Hong Kong Adolescents' Attitudes toward Healthy Eating and Knowledge of Nutrition Information in Food Labels

香港青少年的健康飲食態度及食物營養標籤的認識

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May 2012

Acknowledgement: This study was fully supported by a Faculty Research Grant from the Hong Kong Baptist University (Project No. FRG2/11-12/011). Mr. Yu Leung Ng served as research assistant for this project.

Acknowledgement

We would like to thank the following schools for their contribution to this project.

Caritas Chong Yuet-Ming Secondary School 明愛莊月明中學

Cheung Chuk Shan College 張祝珊英文中學

Hong Kong Tang King Po College 香港鄧鏡波書院

Kiangsu-Chekiang College (Shatin) 沙田蘇浙公學

Kowloon Tong School (Secondary Section) 九龍塘學校（中學部）

PLK Mrs. Ma Kam Ming Cheung Fook Sien College 保良局馬錦明夫人章馥仙中學

Po Leung Kuk Lo Kit Sing (1983) College 保良局羅傑承 (一九八三) 中學

Yuen Long Merchants Association Secondary School 元朗商會中學

*Schools are in alphabetical order.

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Introduction

Over-weight and obesity pose long-term health problems. The younger the over-weight and obesity problem arises, the higher the health risk will result. The World Health Organization (WHO) recommends the use of body mass index (BMI) to define over-weight and obesity. If a person's BMI is beyond 85 percentile of those of the same age and sex in the population, he or she is defined as over-weight. Similarly, a person will be classified as obese if his or her BMI is beyond 95 percentile (So et al., 2008). In Hong Kong, 16.7% of children were over-weight or obese in 2005/6 while the data in 1993 was only 11.6% (So et al., 2008).

Hong Kong had a population of 7.1 million people at the year-end of 2011. During the same time, there were 700,000 (or 10.3% of the total population) people aged 10 to 19 (Census and Statistics Department, 2011). The obesity epidemic amongst adolescents and teenagers of many developed countries has grown to an alarming level in the past decade. It is generally believed that adolescent obesity is highly correlated to the wealth of a country or region. The per capita GDP of Hong Kong was HK$208,263, which was a 22.5% increase since 1993. The increase in per capita GDP of Hong Kong was in line with the increase in percentage of over-weight or obese children in Hong Kong. The Department of Health has launched several publicity campaigns to advocate healthy eating concepts such as balanced diet and increased fruit intake through public services advertisements and school-based health education programs. However, the target audience of the publicity efforts was elementary school students and their families. There is no publicity effort that put emphasis on the increasingly independent adolescents (Chan et al., 2009). A study of 152 seventh, eighth and ninth grade Hong Kong students found that respondents frequently ate out with friends and frequently consumed a range of relatively unhealthy food (candies, chips and soft drinks).

They most likely ate unhealthy food at parties, when eating out or with friends. Respondents perceived that parents and government publicity asked them to eat healthy food more often than teachers or friends. In terms of alternative advertising appeals discouraging unhealthy eating, respondents considered news and fear appeals to be the most effective while popularity and achievement appeals were considered to be relatively less effective (Chan et al., 2009).

What are the Hong Kong adolescents' healthy and unhealthy eating practices? What are their attitudes toward healthy eating? Do they perceive subjective norms to eat healthily? Do they perceive that they have control on healthy eating? What are the barriers to healthy eating among teenagers in Hong Kong? Do they feel that they are able to engage in healthy eating? How do adolescents' intention to eat healthy affected by the above five factors? Do they have enough knowledge about food labels? The current report attempts to answer these questions.

Method

Respondents

A multi-stage cluster sampling design based on geographic districts, then schools, then classes was conducted. A probability sample of nine secondary schools was drawn from a sampling frame of registered secondary schools arranged by district obtained from the website of the Education Bureau. A letter was sent to the schools to invite them for participation in the study. Schools refused to participate were replaced by another school in a neighboring distinct that were also randomly selected. The final sample consisted of eight schools. Two classes at different forms were selected for each of the sampled school. Altogether 563 students studying in secondary forms 1 to 5 were surveyed. As we are aiming at adolescents, two students aged 19 and 22 were excluded from the data analysis, resulting in a sample size of 561. The demographic profile is summarized in Table 1. After removal of the two students, all respondents were aged between 12 and 18. The mean age was 14.9 and the

standard deviation was 1.6. There were 286 males and 272 females. Fifty percent of the respondents reported living in public housing and another ten percent lived in rental private housing. Thirty percent lived in family-owned housing while the remaining ten percent lived in other types of housing. The Body Mass Index (BMI) of respondents ranged from 8.2 to 37.9, with a mean of 19.2 and standard deviation of 3.0. An age-sex specific BMI percentile profiles for Hong Kong adolescents classified the top 15 percentile of a specific age-sex population as overweight and top 5 percentile as obesity (So et al., 2008; see Appendix I). Based on the cut-off BMI indexes, six percent of the sample was classified as overweight and three percent of the sample was classified obesity.

Measures

A structured questionnaire was used for the study (see Appendix II). The questionnaire was constructed related to eating habits, attitudes toward healthy eating, subjective norms, perceived behavioral control, perceived barriers to healthy eating, self-efficacy of eating healthily, intention to eat healthily, as well as knowledge of nutrition information in food labels. In the current study and stated in the questionnaire, healthy eating was described as consuming three moderately balanced meals daily that consisted of sufficient fruits as well as vegetables contents, and avoiding fast foods, chips, candies, and desserts. Respondents were asked about their frequency of healthy eating practices (such as eating breakfast) or unhealthy eating practices (such as consuming fast foods) on a four-point scale (1 = never; 4 = more than 5 times a week). Attitudes toward healthy eating were measured by asking respondents to rate on a 5-point semantic differential scale for six evaluative adjectives that describe healthy eating, including boring-interesting, useful-useless, enjoyable-un-enjoyable, worthy-un-worthy, good-bad, harmful-beneficial. The Cronbach alpha coefficient was 0.83. Subjective norms was measured by asking respondents the following seven statements: “My friends/My family members/My classmates/My teachers/TV programs I watch/Newspapers

and magazines I read/The government publicity think I should engage in healthy eating". The Cronbach alpha coefficient was 0.85. Three questions about whether they perceive that they have control on healthy eating were asked: "Will you try hard to eat healthily?", "Do you have enough discipline to eat healthily?" and "Do you have enough time to eat healthily?". Respondents were asked to rate on a 5-point scale (1 = definitely no, 5 = definitely yes). The Cronbach alpha coefficient was 0.72. Perceived barriers was measured by asking respondents to rate on six statements: "I don't always eat healthily because I like to treat myself/healthy food doesn't taste as good/not enough healthy options available/confused about what's healthy and what's not/haven't got time/healthy food are expensive". The Cronbach alpha coefficient was 0.78. Self-efficacy was measured by asking respondents to rate on four statements on a five-point scale: "How certain/confident are you that you could engage in healthy eating over the next two weeks?", "For me, engaging in healthy eating over the next two weeks would be difficult" and "If I wanted to, I could easily engage in healthy eating over the next two weeks". The Cronbach alpha coefficient was 0.82. Behavioral intention was measured by asking respondents to rate on a five-point scale for one question: "Will you engage in healthy eating in the coming two weeks?" (1 = definitely no, 5 = definitely yes). Four questions were asked to test the respondents' knowledge of nutrition labels. Three questions required the respondents to identify a healthier choice between two food products based on the nutrition information given in the food labels. The fourth question asked the respondents to identify the meaning of "3 lows, 1 high" for a healthy diet. These questions were constructed based on materials for exhibition boards on healthy eating and food label prepared by the government (Centre for Food Safety, 2012).

Results

The respondents' reported eating habits are summarized in Table 2. Respondents reported that they practiced health eating regularly. Over 70 percent of the respondents reported that

ate breakfast, ate at least a portion of fruits, and ate at least half bowl of vegetables at least three days a week. Consumption of not so healthy eating was not regular. About 30 percent of the respondents reported that they eat candies or chips, drink soft drinks and eat fast foods at least three days a week.

