

## Eating Habits in Kampung Salak Tinggi, Sepang, Selangor

Manpreetajit K.S, Nur Ain M, A.A.Syahmie, Jennat-Ul F, Johnathan Joseph S

Department of Community Health, Faculty of Medicine, Cyberjaya University College of Medical Sciences.

Corresponding Author: Nur Ain M

### ABSTRACT

**Background:** The study of eating habits among Malaysians has been poorly studied in our country and is now a trending topic to be observed upon. Eating habits among Malaysians should not be taken lightly as it influences the daily lives, as well as the start of all irreversible chronic diseases. This study is focused primarily on the eating habits of the community of Kampung Salak Tinggi, Sepang, Selangor.

**Materials and Methods:** Our study comprises of one hundred twenty-nine respondents from Kampung Salak Tinggi with a response rate of 100% participated in our study using cross sectional study design, simple random sampling method and using one way ANOVA and independent sample t test.

**Result:** The current data indicated that 55.8% of them do not take meals regularly. About 82.2% took breakfast regularly. About 47.3% had snacks less than three times per week. 85.3% respondents consumed vegetables three or more times per week. Almost half of them by 58.9% consumed fruits of three times or more per week. About 62.0% consume fried food twice a week or more. About 20.9% had fast food often and 82.2% took meals with family or friends daily. Among the respondents, 63.3% drink more than two litres of water every day. 46.5% of the respondents ate because feeling happy. Among the respondents, 27.9% woke up in the middle of the night just to go grab some food and nearly 25.6% of the respondents ate because of feeling lonely.

**Conclusion:** In a nutshell, the respondents from this research study, practice good eating habits except in regular meals, frequency of eating snacks and fried food. Besides that, the majority of the respondents does not have any psychological association to eating habits.

**Keywords:** Eating habits; Psychological Factors; Factors associated with eating habits; Compulsive Eating Habits; Kampung Salak Tinggi, Sepang, Selangor.

### 1.0 INTRODUCTION

Poor dietary meal pattern is a very significant health issue among the adolescents, as they are the ones who are facing a very tensed living environment. These factors represent obstacles against practicing healthy eating behaviours. Even though these behaviours are considered to be temporary, unhealthy habits practiced during this time of age will eventually continue when they grow older (Kurubaran et al., 2012).

A good healthy and balanced eating habit provides sufficient amount of vigor and nutrients required by the body. The Malaysian Dietary Guidelines (MDG), suggested three important features when planning healthy meals, especially, eating a balanced diet and a variety of foods in moderation (NCCFN, 2013)

There are many factors affecting their eating habit as well as what to eat and with whom they would eat with. At the same time, there are certain barriers affecting their healthy or unhealthy diet which should be intervened. Chin & Nasir (2009) described that by skipping breakfast, eating snacks and going through different weight losses dietary behaviours were some of the prominent unhealthy eating behaviours shown by the young adult females. (NCCFN, 2013)

The study concluded that it is important to promote healthy eating as it is crucial for the betterment of individual health. There is very less study done in Malaysia that did a research on the association between eating habits and the psychological factors among Malaysian adults. World Health Organization (WHO) recommends that each country should

estimate their respective food consumption pattern data.

The present day study is directed at evaluating the patterns of eating habits and the associated factors, which focuses on the psychological factors among adults in the community.

## 2.0 MATERIALS AND METHODS

This cross sectional research study was conducted among 129 respondents aged between 18-80 years in the community of Kampung Salak Tinggi using stratified sampling. They were requested to participate in this study. However, nobody was forced to participate. A survey was done using a validated questionnaire on Eating Habits taken from a previous study (Kurubaran et al., 2012). The objectives of this study were explained verbally to the respondents during the survey.

The questionnaire consists of three parts which are Socio-demographic Data, Eating Habits and Compulsive Eating Scale (CES) with total question of 30s

- I. The first part included the socio-demographic data, for example the age, gender, ethnicity, religion, marital status, level of education, working status, household income as well as anthropometry of the respondents.
- II. The second part consists of 10 questions on eating habits and type of meals consumed, such as meals regularity, frequency of meals, types of meal; consumptions of vegetables and fruits, daily water intake, consumption of fast or fried food, etc.
- III. The third part focuses on psychological factors that influence the respondents' dietary habits. This part included 8 selected questions from the validated Compulsive Eating Scale (CES) that was used to measure uncontrolled eating patterns.

