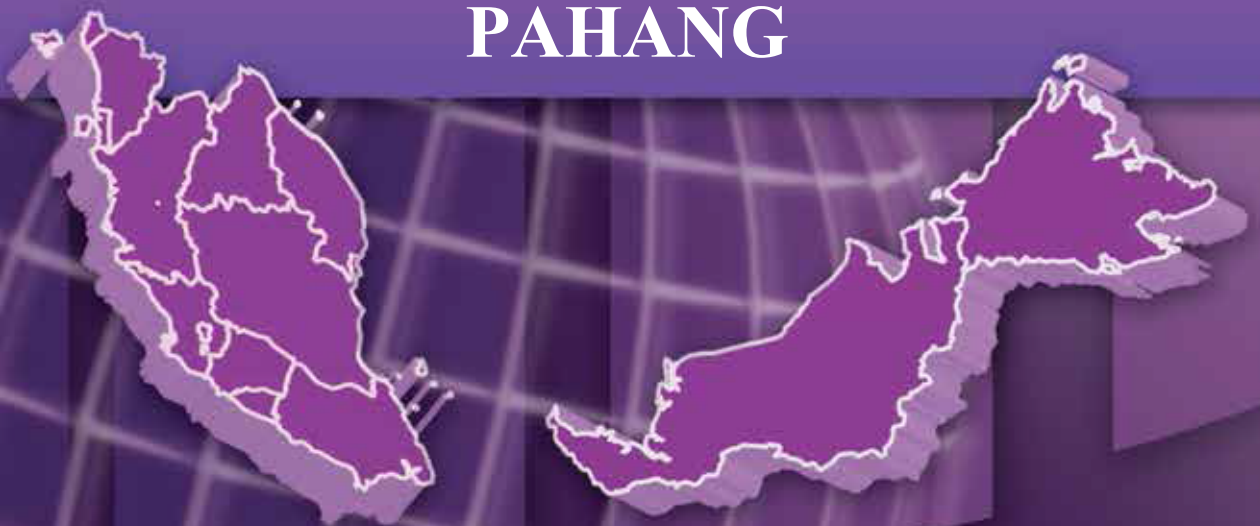


NATIONAL HEALTH AND MORBIDITY SURVEY 2017

ADOLESCENT NUTRITION SURVEY

PAHANG



THE NATIONAL HEALTH AND MORBIDITY SURVEY 2017

ADOLESCENT NUTRITION SURVEY 2017

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The following persons had contributed in the interpretation of findings, discussion on implication, conclusion and/or drawing recommendations for this report.

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Table of Contents

Acknowledgement	i
List of Tables	v
List of Appendices	ix
Executive Summary	x
1.0 Introduction	1
1.1 Objectives.....	4
1.1.1 General Objectives	4
1.1.2 Specific Objectives.....	4
1.2 The NHMS 2017 Organisation Team.....	4
1.2.1 NHMS Steering Committee	4
1.2.2 Central Coordinating Team (CCT).....	5
1.2.3 Research Team Members.....	5
1.2.4 State Liaison Officers and Data Collection Team	5
2.0 Methodology	7
2.1 Target Population	7
2.2 Sampling Frame	7
2.3 Sample Size Determination.....	7
2.4 Sampling Design.....	8
2.5 Ethical Approval	9
2.6 Data Collection.....	9
2.7 Data Management	9
2.7.1 Data Operation Centre	9
2.7.2 Data Analysis	11
2.8 Survey Instruments	11
3.0 Findings	12
3.1 General Findings	12
3.2 Nutritional status among adolescents (Primary 4 to Secondary 5) in Pahang.....	15
3.2.1 Introduction.....	15
3.2.2 Objectives	15
3.2.3 Variable definition	15