Table 3 summarizes the attitudes, subjective norms, perceived behavioral control, perceived barriers, self-efficacy, knowledge of nutrition labels, and behavioral intention relating to the healthy eating behavior. The respondents reported a positive attitude, subjective norms, behavioral control, self-efficacy, and behavioral intention and negative perceived barriers. The mean scores for these variables ranged from 2.8 for perceived barriers to 3.7 for attitudes on the 5-point scale. Healthy eating was evaluated by most of the respondents as beneficial, useful and good. However, healthy eating was evaluated as mildly enjoyable and uninteresting. Respondents perceived social norms to engage in healthy eating from personal sources as well as from mediated messages in the mass media. Respondents perceived the highest norms for healthy eating from family members, followed by government publicities. Contrary to previous findings that friends and peers were influencers for unhealthy eating, the current study found that respondents perceived positive influence from friends and classmates to eat healthily. Mass media (i.e. television programs, newspapers and magazines) were perceived as equally influential sources of subjective norms as personal sources (i.e. family members, teachers, friends, and classmates).

Respondents perceived a high level of behavioral control. They perceived that they had the ability to try, and they have time to engage in healthy eating. They perceived that they had enough discipline to engage in healthy eating, but to less extent. Participants had low level of perceived barriers. They did not perceive that healthy foods are expensive. They did not experience lack of time to eat healthily. However, they did not eat healthily often because they like to treat themselves. Respondents perceived high self-efficacy in healthy eating.

They had confident and are certain that they could engage in healthy eating. They perceived that they could engage in healthy eating if they want to. They were high on behavioral intention. Among the respondents, eleven percent “definitely” intended to eat healthily during the coming two weeks while a majority (46 percent) “mostly” intended to eat healthily during the coming two weeks. Thirty-eight percent were not sure. Five percent “mostly not” and one percent “definitely not” intended to eat healthily in the coming two weeks.

The respondents’ knowledge of nutrition information in food labels are summarized in Table 4. Respondents showed good knowledge in reading nutrition information in food labels. Thirty-two percent answered all four questions correctly. Most of them (58 percent) answered three out of four questions correctly. Nine percent and one percent gave correct answers to two or one questions respectively. Respondents showed some difficulties in comparing nutrition information for foods with different serving sizes.

Table 5 shows the Pearson correlation matrix between all variables that will be used in the prediction of intention for healthy eating. Among the demographic variables, only gender showed significant correlation with behavioral intention. Female respondents had higher behavioral intention than male respondents. A high correlation coefficient of 0.64 was reported between behavioral intention and perceived behavioral control. Behavioral intention had significant correlation with all psychographic variables. Behavioral intention had no significant correlation with demographic variable, including age and BMI.

To examine the theoretical model, multiple regression analysis was performed. The regression was conducted in two steps. Demographic variables were introduced in the first step, followed by the other six predictors, including attitudes, subjective norms, perceived behavioral control, perceived barriers, self-efficacy, and knowledge of nutrition labels. The results of the regression analysis are summarized in Table 6.

In the first step of multiple linear regression with the three demographic variables as predictors, a statistically non-significant R square value of 0.00 was obtained. This indicated that gender, age, and BMI were not significant predictors of behavioral intention. In the second step of multiple linear regression when six psychographic variables were added, a statistically significant R square value of 0.47 was obtained. This indicated that 47 percent of the total variation of the dependent variable of behavioral intention could be explained by the set of nine predictors. The increase in R square value was significant at 0.001 level. Among the nine predictors, only three were significant. These three predictors were attitudes toward healthy eating, perceived behavioral control, and self-efficacy. Respondents who had more positive attitudes toward healthy eating, had higher perceived behavioral control, and had higher self-efficacy were more likely to engage in healthy eating. The relative importance of perceived behavioral control, self-efficacy, and attitudes toward healthy eating were demonstrated by the regression coefficients of 0.46, 0.20, and 0.11 respectively.

Conclusion

To conclude, the present study found that perceived behavioral control, self-efficacy, and attitudes toward healthy eating were most important factors in predicting adolescents' intention for healthy eating. Among these three variables, perceived behavioral control was most important in predicting behavioral intention. Our sample perceived family members and government publicities the major source of social influence regarding healthy eating. Respondents perceived healthy eating beneficial, useful and good. However, healthy eating was perceived to be marginally enjoyable and somewhat boring.

Recommendations

The findings of the current study would lead to the following suggestions for promoting healthy eating to adolescents:

1. The government should design a targeted communication campaign that directly at the increasingly independent adolescents.
2. Communicating healthy eating messages should target adolescents as well as their parents. Healthy eating messages should encourage family communication about ways to eat healthily and healthier food choices.
3. Healthy eating should be repositioned as fun and interesting.
4. Communicating healthy eating to adolescents must enhance their ability, their behavioral control, and their confidence.

As perceived behavioral control demonstrated to be the strongest predictor of intention for healthy eating, health communicators should empower adolescents with the ability and resources to engage in healthy eating. This can be done by providing education on how to eat healthy. The government and non-profit organizations should set up web sites to disseminate healthy eating tips for adolescents. In view of the high incidence of unhealthy eating in social gatherings (Chan et al., 2009), there is a need to help adolescents to search for healthier food choices for social functions and parties. We can also encourage adolescents to prepare healthy foods for social gatherings. Adolescents seek for role models. Health communicators, educators and policy makers can encourage the sharing of positive experience on healthy eating in the new media such as blogs and Facebook websites. Seeing how other people of similar age and background engage in healthy eating will enhance the perception of behavioral control that will eventually lead to higher intention for healthy eating.

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Table 1 Demographic profile of respondents (N=561)

表一 受訪者的人口狀況 (N = 561)

Demographic 人口狀況	**No.** 人數	**Percentage** 百分比
Gender 性別		
Female 女性	272	48.7
Male 男性	286	51.3
Education 就讀年級		
Secondary Form 1 中一	71	12.7
Secondary Form 2 中二	97	17.4
Secondary Form 3 中三	128	22.9
Secondary Form 4 中四	108	19.3
Secondary Form 5 中五	155	27.7
Housing type 住屋類型		
Public rental housing 公共屋邨	272	49.7
Private rental housing 租住私人樓宇	55	10.1
Self-owned flat 自置私人樓宇	165	30.2
Other types of housing 其他住屋類型	55	10.1
Body mass index 身體質量指數		
BMI less than 17 BMI 少於 17	106	20.3
17 ≤ BMI < 20 BMI 於 17 至 20 之間	251	48.0
20 ≤ BMI < 23 BMI 於 20 至 23 之間	113	21.6
23 ≤ BMI < 26 BMI 於 23 至 26 之間	38	7.3
BMI 26 or above BMI 大於 26	15	2.9
Overweight and obesity 超重和肥胖 [a]		
Not overweight/obesity 非超重/肥胖	459	91.1
Overweight 超重	31	6.2
Obesity 肥胖	14	2.8

Notes: [a] Based on age-sex specific body mass index percentile for Hong Kong 2005/06 (So et al., 2008). Demographic variables do not equal to 561 due to missing data.

