 138	5.3%	94.7%	0.000	
	Subsidised sale flats	698	1.6%	98.4%		
	Private housing	2 056	3.1%	96.9%		

## **Chapter 5 Conclusion and Recommendations**

### **5.1 Conclusion**

#### **5.1.1 Eating out habits**

In the 30 days prior to the survey, more than a quarter (27.2%), nearly half (48.2%) and less than one-tenth (9.1%) of the respondents ate out for breakfast, lunch and dinner 5 times or more a week respectively.

About three-quarters (76.3%) of the respondents had heard of EatSmart Restaurants. Among those respondents who had heard of EatSmart restaurants, the majority (86.1%) of them had not patronised EatSmart Restaurants in the 30 days prior to the survey. The most frequently cited reasons for not patronising EatSmart Restaurants were 'few or no EatSmart Restaurants nearby' (48.3%) and 'not knowing which restaurants were EatSmart Restaurants' (30.4%).

In the 30 days prior to the survey, more than two-fifths (44.3%) of the respondents reported that they had not consumed EatSmart Dishes. The most frequently reported reasons for not consuming EatSmart Dishes were 'no EatSmart Dishes provided in restaurants' (34.0%) and 'not knowing which dishes were EatSmart Dishes' (23.6%).

#### **5.1.2 Consumption of sugary beverages and foods**

In the 30 days prior to the survey, more than one-third (35.6%) of the respondents drank soft drinks or sugary beverages once a day or more while almost one-tenth (8.9%) of the respondents ate desserts or snacks that were high in sugar once a day or more. Less than three-tenths (29.3%) of the respondents reported they checked nutrition labels when choosing pre-packaged drinks and foods all/ most of the time.

#### **5.1.3 Food handling practices**

Most respondents washed all food thoroughly before cooking, especially seafood (78.0%), kept raw and cooked food separately (70.3%), cooked/reheated food thoroughly, especially seafood (73.3%) and washed their hands before handling food (73.6%) all of the time.

#### **5.1.4 Sport participation and injury**

In the 12 months prior to the survey, about three-fifths (61.2%) of the respondents reported that they participated in a sport or exercise activity at least once a week. Among those respondents who participated in a sport or exercise activity in the 12 months prior to the survey, about half (52.5%) of the respondents would warm up before taking part in a sport

or exercise activity all/ most of the time; only about one-third (34.4%) of the respondents would cool down after taking part in a sport or exercise activity all/ most of the time. Overall, almost one-tenth (9.0%) of the respondents who participated in a sport or exercise activity in the 12 months prior to the survey reported that they had been injured by taking part in a sport or exercise activity.

#### **5.1.5 Heat stroke and sunburn**

In the 12 months prior to the survey, 3.4% and 12.7% of the respondents reported that they had a heat stroke and sunburn respectively.

#### **5.1.6 Use of solarium**

Overall, 1.3% of the respondents had ever used a solarium. Among those who had ever used a solarium, 7.8% of them reported that they used a solarium for the first time when they were 14-17 years old.

#### **5.1.7 Use of mobile phone**

Most respondents (99.0%) reported that they were currently using a mobile phone. Among them, 2.2% of respondents reported that they physically got injured when using a mobile phone and walking on the street in the 30 days prior to the survey.

#### **5.1.8 Organ donation**

More than two-thirds (69.0%) of respondents had heard of the Centralised Organ Donation Register, while about half (52.6%) of the respondents reported that they were willing to donate their organs after death. Among those respondents who were willing to donate their organs, 59.3% of them expressed their wish to family members and 22.0% of them carried an organ donation card to express their wish of donating their organs. Overall, the vast majority (96.4%) of the respondents reported that they would not object to the transplant if their family members had expressed their will to donate organs after death.