The SPSS Version 20.0 was used to analyse in this study. In this study, based on the NHMS 2015 cutoff for the Malaysian population, a BMI < 18.5 kg/m<sup>2</sup> was categorised as underweight, 18.5–

22.9 kg/m<sup>2</sup> for the normal range, 23.0–27.4 kg/m<sup>2</sup> as overweight, and more than 27.5 kg/m<sup>2</sup> as obese. Cronbach's alpha coefficient of the Compulsive Eating Scale (CES) was 0.80. The response options for each question were 'Yes' or 'No'. The question in the second part, which is eating habits, was scored (1) if the response was healthy or (0) if non-healthy. The total score was summed up and obtained (minimum = 0 and maximum = 10). Thus, a higher score on eating habits indicated better eating habits. Descriptive analysis was performed for all variables. Student *t*-test and ANOVA test were used to compare mean of total eating habits score across socio-demographic and association variables. Test of normal distribution of the total score of eating habits was also conducted.

## RESULT

### 2.1 Sociodemographic Characteristic

Table 1: Sociodemographic characteristics of respondents (n = 129)

SOCIODEMOGRAPHIC CHARACTERISTICS	N	%
<b>GENDER</b>		
Male	50	38.8
Female	79	61.2
Total	129	100
<b>AGE</b>		
18-20	4	3.1
21-30	44	34.1
31-40	21	16.3
41-50	12	9.3
51-60	26	20.2
61 and above	22	17.1
Total	129	100
<b>ETHNICITY</b>		
Malay	129	100.0
<b>BODY MASS INDEX (kg/m<sup>2</sup>)</b>		
Underweight (<18.5)	8	6.2
Normal (18.5-22.9)	37	28.7
Overweight (23.0-27.4)	40	31.0
Obese (>27.5)	44	34.1
Total	129	100
<b>HOUSEHOLD INCOME</b>		
Less than RM3000	79	61.2
RM3000-5000	32	24.8
RM5001-10000	13	10.1
RM10001-15000	3	2.3
RM15001 and above	2	1.6
Total	129	100
<b>SMOKING STATUS</b>		
Yes	25	19.4
No	104	80.6
Total	129	100
<b>REGULAR EXERCISE</b>		
Yes	41	33.8
No	88	68.2
Total	129	100

One hundred twenty-nine respondents from Kampung Salak Tinggi with a response rate of 100% participated in our study. The majority of respondents were females (61.2%), aged more than 21-30 years old (34.1%) and 100% of them are Malays. The majority had an average monthly household income of less than RM 3000 (61.2%). The majority of the respondents are non-smokers (80.6%). About 68.2% do not perform regular exercise, but some did (33.8%). Among the respondents, 28.7% had a normal Body Mass Index, 6.2 % were under weights, 31.0% were overweight and 34.1 % were obese.

### 2.2 Eating Habits

Among the respondents, 55.8% of them do not take meals regularly. About 82.2% took breakfast regularly. 47.3% had snacks less than three times per week and 52.7% took snacks three or more times per week. Myriad of respondents consumed vegetables three or more times per week (85.3%). About 58.9% consumed fruits more than three times per week; the rest (41.1%) took it less than three times per week. Many had fried food twice a week or more (62.0%), while 32.0% took it less than two times. The majority (20.9%) had fast food often and took meals with family or friends daily (82.2%). Among the

respondents, 63.3% drink more than two litres of water every day.