註釋：[a] 根據香港 2005/06 年度特定年齡和性別的身體質量指數百分比（So et al., 2008）。由於部份數據不全，人口統計變量不等於 561。

Table 2 Eating habits
表二 飲食習慣

	Never 從不 (%)	1-2 days a week 一星期一至兩天 (%)	3-4 days a week 一星期三至四天 (%)	> 5 days a week 一星期五天或以上 (%)
Eat breakfast 進食早餐	4	10	19	67
Eat at least a portion of fruits 進食至少一份水果	4	24	41	32
Eat at least half bowl of vegetables 進食至少半碗蔬菜	2	16	33	49
Consume candies or chips 食糖或薯片	6	62	25	7
Consume soft drinks 飲汽水	13	61	22	4
Eat fast foods 進食快餐店的食物	5	70	20	5

Note: Row percentages do not add to 100% due to rounding

註釋：由於四捨五入，行列的百分比不加至 100%

Table 3 Attitudes, subjective norms, perceived behavioral control, perceived barriers, self-efficacy, and behavioral intention of healthy eating

表三 健康飲食行為的態度，主觀規範，感知行為控制，感知障礙，自我效能和意圖

	(%)[a]	(%)[a]	(%)[a]	(%)[a]	(%)[a]	**Mean[b]** 平均值	**SD** 標準偏差
Overall attitudes toward healthy eating (α = 0.83) **總體健康飲食行為的態度**	**SD**	**D**	**N**	**A**	**SA**	**3.7**	**0.5**
beneficial 有益	0	1	21	53	26	4.0	0.7
useful 有用	1	2	26	52	18	3.8	0.8
good 好	1	1	30	53	16	3.8	0.7
worthy 值得	0	1	32	49	17	3.8	0.7
enjoyable 享受	1	7	61	27	4	3.3	0.7
interesting 有趣	1	7	70	18	4	3.2	0.6
Overall subjective norms (α = 0.85) **總體主觀規範**	**SD**	**D**	**N**	**A**	**SA**	**3.3**	**0.6**
family members 家人	1	5	34	43	18	3.7	0.8
government publicities 政府宣傳	2	5	39	40	14	3.6	0.9
teachers 老師	1	6	60	25	8	3.3	0.8
TV programs 電視節目	3	10	53	29	5	3.2	0.8
classmates 同學	2	8	66	20	5	3.2	0.7
friends 朋友	2	8	65	21	4	3.2	0.7
newspapers and magazines 報章雜誌	3	11	58	23	5	3.2	0.8
Overall perceived behavioral control (α = 0.72) **總體感知行為控制**	**DN**	**MN**	**NS**	**MY**	**DY**	**3.5**	**0.7**
Will you try hard to eat healthily? 你會否盡力嘗試進行健康飲食？	1	4	28	56	11	3.7	0.7
Do you have enough time to eat healthily? 你會否夠時間進行健康飲食？	2	11	36	41	11	3.5	0.9
Do you have enough discipline to eat healthily? 你會否有足夠定力進行健康飲食？	2	11	39	40	8	3.4	0.9

	(%)[a]	(%)[a]	(%)[a]	(%)[a]	(%)[a]	**Mean[b]** 平均值	**SD** 標準偏差
Overall perceived barriers (α = 0.78) **總體感知障礙**	**SD**	**D**	**N**	**A**	**SA**	**2.8**	**0.7**
I do not always eat healthily because… 我不會經常食得健康，因為…							
I like to treat myself 我喜歡獎勵一下自己	6	23	38	29	4	3.0	1.0
healthy food doesn't taste as good 健康食品的味道不好	8	33	32	22	6	2.9	1.0
there are not enough healthy options available 沒有足夠的健康食品可供選擇	8	34	32	22	4	2.8	1.0
I'm confused about what's healthy and what's not 我很難分辨那些是健康食品	9	35	31	21	4	2.8	1.0
I haven't get time 我沒有時間	9	43	25	21	3	2.7	1.0
it is expensive 健康食品很昂貴	9	41	30	17	3	2.6	1.0
Overall self-efficacy (α = 0.82) **總體自我效能**	**SD**	**D**	**N**	**A**	**SA**	**3.3**	**0.7**
If I wanted to, I could easily engage in healthy eating 只要我想，我很容易就食得健康	2	10	34	43	11	3.5	0.9
I am confident that I can engage in healthy eating 我有信心可以食得健康	3	12	44	36	6	3.3	0.9
I am certain that I can engage in healthy eating 我肯定可以食得健康	2	14	50	29	5	3.2	0.8
For me, engaging in healthy eating Is really difficult* 對我來說，要食得健康真的很困難*	10	33	36	20	2	3.3	1.0
Behavioral intention **健康飲食行為的意圖**	**DN** 1	**MN** 5	**NS** 38	**MY** 46	**DY** 11	3.6	**0.8**

Notes: [a] Row percentages do not add to 100% due to rounding. [b] All variables are measured on a 5-point scale with 5 indicating positive direction and 1 indicating negative direction. SD = Strongly disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly agree; DN = Definitely no; MN = Mostly no; NS = Not sure; MY = Mostly yes; DY = Definitely yes. *Recoded reversely for the mean.

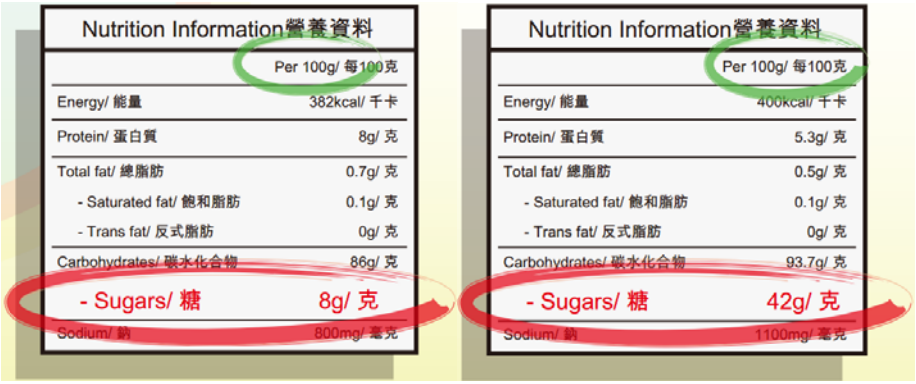
註釋：[a] 由於四捨五入，行列的百分比不加至 100%。[b] 所有變量的測量均使用五個回應的等級，5 代表非常同意，1 表示非常不同意。 SD = 非常不同意；D = 不同意；N = 無意見；A = 同意；SA = 非常同意；DN = 絕對不會；MN = 多數不會；NS = 不肯定；MY =多數會；DY = 絕對會。*平均值被逆轉重新編碼。

Table 4 Knowledge of nutrition information in food labels

表四 營養標籤的知識

Question 1: which food product is healthier?

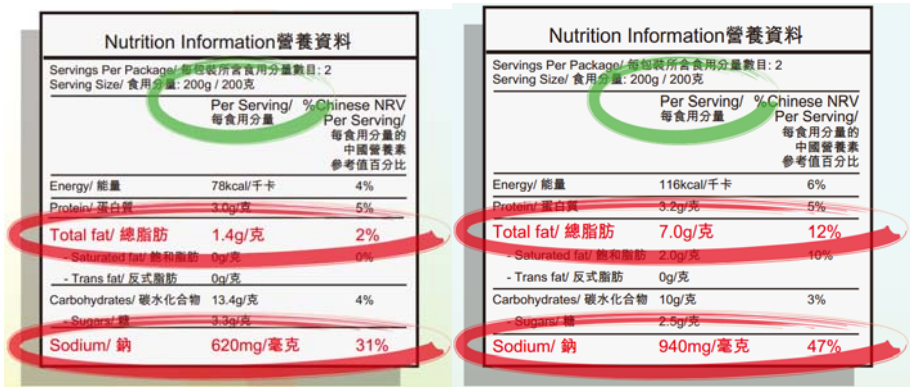
問題一：你認為那一樣食品類產品比較健康?



Correct answer 正確答案 (94.5%) Wrong answer 錯誤答案 (5.5%)

Question 2: which food product is healthier?

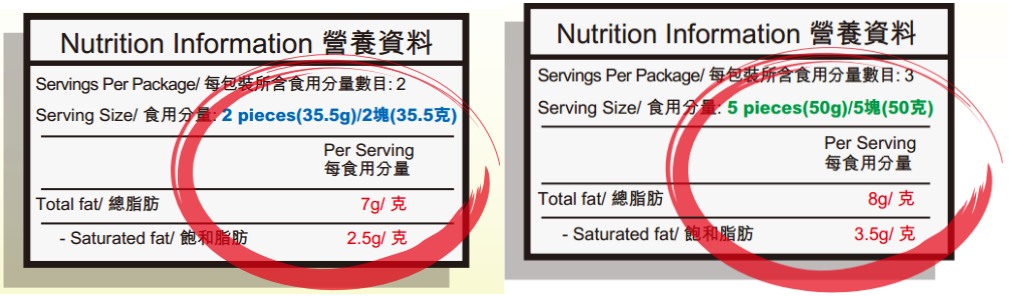
問題二：你認為那一樣食品類產品比較健康?