## **5.2 Recommendations**

Some recommendations based on the survey findings are suggested below:

1. Among the respondents who had not patronised EatSmart Restaurants (86.1%) and had not consumed EatSmart Dishes (44.3%), the most frequently cited reason for not patronising EatSmart Restaurant and not consuming EatSmart Dishes was ‘few or no EatSmart Restaurants nearby’ ‘and ‘no EatSmart Dishes provided in restaurants’ respectively. Thus, more efforts are needed to recruit restaurants to join EatSmart campaign to provide more EatSmart Dishes.
2. Less than three-tenths (29.3%) of respondents reported they checked nutrition labels when choosing pre-packaged drinks and foods all / most of the time. Promotional campaigns should be strengthened to educate the public the importance of and ways to checking nutrition labels of pre-packaged drinks and foods.
3. Warming up and cooling down can help reduce the risk of sport-related injuries and enhance performance. Among those who participated in a sport or exercise activity in the 12 months prior to the survey, however, only about half (52.5%) of respondents would warm up before taking part in a sport or exercise activity and only about one-third (34.4%) of respondents would cool down after taking part in a sport or exercise activity all/ most of the time. More education about the importance of warning up and cooling down before and after participating in a sport or exercise activity should be provided to the community.
4. More than two-thirds (69.0%) of respondents had heard of the Centralised Organ Donation Register, while only about half (52.6%) of the respondents reported that they were willing to donate their organs after death. More promotional campaigns are needed to raise the public’s awareness and to encourage the public to donate organs after death.

### **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 reasons were that there were increasing telephone deceptions and telephone opinion polls about political reform that might have caused 'survey fatigue' and 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 drinking soft drinks or sugary beverages). 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 2015**

#### **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)

Q1. Record the gender

1. Male
2. Female



**Section 1: Eating out habits**

Q2. In the past 30 days, about how often did you eat out for breakfast? “Eat out for breakfast” refers to the breakfast that is not made at home and excludes the bread that is bought from a bakery. (Interviewer: Do not read out the answers)

1. 5 times or more a week
2. 2-4 times a week
3. Once a week
4. 2-3 times a month
5. Once a month or less
6. Skipped breakfast

Q3. In the past 30 days, about how often did you eat out for lunch? “Eat out for lunch” refers to the lunch that is not made at home. (Interviewer: Do not read out the answers)

1. 5 times or more a week
2. 2-4 times a week
3. Once a week
4. 2-3 times a month
5. Once a month or less
6. Skipped lunch

Q4. In the past 30 days, about how often did you eat out for dinner? “Eat out for dinner” refers to the dinner that is not made at home. (Interviewer: Do not read out the answers)

1. 5 times or more a week
2. 2-4 times a week
3. Once a week
4. 2-3 times a month
5. Once a month or less
6. Skipped dinner

Q5. Have you ever heard of EatSmart Restaurants?

1. Yes
2. No (Skip to Q7a)
3. Don't remember/Don't know (Skip to Q7a)

Q6a. In the past 30 days, did you patronise any EatSmart Restaurants?

1. Yes (Skip to Q7a)
2. No
3. Don't remember/Don't know (Skip to Q7a)

Q6b. Why not? (Interviewer: Do not read out the answers. Allow multiple answers)

1. Did not know which restaurants were EatSmart Restaurants
2. Did not want to patronise EatSmart Restaurants
3. Fewer or no EatSmart Restaurants nearby
4. Dishes in EatSmart Restaurants are expensive
5. Seldom eat out or always eat at home
6. Others (Please specify reason(s) : \_\_\_\_\_)

Q7a. In the past 30 days, did you consume any EatSmart Dishes, including "More Fruit and Vegetables" or "3 Less" Dishes? (Interviewer: Read out the answers one by one)

1. Yes (Skip to Q8)
2. No
3. Had not heard/seen of it (Skip to Q8)
4. Don't remember/Don't know (Skip to Q8)

Q7b. Why not? (Interviewer: Do not read out the answers. Allow multiple answers)

1. Did not know which dishes were "More Fruit and Vegetables" or "3 Less" Dishes
2. Did not want to consume "More Fruit and Vegetables" or "3 Less" Dishes
3. No EatSmart Dishes provided in restaurant
4. Seldom eat out or always eat at home
5. Others (Please specify reason(s) : \_\_\_\_\_)