3.2.4 Findings.....	15
3.2.4.1 Height-for-Age z-score	15
3.2.4.2 BMI-for-Age z-score.....	16
3.2.5 Conclusion	16
3.2.6 Recommendation	17
3.3 Perception on body weight management among adolescents (Primary 4 to Secondary 5) in Pahang.....	21
3.3.1 Introduction.....	21
3.3.2 Objective.....	21
3.3.3 Variable definition	21
3.3.4 Findings.....	22
3.3.5 Discussion/Conclusion.....	23
3.3.6 Recommendation	23
3.4 Meal pattern among adolescents (Primary 4 to Secondary 5) in Pahang.....	43
3.4.1 Introduction.....	43
3.4.2 Objective.....	43
3.4.3 Variable Definition.....	44
3.4.4 Findings.....	45
3.4.5 Discussions/Conclusion	45
3.4.6 Recommendation	46
3.5 Physical activity among adolescents (Primary 4 to Secondary 5) in Pahang	116
3.5.1 Introduction.....	116
3.5.2 Objectives	116
3.5.3 Variable definitions	116
3.5.4 Findings.....	117
3.5.5 Discussion	117
3.5.6 Conclusion	117
3.5.7 Recommendations.....	118
3.6. Supplements intake among adolescents (Primary 4 to Secondary 5) in Pahang	125
3.6.1 Introduction.....	125
3.6.2 Objectives	125
3.6.3 Findings.....	126

3.6.4 Discussions.....	126
3.6.5 Conclusions.....	126
3.6.6 Recommendation	126
3.7 Food and nutrition labeling among adolescents (Secondary 1 to Secondary 5) in Pahang	145
3.7.1 Introduction.....	145
3.7.2 Objective.....	145
3.7.3 Variable definitions	146
3.7.4 Findings.....	147
3.7.4.1 Prevalence of practise reading food labels when buying or receiving food/drink among adolescents in Pahang	147
3.7.4.2 Reasons for not reading food and nutrition labelling among adolescents in Pahang	147
3.7.4.3 Types of nutrition fact information (energy, carbohydrate/ sugar, fat, protein, sodium, vitamin, mineral and fiber content) that read from the food labels.....	147
3.7.4.4 Types of information (expiry date, nutrition claim, nutrition facts, halal logo, food ingredients and storage instruction) read from the food labels.	147
3.7.4.5 Understanding of nutrition facts among adolescents in Pahang.....	148
3.7.4.6 Understanding of front of pack labelling among adolescents in Pahang .	148
3.7.4.7 Understanding of the mostly and the least used ingredients based on the food ingredient list among adolescents in Pahang.....	148
3.7.5 Discussion/Conclusion.....	148
Appendices	168

List of Tables

METHODOLOGY

Table 2.1 Distribution of Secondary and Primary Schools Sampled by State, NHMS 2017

FINDINGS

Table 3.1.1 Response Rate at Student Level for Adolescent Nutrition Survey by State, NHMS 2017

Table 3.1.2 Comparison between NHMS 2017 respondents and national enrolment of school students in Malaysia 2017

NUTRITIONAL STATUS AMONG ADOLESCENTS (PRIMARY 4 TO SECONDARY 5) IN PAHANG

Table 3.2.1 Distribution of adolescents according to Height-For-Age (HAZ) Z-score by socio-demographic characteristics

Table 3.2.2 Distribution of adolescents according to BMI-For-Age status by socio-demographic characteristics

PERCEPTION OF WEIGHT MANAGEMENT AMONG ADOLESCENTS (PRIMARY 4 TO SECONDARY 5) IN PAHANG

Table 3.3.1 Body weight perception among adolescents by socio-demographic characteristics

Table 3.3.2 Body weight perception among adolescent by actual BMI for age status.

Table 3.3.3 Action taken according to correctly perceived body weight among adolescents.

Table 3.3.4 Action taken according to misperception of body weight among adolescents

Table 3.3.5 Main factors that motivate to lose body weight among adolescents by socio-demographic characteristics

Table 3.3.6 Main factor that motivate to increase body weight among adolescents by socio-demographic characteristics

Table 3.3.7 Preferred option to lose body weight among adolescents by socio-demographic characteristics

Table 3.3.8 Preferred option to increase body weight among adolescents by socio-demographic characteristics

MEAL PATTERN AMONG ADOLESCENTS (PRIMARY 4 TO SECONDARY 5) IN PAHANG

Table 3.4.1 Prevalence of breakfast per week among adolescents by socio-demographic characteristics and nutritional status