Correct answer 正確答案 (92.7%) Wrong answer 錯誤答案 (7.3%)

Question 3: which food product is healthier?

問題三：你認為那一樣食品類產品比較健康?



Wrong answer 錯誤答案 (63.3%) Correct answer 正確答案 (36.7%)

Question 4: What is the 3 lows, 1 high" healthy diet?

問題四：下列那一項是"三低一高"的健康飲食原則？

Correct answer 正確答案 (93.7%) ：

c. Low fat, low sodium (or salt), low sugars, and high fiber
低脂、低鈉(或鹽)、低糖及高纖

Wrong answer 錯誤答案 (6.3%) ：

a. Low fiber, low sodium (or salt), low sugars, and high fat; or
低纖、低鈉(或鹽)、低糖及高脂；或

b. Low fat, low fiber, low sugars, and high sodium (or salt); or
低脂、低纖、低糖及高鈉(或鹽)；或

d. Low fat, low sodium (or salt), low fiber, and high sugars
低脂、低鈉(或鹽)、低纖及高糖

Table 5 Pearson correlations among various measures

表五 各種變量之間的皮爾森相關係數

	2	3	4	5	6	7	8	9	10
1. Gender (1 = M, 2 = F) 性別 (1 = 男, 2 = 女)	0.06	0.02	0.17***	0.07	0.08	0.02	0.07	0.01	0.10*
2. Age 年齡		0.09	0.09*	-0.02	0.01	0.04	0.03	0.07	0.02
3. BMI 身體質量指數			0.02	0.02	0.07	0.04	-0.03	-0.02	0.03
4. Attitudes towards healthy eating 健康飲食行為的態度				0.36***	0.35***	-0.34***	0.43***	0.07	0.41***
5. Perceived behavioral control 感知行為控制					0.37***	-0.37***	0.51***	0.04	0.64***
6. Subjective norms 主觀規範						-0.12**	0.19***	-0.10*	0.27***
7. Perceived barriers 感知障礙							-0.40***	-0.05	-0.36***
8. Self-efficacy 自我效能								0.02	0.50***
9. Knowledge of nutrition information in food labels 營養標籤的知識									0.07
10. Behavioral intention 健康飲食行為的意圖									

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 6 Summary of results of multiple linear regression for predicting behavioral intention

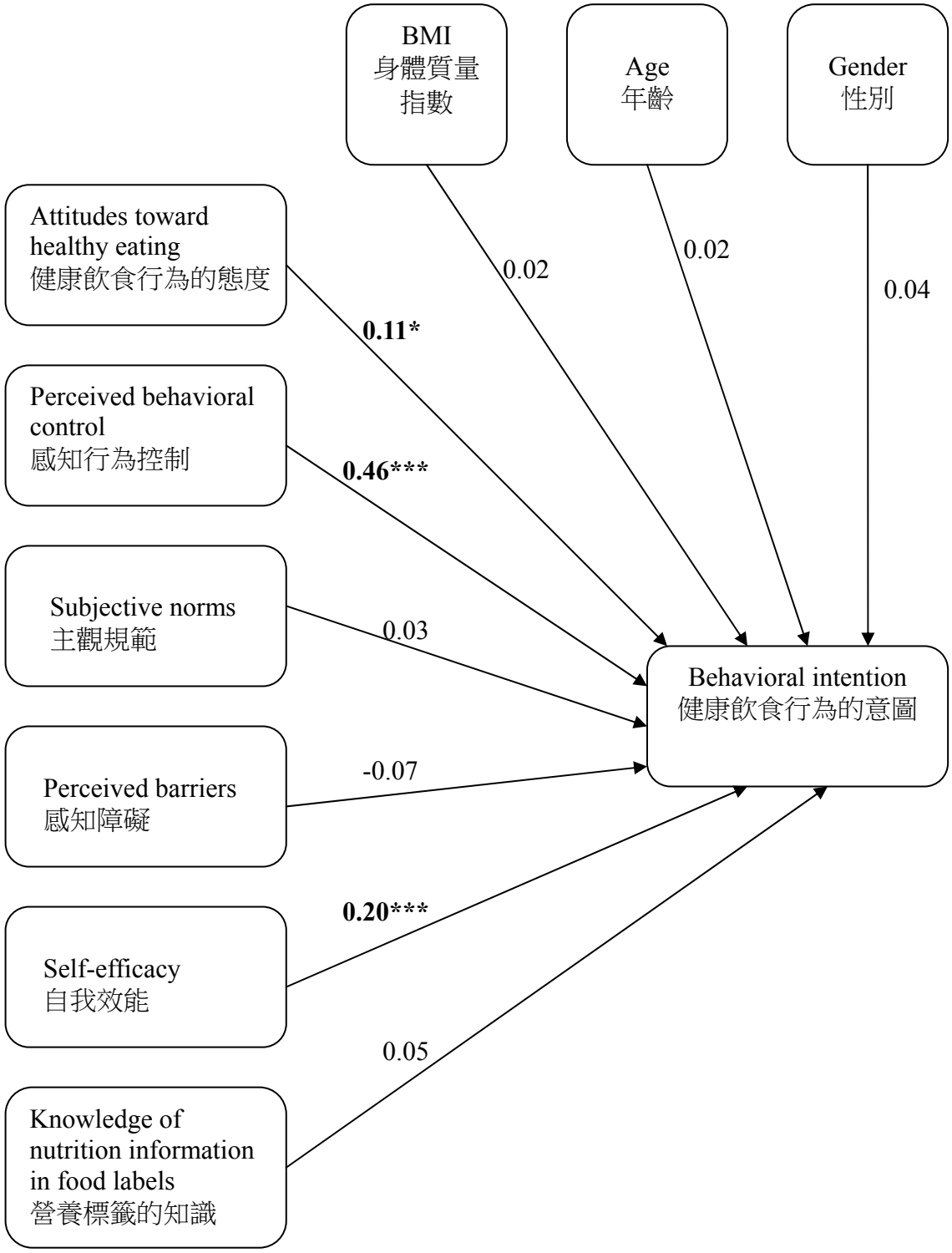
表六 預測行為意圖的多元線性回歸結果摘要

Variables 變量	Standardized coefficient beta 標準化迴歸係數 Beta 值	t-value t 值	Standardized coefficient beta 標準化迴歸係數 Beta 值	t-value t 值
Step 1: demographics *步驟一：人口統計*				
Gender (1 = M, 2 = F) 性別 (1 = 男, 2 = 女)	0.08	1.6	0.04	1.1
Age 年齡	0.05	1.1	0.02	0.6
BMI 身體質量指數	0.02	0.5	0.02	0.6
Adjusted R square = 0.00 調整後的 R 平方 = 0.00				
Step 2 *步驟二*				
Attitudes toward healthy eating 健康飲食行為的態度			0.11	2.6*
Perceived behavioral control 感知行為控制			0.46	11.0***
Subjective norms 主觀規範			0.03	0.7
Perceived barriers 感知障礙			-0.07	-1.7
Self-efficacy 自我效能			0.20	4.7***
Knowledge of nutrition information in food labels 營養標籤的知識			0.05	1.5
Increase in adjusted R square = 0.47*** 增加調整後的 R 平方 = 0.47***				

Notes: * $p < 0.05$; *** $p < 0.001$

Figure 1. Theoretical model

圖一　理論模型



Notes: * $p < 0.05$; *** $p < 0.001$

Appendix I: Age-sex-specific body mass index (BMI) percentiles for Hong Kong in 2005/6 for adolescents aged 12 to 18 years old