## **Section 2: Consumption of sugary beverages and foods**

Q8. In the past 30 days, about how often did you drink soft drinks or sugary beverages? They include milk tea or coffee with added sugar, lemon tea, chrysanthemum tea, Yakult, Vitasoy, soy drinks or cordials in tetra-packs, cans or bottles etc, but exclude pure milk and pure fruit juice. (Interviewer: Do not read out the answers)

1. More than twice a day
2. Twice a day
3. Once a day

4. 4-6 times a week
5. 1-3 times a week
6. Less than once a week
7. Did not drink soft drinks or sugary beverages

Q9. In the past 30 days, about how often did you eat desserts or snacks that were high in sugar, such as cakes, chocolates, confectionaries and ice-creams, etc? (Interviewer: Do not read out the answers)

1. More than twice a day
2. Twice a day
3. Once a day
4. 4-6 times a week
5. 1-3 times a week
6. Less than once a week
7. Did not eat desserts or snacks that were high in sugar

Q10. How often do you check nutrition labels when choosing pre-packaged drinks and foods? (Interviewer: Read out the answers one by one)

1. All of the time
2. Most of the time
3. Some of the time
4. None of the time
5. Do not buy pre-packaged drinks and foods

### **Section 3: Food handling practices**

Q11. How often do you wash all food thoroughly before cooking, especially seafood? (Interviewer: Read out the answers one by one)

1. All of the time
2. Most of the time
3. Some of the time
4. None of the time
5. Do not cook food

Q12. How often do you keep raw and cooked food separately? (Interviewer: Read out the answers one by one)

1. All of the time
2. Most of the time

3. Some of the time
4. None of the time
5. Do not keep raw or cooked food

Q13. How often do you cook or reheat food thoroughly, especially seafood? (Interviewer: Read out the answers one by one)

1. All of the time
2. Most of the time
3. Some of the time
4. None of the time
5. Do not cook food

Q14. How often do you wash your hands before handling food? (Interviewer: Read out the answers one by one)

1. All of the time
2. Most of the time
3. Some of the time
4. None of the time
5. Do not handle food

#### **Section 4: Sport participation and injury**

Q15. In the last 12 months, about how often did you participate in a sport or exercise activity which includes practice, training, competition and those for leisure? (Interviewer: Do not read out the answers)

1. Less than once a month
2. 1-3 times a month
3. 1-3 times a week
4. 4-6 times a week
5. Daily or almost daily
6. Did not participate in any sport or exercise activity (skip to Q20)

Q16. Before taking part in a sport or exercise activity, how often would you warm-up? (Interviewer: Read out the answers one by one)

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

Q17. After taking part in a sport or exercise activity, how often would you cool-down?  
(Interviewer: Read out the answers one by one)

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

Q18. In the last 12 months, about how many times had you been injured by taking part in sport or exercise activity, and the injury episode was serious enough to limit your normal activity?

1. 5 times or more
2. 3-4 times
3. 1-2 times
4. None (skip to Q20)

Q19. What kind of sport were you engaged in at the time of the injury(ies)? (Multiple response is allowed if there were more than one injury reported)

1. Running
2. Jogging
3. Hiking
4. Field and track
5. Swimming
6. Canoeing
7. Cycling
8. Soccer
9. Basketball
10. Volleyball
11. Tennis
12. Table tennis
13. Badminton
14. Handball
15. Bowling
16. Ice skating
17. Skiing
18. Roller skating
19. Martial arts
20. Yoga

21. Gymnasium

98. Others (Please specify : \_\_\_\_\_)

### **Section 5: Heat stroke and sunburn**

Q20. In the past 12 months, did you have a heat stroke? Symptoms of heat stroke may include high fever ( $>39^{\circ}\text{C}$ ); red, hot and dry skin; rapid pulses; throbbing headache; nausea; muscle cramps and dizziness.