Table 2: Eating habit among respondents (n=129)

EATING HABITS	N	%
<b>Regular meals</b>		
Yes	57	44.2
No	72	55.8
Total	129	100
<b>Daily breakfast</b>		
Yes	106	82.2
No	23	17.8
Total	129	100
<b>Frequency of daily meals</b>		
Three times or less	94	72.9
More than three times	35	27.1
Total	129	100
<b>Frequency of having snacks (per week)</b>		
Less than three times	61	47.3
Three or more times	68	52.7
Total	129	100
<b>Weekly consumption of vegetables</b>		
Less than three times	19	14.7
Three or more times	110	85.3
Total	129	100
<b>Weekly consumption of fruits</b>		
Less than three times	53	41.1
Three or more times	76	58.9
Total	129	100
<b>Weekly consumption of fried food</b>		
Less than twice	49	38.0
Twice or more	80	62.0
Total	129	100
<b>Consumption of fast food</b>		
Often	27	20.9
Rarely	102	79.1
Total	129	100
<b>Meals with friends &amp; family</b>		
Daily	106	82.2
Not daily	23	17.8
Total	129	100
<b>Water intake (liters/day)</b>		
< 2	47	36.4
≥2	82	63.6
Total	129	100

### 2.3 Psychological Factors Affecting Eating Habits

Table 3: Psychological factors affecting eating habits among respondents (n=129)

Psychological Factor	Bad n(%)	Good n(%)
Eat because of feeling lonely	33 (25.6)	96 (74.4)
Feel completely out of control when it comes to food	28 (21.7)	101 (78.3)
Eat so much until stomach hurts	14 (10.9)	115 (89.1)
Eat because of feeling upset or nervous	13 (10.1)	116 (89.9)
Eat because of feeling bored	22 (17.1)	107 (82.9)
Eat because of feeling happy	60 (46.5)	69 (53.5)
Eat a lot and fast until the quantity and taste is not known	14 (10.9)	115 (89.1)
Waking up going to the kitchen eating left overs knowing it is there	36 (27.9)	93 (72.1)

Cronbach's alpha coefficient of the Compulsive Eating Scale (CES) was 0.80. The majority of the respondents ate because feeling happy (46.5%). Among the

respondents, 27.9% woke up in the middle of the night just to go grab some food and nearly 25.6% of the respondents ate because of feeling lonely.

### 2.4 Association between Eating Habits and Socio-demographic Factors, Smoking, BMI status and Exercise

**Table 4: Association between eating habits score and categorical variables (n = 129)**

Categorical Variable	Mean (SD)		p-value
	Male	Female	
Gender	Male	6.34 (1.62)	0.175
	Female	6.75 (±1.67)	
Age*	18-20	5.75 (±3.0)	0.537
	21-30	6.34(±1.40)	
	31-40	6.81(±1.72)	
	41-50	6.42(±1.73)	
	51-60	7.00(±1.81)	
	>61	6.64 (±1.62)	
Educational Status*	No formal education	8.0 (±1.41)	0.159
	Primary education	6.24(±1.61)	
	Secondary education	6.40 (±1.77)	
	Tertiary education	6.93 (±1.48)	
Household Income*	< RM 3000	6.16 (±1.66)	0.002**
	RM3000-RM5000	7.31 (±1.51)	
	RM5001-RM 10000	6.92 (±1.25)	
	RM10001-RM15000	7.00 (±1.00)	
	>RM15000	9.00 (±0.00)	
Smoking	Smoker	6.67(±1.69)	0.242
	Non-Smoker	6.24(±1.51)	
Exercise	Yes	6.59 (±1.55)	0.986
	No	6.59 (±1.88)	
BMI*	Underweight	6.00 (±2.13)	0.603
	Normal	6.43 (±1.52)	
	Overweight	6.90 (±1.82)	
	Obese	6.65 (±1.58)	

\* One way ANOVA test was used to compare mean between categories.

\*\* Indicate significance at the 0.05 level

Mean total score of eating habits was compared across the categorical variables in the study. There is no significant difference between eating habit with age, educational status, smoking, exercise and BMI. However, we only found that there is significant difference between eating habit and income status (p=0.002).

Post hoc test of Bonferroni Correction was done to find the specific household income values that are significant with eating habits. Only those with income of <RM3000 and RM3000-RM5000 are significant (both with p=0.007).