附錄一：12 歲至 18 歲的香港青少年在 2005/06 年度特定年齡和性別的身體質量指數百分比

Age (years)	Hong Kong 2005/6	
	P_{85}	P_{95}
Boys		
12	22.3	25.7
13	22.7	26.2
14	23.1	26.6
15	23.5	26.9
16	23.7	27.2
17	23.9	27.3
18	24.1	27.3
Girls		
12	21.1	24.0
13	21.9	24.9
14	22.5	25.5
15	22.9	25.8
16	23.1	26.0
17	23.2	26.0
18	23.2	25.9

P_{85}: 85th percentile, overweight

P_{95}: 95th percentile, obesity

So, H.K., Nelson, E.A.S., Li, A.M., Wong, M.C., Lau, T.F., Guldan, G.S., Mak, K.H., Wang, Y., Fok, T.F., and Sung, R.Y.T. (2008), "Secular changes in height, weight and body mass index in Hong Kong children", *BMC Public Health*, Vol. 8, pp. 320-329. doi:10.1186/1471-2458-8-320

Appendix II: Questionnaire

附錄二：問卷

青少年與食物調查

我是香港浸會大學傳播系的老師，現正進行一項有關青少年飲食的調查，所有收到的資料會絕對保密，只用作統計用途。如有問題，請和我聯絡：karachan@hku.edu.hk

下列問題沒有正確或錯誤的答案，我只想知道你個人的想法，多謝合作！

陳家華教授　2012 年 3 月

請於你認為最適合的答案加上「✓」

1. 你會…	**從不**	**一星期一至兩天**	**一星期三至四天**	**一星期五天或以上**
a. 進食早餐	____	____	____	____
b. 食糖或薯片	____	____	____	____
c. 飲汽水	____	____	____	____
d. 進食至少一份水果	____	____	____	____
e. 進食至少半碗蔬菜	____	____	____	____
f. 到快餐店進餐	____	____	____	____

一個人如果每日食三餐都算均衡的正餐，有足夠份量的蔬菜和生果，甚少食好似快餐、薯片、糖果及甜品等食物，就算是進行健康飲食。

2. 在未來兩星期，你會進行健康飲食嗎？

絕對會 _____　　多數會 _____　　唔肯定 _____　多數唔會 _____　絕對唔會 _____

3. 你對健康飲食有怎樣看法？（請於每組辭彙中選出一個最合適的）

a.	非常沉悶 ____	沉悶 ____	中立 ____	有趣 ____	非常有趣 ____
b.	非常有用 ____	有用 ____	中立 ____	無用 ____	非常無用 ____
c.	非常享受 ____	享受 ____	中立 ____	受罪 ____	非常受罪 ____
d.	非常值得 ____	值得 ____	中立 ____	不值得 ____	非常不值得 ____
e.	非常好 ____	好 ____	中立 ____	差 ____	非常差 ____
f.	非常有害 ____	有害 ____	中立 ____	有益 ____	非常有益 ____

4. 關於進行健康飲食方面，你認為你會否做得到？

	絕對會	**多數會**	**唔肯定**	**多數唔會**	**絕對唔會**
a. 你會唔會盡力嘗試進行健康飲食？	____	____	____	____	____
b. 你會唔會有足夠定力進行健康飲食？	____	____	____	____	____
c. 你會唔會夠時間進行健康飲食？	____	____	____	____	____

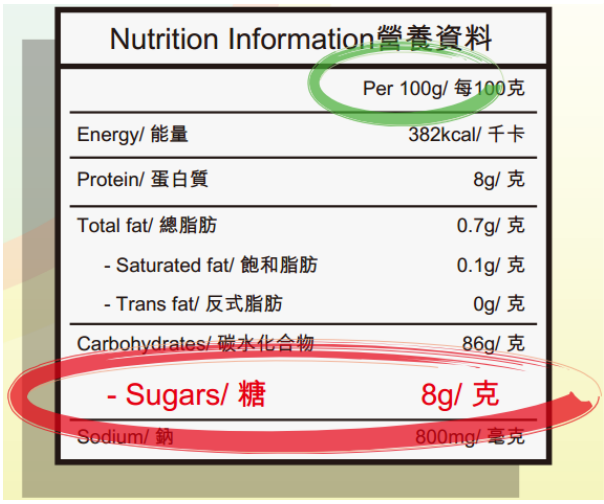
5. 你同意下列句子嗎？

	非常同意	**同意**	**無意見**	**不同意**	**非常不同意**
a. 我嘅朋友認為我應該進行健康飲食	____	____	____	____	____
b. 我嘅家人認為我應該進行健康飲食	____	____	____	____	____
c. 我嘅同學認為我應該進行健康飲食	____	____	____	____	____
d. 我嘅老師認為我應該進行健康飲食	____	____	____	____	____
e. 我睇開嘅電視節目認為我應該進行健康飲食	____	____	____	____	____
f. 我睇開嘅報章雜誌認為我應該進行健康飲食	____	____	____	____	____
g. 政府宣傳認為我應該進行健康飲食	____	____	____	____	____

6. 你同意下列句子嗎？

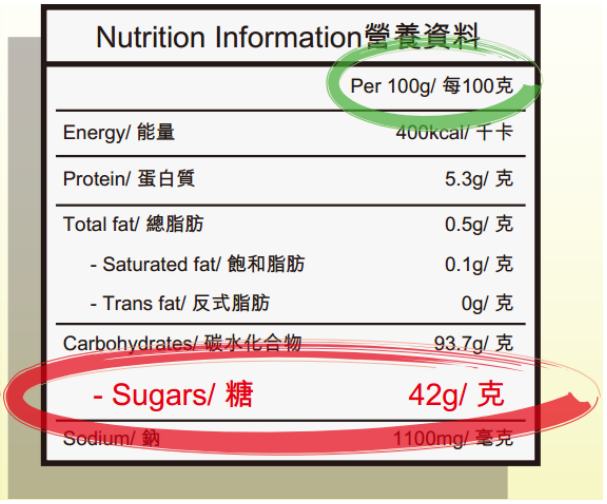
	非常同意	同意	無意見	不同意	非常不同意
a. 我不會經常食得健康，因為我沒有時間	_____	_____	_____	_____	_____
b. 我不會經常食得健康，因為健康食品很貴	_____	_____	_____	_____	_____
c. 我不會經常食得健康，因為沒有足夠的健康食品可供選擇	_____	_____	_____	_____	_____
d. 我不會經常食得健康，因為我很難分辨那些是健康食品	_____	_____	_____	_____	_____
e. 我不會經常食得健康，因為健康食品的味道不好	_____	_____	_____	_____	_____
f. 我不會經常食得健康，因為我喜歡獎勵一下自己	_____	_____	_____	_____	_____
g. 對我來說，在未來兩星期要食得健康真的很難	_____	_____	_____	_____	_____
h. 我肯定在未來兩星期可以食得健康	_____	_____	_____	_____	_____
i. 我有信心在未來兩星期可以食得健康	_____	_____	_____	_____	_____
j. 只要我想，我很容易就能在未來兩星期食得健康	_____	_____	_____	_____	_____

7. 你認為玉米片 A 或玉米片 B 比較健康？請於你認為最適合的答案加上「✓」



Nutrition Information營養資料	
	Per 100g/ 每100克
Energy/ 能量	382kcal/ 千卡
Protein/ 蛋白質	8g/ 克
Total fat/ 總脂肪	0.7g/ 克
- Saturated fat/ 飽和脂肪	0.1g/ 克
- Trans fat/ 反式脂肪	0g/ 克
Carbohydrates/ 碳水化合物	86g/ 克
- Sugars/ 糖	8g/ 克
Sodium/ 鈉	800mg/ 毫克