1. Yes
2. No (skip to Q22)

Q21. In the past 12 months, how many heat stroke(s) did you have?

\_\_\_\_\_ time(s)

Q22. In the past 12 months, did you have sunburn? That includes any time that even a small part of your skin was red or sore for more than 12 hours?

1. Yes
2. No (skip to Q24)

Q23. In the past 12 months, how many sunburn(s) did you have?

\_\_\_\_\_ time(s)

### **Section 6: Use of solarium**

Q24. Have you ever used a solarium (sunbed or tanning bed)?

1. Yes
2. No (skip to Q29)

Q25. How old were you the first time you used a solarium?

\_\_\_\_\_ year

Q26. Up till now, how many times have you used a solarium?

1. Once
2. 2-5 times
3. 6-10 times
4. More than 10 times

Q27. In the past 12 months, how many times did you use a solarium?

1. Once
2. 2-5 times
3. 6-10 times
4. More than 10 times
5. None (skip to Q29)

Q28. About how much time did you spend on your last tanning session?

1. Less than 5 minutes
2. 5 -10 minutes
3. 11-15 minutes
4. 16-20 minutes
5. 21-30 minutes
6. More than 30 minutes

#### **Section 7: Use of mobile phone**

Q29. Do you currently use a mobile phone?

1. Yes
2. No (skip to Q33)

Q30. How many mobile phone numbers in total which you are using personally and would usually answer?

\_\_\_\_\_

Q31. In the past 30 days, did you physically get injured when using a mobile phone and walking on the street, such as lacerations to foot or ankle injuries as result of missing steps, sustained a bruise from bumping into another person or tripping over clutter, etc?

1. Yes
2. No (skip to Q33)

Q32a. How many times?

1. 5 times or more
2. 3-4 times
3. 1-2 times

Q32b. At that time were you using the mobile phone for ...? (Interviewer: Read out the answers one by one. Allow multiple answers)

1. Answering or listening to a phone call
2. Listening to the radio or music
3. Reading emails or text messages
4. Typing or sending emails or text messages
5. Watching movie or television
6. Others (Please specify:\_\_\_\_\_)

### **Section 8: Organ donation**

Q33. Have you ever heard of the Centralised Organ Donation Register?

1. Yes
2. No
3. Don't remember/Don't know

Q34. Are you willing to donate your organs (after death)?

1. Yes
2. No (Skip to Q36)
3. Not decided/considered yet (Skip to Q36)

Q35. Have you used any of the following ways to express your wish to donate organ?

i) Registered online at the Centralised Organ Donation Register

1. Yes
2. No

ii) Carry an organ donation card

1. Yes
2. No

iii) Filled in registration form and returned it to the Department of Health (organ donation card should not be regarded as a form)

1. Yes
2. No

iv) Expressed your wish to family members

1. Yes



2. No

v) Others

1. Yes (please specify : \_\_\_\_\_)
2. No

Q36. If your family members express their will of donating their organs after death, will you object to the transplant?

1. Yes
2. No
3. Don't know

### **Section 9: Demographic Characteristics**

Q37. What is your age?

\_\_\_\_\_ Years

Q38. 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

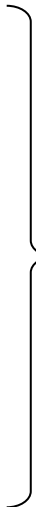
Q39. What is your marital status? (Interviewer: read out the answers one by one)

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

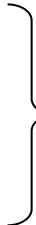
Q40a. Are you currently engaged in a job?

1. Yes
2. No (skip to Q40c)

Q40b. 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
  7. Skilled agricultural/fishery worker
  8. Craft and related worker
  9. Plant and machine operator and assembler
  10. Un-skilled worker
  11. Others (Please specify : \_\_\_\_\_)
- 
- (skip to Q41)

Q40c. You are a ... [Interviewer: read out the answers one by one]

1. Student
  2. Homemaker
  3. Unemployed person
  4. Retired person
  5. Others (Please specify : \_\_\_\_\_)
- 
- (skip to Q42)

Q41. 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

Q42. 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

Q43. What is your type of 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

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