### 2.5 Association between Eating Habits and Psychological Factors

**Table 5: Association between eating habits score and psychological factors (n = 129)**

Psychosocial Factor	Mean (SD)		P-value
	Yes (Bad)	No (Good)	
Eat because of feeling lonely	6.50 (±1.80)	6.66 (±1.61)	0.86
Feel completely out of control when it comes to food	6.57 (±1.77)	6.59(±1.63)	0.95
Eat so much until stomach hurts	6.29 (±1.59)	6.63(±1.67)	0.47
Eat because of feeling upset or nervous	6.31(±1.70)	6.62(±1.66)	0.52
Eat because of feeling bored	6.64(±1.68)	6.58(±1.66)	0.88
Eat because of feeling happy	6.50(±1.67)	6.67(±1.65)	0.57
Eat a lot and fast until the quantity and taste is not known	6.36(±1.33)	6.62(±1.69)	0.58
Waking up going to the kitchen eating left overs knowing it is there	6.11(±2.01)	6.77(±1.47)	0.04*

\* Indicate significance at the 0.05 level

Mean of the total score of eating habit was compared between those who answered ‘yes’ and ‘no’ on each item of the psychological factors. The mean total score of those “waking up, going to the kitchen eating left over knowing it is there” was 6.11(±2.01) and those who did not was 6.77(±1.47). There is a significance of 0.04 which is lower than p=0.05.

### 3.0 DISCUSSION

In our study, less than a half of the respondents had their meal regularly and 72.9% ate at least 3 times per day. The finding was lower than reported by a study where 57.6% of the respondents had their meal regularly (Kurubaran et al., 2012). This could probably be due to the financial status of the community in Kampung Salak

Tinggi. In regards to our survey, their monthly income is less than RM 3000. This can also be due to the socio-demographic factor where most of them are women and unemployed. They need to do house chores and manage their family's needs, especially their children before having time to do other things. They usually eat later than the usual regular hours. However, most of the respondents still have daily meals at least 3 times per day.

Regular breakfast consumption is important for sufficient energy to start daily activities. In our study, 82.2% have their daily breakfast which is higher in contrast to previous studies which found that only 43.9% of the respondents took daily breakfast (Kurubaran et al., 2012). But differ to another study showing that 93.7% Malaysian adults took their breakfast (Yeo P.S et al., 2015). There is also another study showing that 89.2% of their respondents take breakfast (Wan A.M et al., 2012). The prevalence of breakfast was higher in rural than in urban probably because of different lifestyle and social norms resulting different breakfast habits. This is also due to living in rural areas, they tend to practice original breakfast habits while those living in the urban area have been accustomed to the urban lifestyle with skipping breakfast.

Frequent consumption of snack and light food is not an expected result in which, according to previous studies, only 42.2% respondents had snacks at least three times a week (Kurubaran et al., 2012). The most common meals and snacking pattern is composed of 3 main meals plus 2 snacks per day. Surprisingly, in our study, among the community of Kampung Salak Tinggi, more than a half of the respondents (52.7%) had snacked more than 3 times in a week. This can be due to sociodemographic factor where highest respondents are among those who are unemployed. They tend to make snacking while watching television and while spending time at home.

Fruits and green leafy vegetables are rich in potassium, fibre, folic acid and vitamin A, E, and C. These nutrients are

essential for good health, maintenance of the body and prevention of certain diseases (National Coordinating Committee on Food and Nutrition, 2013). The majority of the our respondents ate vegetables more than 3 times per week (85.3%), slightly higher from previous study (81.8%) (Kurubaran et al., 2012). However, according to the Malaysian Dietary Guideline, recommended frequency of vegetable consumption among Malaysian is 3 serving per day and 2 serving of fruit per day (National Coordinating Committee on Food and Nutrition, 2013). In our study, 58.9% eat fruit more than 3 times per week, which is 10.4% higher than the previous study (Kurubaran et al., 2012). The intake value is lower than recommended can be due to their preferences to snacking more than eating fruits or vegetable. In our survey, some claimed that they practiced having vegetables per serving at every meal, but some did not because they did not eat vegetables or some of their family did not prefer it. Thus, promoting the consumption of fruits and vegetables based on the recommendations for all Malaysians may help diminish the expanding prevalence of non-communicable diseases, including type II diabetes, cardiovascular disease and cancer among Malaysian adults. In this way, the nation will be able to maintain good health status and wellbeing (National Coordinating Committee on Food and Nutrition, 2013).