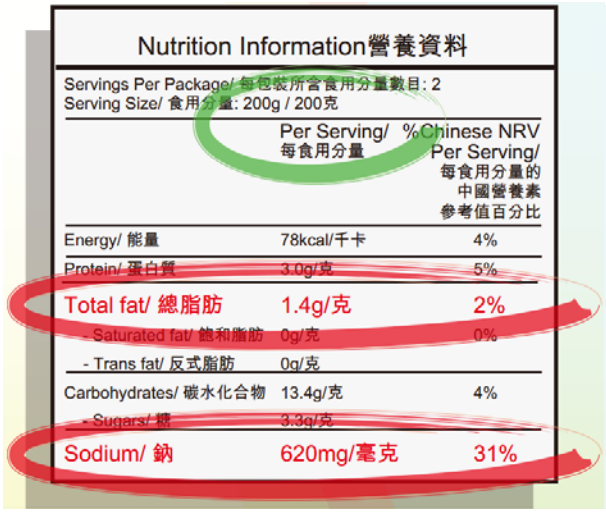
玉米片 **A** _____



Nutrition Information營養資料	
	Per 100g/ 每100克
Energy/ 能量	400kcal/ 千卡
Protein/ 蛋白質	5.3g/ 克
Total fat/ 總脂肪	0.5g/ 克
- Saturated fat/ 飽和脂肪	0.1g/ 克
- Trans fat/ 反式脂肪	0g/ 克
Carbohydrates/ 碳水化合物	93.7g/ 克
- Sugars/ 糖	42g/ 克
Sodium/ 鈉	1100mg/ 毫克

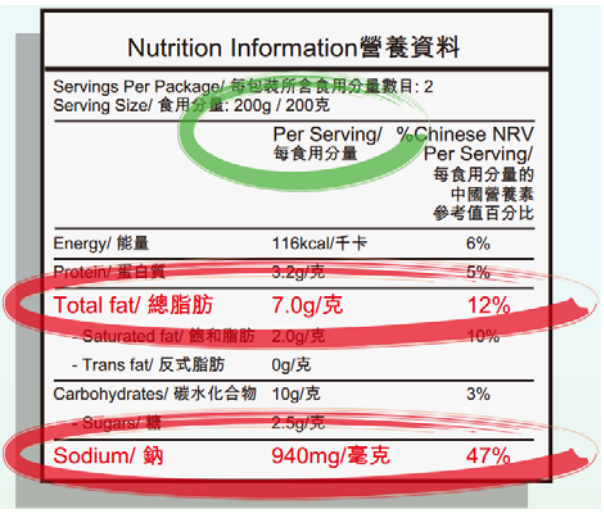
玉米片 **B** _____

8. 你認為罐頭湯 **A** 或罐頭湯 **B** 比較健康？請於你認為最適合的答案加上「✓」



Nutrition Information營養資料		
Servings Per Package/ 每包裝所含食用分量數目: 2 Serving Size/ 食用分量: 200g / 200克		
	Per Serving/ 每食用分量	%Chinese NRV Per Serving/ 每食用分量的中國營養素參考值百分比
Energy/ 能量	78kcal/千卡	4%
Protein/ 蛋白質	3.0g/克	5%
Total fat/ 總脂肪	1.4g/克	2%
- Saturated fat/ 飽和脂肪	0g/克	0%
- Trans fat/ 反式脂肪	0g/克	
Carbohydrates/ 碳水化合物	13.4g/克	4%
- Sugars/ 糖	3.3g/克	
Sodium/ 鈉	620mg/毫克	31%

罐頭湯 **A** _____



Nutrition Information營養資料		
Servings Per Package/ 每包裝所含食用分量數目: 2 Serving Size/ 食用分量: 200g / 200克		
	Per Serving/ 每食用分量	%Chinese NRV Per Serving/ 每食用分量的中國營養素參考值百分比
Energy/ 能量	116kcal/千卡	6%
Protein/ 蛋白質	3.2g/克	5%
Total fat/ 總脂肪	7.0g/克	12%
- Saturated fat/ 飽和脂肪	2.0g/克	10%
- Trans fat/ 反式脂肪	0g/克	
Carbohydrates/ 碳水化合物	10g/克	3%
- Sugars/ 糖	2.5g/克	
Sodium/ 鈉	940mg/毫克	47%

罐頭湯 **B** _____

9. 你認為餅乾 **A** 或是餅乾 **B** 比較健康？請於你認為最適合的答案加上「✓」

Nutrition Information 營養資料	
Servings Per Package/ 每包裝所含食用分量數目: 2	
Serving Size/ 食用分量: **2 pieces(35.5g)/2塊(35.5克)**	
	Per Serving 每食用分量
Total fat/ 總脂肪	7g/ 克
- Saturated fat/ 飽和脂肪	2.5g/ 克

餅乾 **A** _____

Nutrition Information 營養資料	
Servings Per Package/ 每包裝所含食用分量數目: 3	
Serving Size/ 食用分量: **5 pieces(50g)/5塊(50克)**	
	Per Serving 每食用分量
Total fat/ 總脂肪	8g/ 克
- Saturated fat/ 飽和脂肪	3.5g/ 克

餅乾 **B** _____

10. 下列那一項是“三低一高”的健康飲食原則？請於你認為最適合的答案加上「✓」

a. 低纖、低鈉(或鹽)、低糖及高脂 _____
b. 低脂、低纖、低糖及高鈉(或鹽) _____
c. 低脂、低鈉(或鹽)、低糖及高纖 _____
d. 低脂、低鈉(或鹽)、低纖及高糖 _____

有關你的資料：

男 ____　　女 ____

你的身高 _____米 (可參考以下高度換算表)

你的體重 _____公斤 (可參考下頁體重換算表)

中一 ____　中二 ____　中三 ____　中四 ____　中五 ____　中六 ____

年齡 ____

住屋類型　　公共屋邨 ____　租住私人樓宇 ____
自置私人樓宇 ____　其他 ____

- 完 -
謝謝你的合作！

高度換算表

(換算範圍由4呎至6呎，
如果你的高度在範圍以外，
請以 1吋 = 0.0254米自行換算。)

英呎	米	英呎	米
4呎0吋	1.22	5呎0吋	1.52
4呎1吋	1.24	5呎1吋	1.55
4呎2吋	1.27	5呎2吋	1.57
4呎3吋	1.30	5呎3吋	1.60
4呎4吋	1.32	5呎4吋	1.63
4呎5吋	1.35	5呎5吋	1.65
4呎6吋	1.37	5呎6吋	1.68
4呎7吋	1.40	5呎7吋	1.70
4呎8吋	1.42	5呎8吋	1.73
4呎9吋	1.45	5呎9吋	1.75
4呎10吋	1.47	5呎10吋	1.78
4呎11吋	1.50	5呎11吋	1.80
5呎0吋	1.52	6呎0吋	1.83

重量換算表

(換算範圍由80磅至200磅，
如果你的重量在範圍以外，
請以 1磅＝0.4536公斤自行換算。)

磅	公斤	磅	公斤	磅	公斤
81磅	36.74	121磅	54.88	161磅	73.03
82磅	37.19	122磅	55.34	162磅	73.48
83磅	37.65	123磅	37.65	163磅	73.94
84磅	38.10	124磅	38.10	164磅	74.39
85磅	38.56	125磅	38.56	165磅	74.84
86磅	39.01	126磅	39.01	166磅	75.30
87磅	39.46	127磅	39.46	167磅	75.75
88磅	39.92	128磅	39.92	168磅	76.20
89磅	40.37	129磅	40.37	169磅	76.66
90磅	40.82	130磅	40.82	170磅	77.11
91磅	41.28	131磅	41.28	171磅	77.56
92磅	41.73	132磅	41.73	172磅	78.02
93磅	42.18	133磅	42.18	173磅	78.47
94磅	42.64	134磅	42.64	174磅	78.93
95磅	43.09	135磅	43.09	175磅	79.38
96磅	43.54	136磅	43.54	176磅	79.83
97磅	44.00	137磅	44.00	177磅	80.29
98磅	44.45	138磅	44.45	178磅	80.74
99磅	44.91	139磅	44.91	179磅	81.19
100磅	45.36	140磅	45.36	180磅	81.65
101磅	45.81	141磅	63.96	181磅	82.10
102磅	46.27	142磅	64.41	182磅	82.55
103磅	46.72	143磅	64.86	183磅	83.01
104磅	47.17	144磅	65.32	184磅	83.46
105磅	47.63	145磅	65.77	185磅	83.91
106磅	48.08	146磅	66.22	186磅	84.37
107磅	48.53	147磅	66.68	187磅	84.82
108磅	48.99	148磅	67.13	188磅	85.28
109磅	49.44	149磅	67.59	189磅	85.73
110磅	49.90	150磅	68.04	190磅	86.18
111磅	50.35	151磅	68.49	191磅	86.64
112磅	50.80	152磅	68.95	192磅	87.09
113磅	51.26	153磅	69.40	193磅	87.54
114磅	51.71	154磅	69.85	194磅	88.00
115磅	52.16	155磅	70.31	195磅	88.45
116磅	52.62	156磅	70.76	196磅	88.90
117磅	53.07	157磅	71.21	197磅	89.36
118磅	53.52	158磅	71.67	198磅	89.81
119磅	53.98	159磅	72.12	199磅	90.26
120磅	54.43	160磅	72.57	200磅	90.72

English translation of the questionnaire

A study on youth and food

This is Professor Kara Chan from the Department of Communication Studies, Hong Kong Baptist University. We are now conducting a study about youth and food. The data collected will be kept confidential and will only be used for statistical purposes.

There are no right or wrong answers for the following questions. Please express your opinion. Your cooperation is highly appreciated.

Prof. Kara Chan March 2012

Please indicate your choice by a "✓".

1. How often do you …	**Never**	**Once to twice a week**	**3 to 4 times a week**	**More than 5 times a week**
a. eat breakfast	_____	_____	_____	_____
b. eat candies or potato chips	_____	_____	_____	_____
c. consume soft-drinks	_____	_____	_____	_____
d. eat at least a portion of fruits	_____	_____	_____	_____
e. eat at least half bowl of vegetables	_____	_____	_____	_____
f. eat fast food	_____	_____	_____	_____

A person is considered as eating healthily if he or she eats 3 balanced meals everyday. A balanced meal refers to a meal with sufficient fruits and vegetables, consume junk food such as fast food, candies, potato chips and dessert sparingly.

2. Will you engage in healthy eating in the coming two weeks?

Definitely yes ___ Mostly yes ___ Not sure ___ Mostly no ___ Definitely no ___

3. What is your opinion about healthy eating?
(Please select the most appropriate phrase on each row)

a.	Very boring	____	Boring	____	Neutral	____	Interesting	____	Very interesting ____
b.	Very useful	____	Useful	____	Neutral	____	Useless	____	Very useless ____
c.	Very enjoyable	____	Enjoyable	____	Neutral	____	Un-enjoyable	____	Very un-enjoyable ____
d.	Very worthy	____	Worthy	____	Neutral	____	Unworthy	____	Very unworthy ____
e.	Very good	____	Good	____	Neutral	____	Bad	____	Very bad ____
f.	Very harmful	____	Harmful	____	Neutral	____	Beneficial	____	Very beneficial ____

4. Regarding engaging in healthy eating, do you think you can do the following?

	Definitely yes	**Mostly yes**	**Not sure**	**Mostly no**	**Definitely no**
a. Will you try hard to eat healthily?	____	____	____	____	____
b. Do you have enough discipline to eat healthily?	____	____	____	____	____
c. Do you have enough time to eat healthily?	____	____	____	____	____

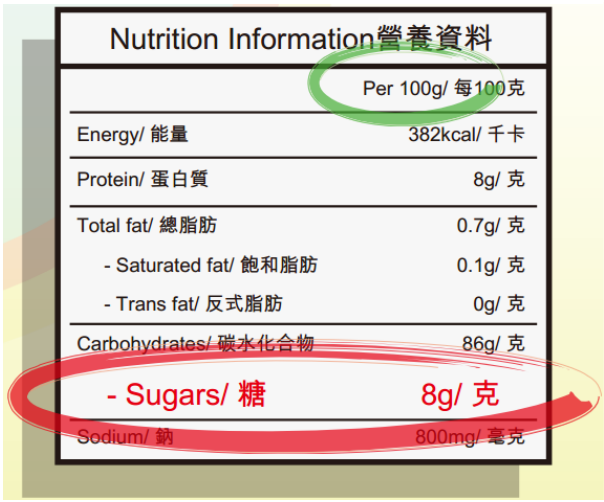
5. Do you agree the following statements?

	Strongly agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
a. My friends think I should engage in healthy eating	____	____	____	____	____
b. My family members think I should engage in healthy eating	____	____	____	____	____
c. My classmates think I should engage in healthy eating	____	____	____	____	____
d. My teachers think I should engage in healthy eating	____	____	____	____	____
e. TV programs I watch think I should engage in healthy eating	____	____	____	____	____
f. Newspapers and magazines I read think I should engage in healthy eating	____	____	____	____	____
g. The government publicity think I should engage in healthy eating	____	____	____	____	____

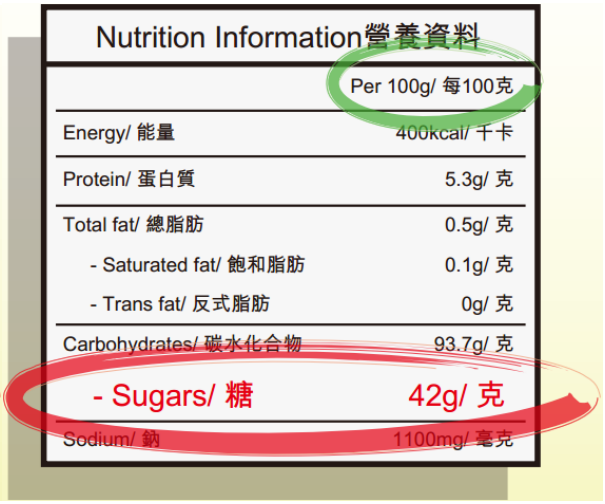
6. Do you agree the following statements?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
a. I don't always eat healthily because I haven't get time	_____	_____	_____	_____	_____
b. I don't always eat healthily because it is expensive	_____	_____	_____	_____	_____
c. I don't always eat healthily because there are not enough healthy options available	_____	_____	_____	_____	_____
d. I don't always eat healthily because I'm confused about what's healthy and what's not	_____	_____	_____	_____	_____
e. I don't always eat healthily because healthy food doesn't taste as good	_____	_____	_____	_____	_____
f. I don't always eat healthily because I like to treat myself	_____	_____	_____	_____	_____
g. For me, engaging in healthy eating over the next two weeks would be difficult	_____	_____	_____	_____	_____
h. I am certain that I can engage in healthy eating over the next two weeks	_____	_____	_____	_____	_____
i. I am confident that I can engage in healthy eating over the next two weeks	_____	_____	_____	_____	_____
j. If I wanted to, I could easily engage in healthy eating over the next two weeks	_____	_____	_____	_____	_____

7. Which food product is healthier, cornflakes A or cornflakes B? Please indicate your choice by a "✓".

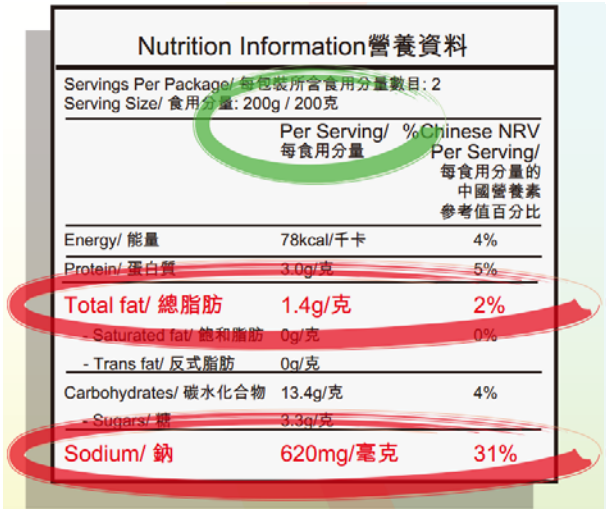


Cornflakes A _____



Cornflakes B ____

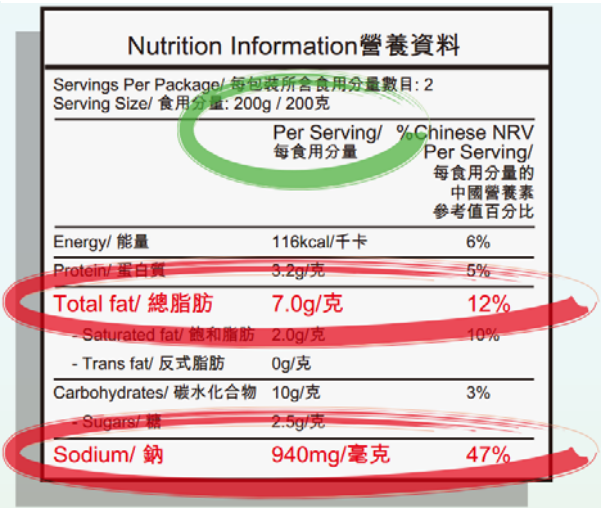
8. Which food product is healthier, canned soup A or canned soup B? Please indicate your choice by a "✓".