Consumption of fatty food and fast food is not a good eating habit. Our study revealed that 62.0% consumed fried food more than twice in a week and 79.1% rarely consumed fast food. This data is slightly low as compared to the previous study which shows higher prevalence of respondents eating fried food more than twice in a week of 73.5% (Kurubaran et al., 2012). This can be due to environmental factor, in which those who live in the rural area tend to refuse oily food as compared to those living in urban areas. Cultural factor can also be a contributing factor for this data.

There is no significant association of smoking, exercise and BMI status with eating habit which contradicted to previous study stating that there is a significantly low eating score among smokers as compared to non-smokers (Kurubaran et al., 2012). The number of male smokers in Kampung Salak Tinggi is 19.4%, which is way less than the number of male smokers throughout Malaysia, which is 40% of men in Malaysia, probably due to the in availability of convenient stores just around the neighbourhood which could be difficult for them to purchase cigarettes (Institute for Public Health, 2011). Besides that, research has shown that 45% adults, especially urban inhabitants live in a monotonous lifestyle and consume unhealthy diets in contrast to rural people due to insufficiency of exercise and high consumption of diets rich in high calories (Mazlina M, Nor Z.H, 2014). However, this data is opposite from our survey conducted which shows 68.2% of the respondents of Kampung Salak do not do regular exercise. There is no significant association between exercise and BMI status and eating habit. Among the respondents of Kampung Salak, 68.2% do not do regular exercise and 34.1% of the respondents are obese. Rural areas experience an increased rate of obesity and overweight, yet many of the factions do not have the resources to tackle this very challenging health concern. Rural healthcare facilities are very unlikely to have the necessary healthcare members that they require such as nutritionists, dieticians, or weight monitoring specialists. Rural areas also lack proper exercise equipment such as treadmill, bench press or dumbbells encourage physical activity. If not equipment, then facilities such as playground or a park should be available for the folks to exercise.

However, we found that there is an association between eating habits and income status of the respondents. Among all income status groups, those with income of <RM3000 and those with income of RM3000-RM5000 shows the most

significant mean difference with eating habit. Unfortunately, there is no other study that can support these findings. In our opinion, they grow their own crops, mostly consisting of vegetables, fruits and consume less poultry and meat. This explains why the community with income less <RM3000 and those income of RM3000-RM5000 have a good eating habit.

We studied on the psychological factor affecting eating. Environmental factor is one of the factors affecting the psychological factor and subsequently affect their eating habits. Based on the results of those who did snacking, they also wake up and eat leftovers in the kitchen. Besides that, the respondents also cannot control their cravings for food.

The main difference between psychological factor and eating habit is not significant except when waking up, going to the kitchen eating left over knowing it is there. The mean total score of those “waking up, going to the kitchen eating left over knowing it is there” was 6.11 ( $\pm 2.01$ ) And those who did not was 6.77 ( $SD \pm 1.47$ ). There is a significance of 0.04 which is lower than  $p=0.05$ . On the other hand, the highest mean total score is among those who ‘eat because of feeling bored’, 6.64 ( $SD \pm 1.68$ ) followed by those who ‘can’t control when it comes to food’ with 6.57 ( $SD \pm 1.77$ ) and those who ‘eat because of feeling lonely’ or ‘happy’ with a mean total score of 6.50 ( $SD \pm 1.80$ ), 6.50 ( $SD \pm 1.67$ ) respectively. As most of the respondents are unemployed, the group who eats because of feeling bored recorded the highest mean total score followed by others. They have ample of time to be at home and feel bored without any activities to do. With records of 52.7% among the respondents who do snacking, they have the tendency to be in the group of those who ‘can’t control when it comes to food’.

#### 4.0 CONCLUSION AND RECOMMENDATION

We investigated on the eating pattern of the community of Kampung Salak

Tinggi. We observed that as a whole, the respondents from this study, practice good eating habits except in regular meals, frequency of eating snacks and fried food. Besides that, the majority of the respondents does not have any psychological association to eating habits. We would like to recommend to the community to follow the instructions on the Malaysian Dietary Guideline to practice good eating habits and also to follow the food pyramid accordingly.

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