Nutrition Information營養資料

Servings Per Package/ 每包裝所含食用分量數目: 2
Serving Size/ 食用分量: 200g / 200克

	Per Serving/ 每食用分量	%Chinese NRV Per Serving/ 每食用分量的中國營養素參考值百分比
Energy/ 能量	78kcal/千卡	4%
Protein/ 蛋白質	3.0g/克	5%
Total fat/ 總脂肪	1.4g/克	2%
- Saturated fat/ 飽和脂肪	0g/克	0%
- Trans fat/ 反式脂肪	0g/克	
Carbohydrates/ 碳水化合物	13.4g/克	4%
- Sugars/ 糖	3.3g/克	
Sodium/ 鈉	620mg/毫克	31%



Nutrition Information營養資料

Servings Per Package/ 每包裝所含食用分量數目: 2
Serving Size/ 食用分量: 200g / 200克

	Per Serving/ 每食用分量	%Chinese NRV Per Serving/ 每食用分量的中國營養素參考值百分比
Energy/ 能量	116kcal/千卡	6%
Protein/ 蛋白質	3.2g/克	5%
Total fat/ 總脂肪	7.0g/克	12%
- Saturated fat/ 飽和脂肪	2.0g/克	10%
- Trans fat/ 反式脂肪	0g/克	
Carbohydrates/ 碳水化合物	10g/克	3%
- Sugars/ 糖	2.5g/克	
Sodium/ 鈉	940mg/毫克	47%

Canned soup A _____ **Canned soup B _____**

9. Which food product is healthier, biscuit A or biscuit B? Please indicate your choice by a "✓".

Nutrition Information 營養資料

Servings Per Package/ 每包裝所含食用分量數目: 2
Serving Size/ 食用分量: 2 pieces(35.5g)/2塊(35.5克)

	Per Serving 每食用分量
Total fat/ 總脂肪	7g/ 克
- Saturated fat/ 飽和脂肪	2.5g/ 克

Nutrition Information 營養資料

Servings Per Package/ 每包裝所含食用分量數目: 3
Serving Size/ 食用分量: 5 pieces(50g)/5塊(50克)

	Per Serving 每食用分量
Total fat/ 總脂肪	8g/ 克
- Saturated fat/ 飽和脂肪	3.5g/ 克

Biscuit A _____ **Biscuit B ___**

10. What is a "3 lows, 1 high" healthy diet? Please indicate your choice by a "✓".

a. Low fiber, low sodium (or salt), low sugar, and high fat _____
b. Low fat, low fiber, low sugar, and high sodium (or salt) _____
c. Low fat, low sodium (or salt), low sugar, and high fiber _____
d. Low fat, low sodium (or salt), low fiber, and high sugar _____

About you …

Boy ____ Girl ____

Your Height _____m (Please refer to the height conversion table)

Your Weight _____kg (Please refer to the weight conversion table)

Grade 7____ Grade 8 ____ Grade 9 ____ Grade 10 ____ Grade 11 ____ Grade 12 ____

Age ____

Living in Public Housing ____ Rented Private Flat ____
Self-owned flat ____ Others ____

- End -
Thank you for your support!

Height Conversion Table
(Range: 4 feet to 6 feet)
If you height is beyond the range,
please convert your height with the ratio below on your own
1 inch = 0.0254 m

Feet	Meters	Feet	Meters
4 feet & 0 inch	1.22	5 feet & 0 inch	1.52
4 feet & 1 inch	1.24	5 feet & 1 inch	1.55
4 feet & 2 inches	1.27	5 feet & 2 inches	1.57
4 feet & 3 inches	1.30	5 feet & 3 inches	1.60
4 feet & 4 inches	1.32	5 feet & 4 inches	1.63
4 feet & 5 inches	1.35	5 feet & 5 inches	1.65
4 feet & 6 inches	1.37	5 feet & 6 inches	1.68
4 feet & 7 inches	1.40	5 feet & 7 inches	1.70
4 feet & 8 inches	1.42	5 feet & 8 inches	1.73
4 feet & 9 inches	1.45	5 feet & 9 inches	1.75
4 feet & 10 inches	1.47	5 feet & 10 inches	1.78
4 feet & 11 inches	1.50	5 feet & 11 inches	1.80
5 feet & 0 inch	1.52	6 feet & 0 inch	1.83

Weight Conversion Table
(Range: 80 pounds to 200 pounds)
If you weight is beyond the range, please convert your weight with the ratio below on your own
1 pound = 0.4536 kg

Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms
81pounds	36.74	121pounds	54.88	161pounds	73.03
82pounds	37.19	122pounds	55.34	162pounds	73.48
83pounds	37.65	123pounds	37.65	163pounds	73.94
84pounds	38.10	124pounds	38.10	164pounds	74.39
85pounds	38.56	125pounds	38.56	165pounds	74.84
86pounds	39.01	126pounds	39.01	166pounds	75.30
87pounds	39.46	127pounds	39.46	167pounds	75.75
88pounds	39.92	128pounds	39.92	168pounds	76.20
89pounds	40.37	129pounds	40.37	169pounds	76.66
90pounds	40.82	130pounds	40.82	170pounds	77.11
91pounds	41.28	131pounds	41.28	171pounds	77.56
92pounds	41.73	132pounds	41.73	172pounds	78.02
93pounds	42.18	133pounds	42.18	173pounds	78.47
94pounds	42.64	134pounds	42.64	174pounds	78.93
95pounds	43.09	135pounds	43.09	175pounds	79.38
96pounds	43.54	136pounds	43.54	176pounds	79.83
97pounds	44.00	137pounds	44.00	177pounds	80.29
98pounds	44.45	138pounds	44.45	178pounds	80.74
99pounds	44.91	139pounds	44.91	179pounds	81.19
100pounds	45.36	140pounds	45.36	180pounds	81.65
101pounds	45.81	141pounds	63.96	181pounds	82.10
102pounds	46.27	142pounds	64.41	182pounds	82.55
103pounds	46.72	143pounds	64.86	183pounds	83.01
104pounds	47.17	144pounds	65.32	184pounds	83.46
105pounds	47.63	145pounds	65.77	185pounds	83.91
106pounds	48.08	146pounds	66.22	186pounds	84.37
107pounds	48.53	147pounds	66.68	187pounds	84.82
108pounds	48.99	148pounds	67.13	188pounds	85.28
109pounds	49.44	149pounds	67.59	189pounds	85.73
110pounds	49.90	150pounds	68.04	190pounds	86.18
111pounds	50.35	151pounds	68.49	191pounds	86.64
112pounds	50.80	152pounds	68.95	192pounds	87.09
113pounds	51.26	153pounds	69.40	193pounds	87.54
114pounds	51.71	154pounds	69.85	194pounds	88.00
115pounds	52.16	155pounds	70.31	195pounds	88.45
116pounds	52.62	156pounds	70.76	196pounds	88.90
117pounds	53.07	157pounds	71.21	197pounds	89.36
118pounds	53.52	158pounds	71.67	198pounds	89.81
119pounds	53.98	159pounds	72.12	199pounds	90.26
120pounds	54.43	160pounds	72.57	200pounds	90.72