Table 3.4.2 Source of food for breakfast among adolescents by socio-demographic characteristics and nutritional status

Table 3.4.3	Reasons for skipping breakfast among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.4	Prevalence of lunch per week among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.5	Source of food for lunch among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.6	Reasons for skipping lunch among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.7	Prevalence of dinner per week among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.8	Source of food for dinner among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.9	Reasons for skipping dinner among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.10	Prevalence of eating and/or drinking during recess time per week among adolescents by socio-demographics and nutritional status
Table 3.4.11	Source of food during recess time among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.12	Prevalence of afternoon tea per week among adolescents per week by socio-demographic characteristics and nutritional status
Table 3.4.13	Source of food for afternoon tea among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.14	Prevalence of heavy meal after dinner per week among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.15	Source of food for eating heavy meal after dinner among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.16	Prevalence of fast food consumption per week among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.17	Practice of bring food to school among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.18	Type of food usually bring to school among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.19	Practice of bring drinks to school among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.20	Type of drinks usually bring to school among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.21	Spending of pocket money among adolescents by socio-demographic characteristics and nutritional status

Table 3.4.22	Prevalence of eating out in a week among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.23	Prevalence of consuming snack food in a week among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.24	Type of snack foods usually consumed among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.25	Prevalence of snack food and/or drinks usually bought out of school area in a week among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.26	Type of snack food and/ or drinks usually bought out of school area among adolescents by socio-demographic characteristics and nutritional status
Table 3.4.27	Media sources which affected dietary pattern among adolescents by socio-demographic characteristics and nutritional status

PHYSICAL ACTIVITY AMONG ADOLESCENTS (PRIMARY 4 TO SECONDARY 5) IN PAHANG

Table 3.5.1	Mean total scores in PAQ-C among adolescents within last 7 days by socio-demographic characteristics and BMI - for - age status
Table 3.5.2	Distribution of adolescents according to physical activity level within last 7 days by socio-demographic characteristics and BMI - for - age status
Table 3.5.3	The five most preferred physical activities during spare time within the last 7 days based on the proportion of adolescents participated in it
Table 3.5.4	Level of participation in physical education (PE) classes among adolescents within last 7 days by socio demographic characteristics and BMI - for-age status
Table 3.5.5	Length of time spent per day on watching television, using computer and playing video games at weekends among adolescents by socio-demographic characteristics and BMI-for-age status
Table 3.5.6	Length of time spent per day on watching television, using computer and playing video games on schooling days among adolescents by socio-demographic characteristics and BMI-for-age status

VITAMIN/MINERAL AND FOOD SUPPLEMENT INTAKES AMONG ADOLESCENTS (PRIMARY 4 TO SECONDARY 5) IN PAHANG

Table 3.6.1	Prevalence of adolescents taking vitamin/ mineral supplements by socio-demographic characteristic
Table 3.6.2	Types of vitamin/ mineral usually consumed among adolescents by socio-demographic characteristics
Table 3.6.3	Reasons for taking vitamin/ mineral among adolescents by socio-demographic characteristics

Table 3.6.4	Frequency of taking vitamin/ mineral among adolescents by socio-demographic characteristics
Table 3.6.5	Prevalence of adolescents taking food supplements by socio-demographic characteristic
Table 3.6.6	Types of food supplement usually consumed among adolescents by socio-demographic characteristics
Table 3.6.7	Reasons for taking food supplements among adolescents by socio-demographic characteristics
Table 3.6.8	Frequency of taking food supplements among adolescents by socio-demographic characteristics

FOOD AND NUTRITION LABELLING AMONG ADOLESCENTS (SECONDARY 1 TO SECONDARY 5) IN PAHANG

Table 3.7.1	Prevalence of reading food and nutritional labelling when buying or receiving food/drink
Table 3.7.2	Reason for not reading food label among adolescents
Table 3.7.3a	Prevalence of reading nutrition information (macronutrient) among those who read food label (Yes, always/ Yes, sometimes)
Table 3.7.3b	Prevalence of reading nutrition information (micronutrient/fiber) among those who read food label (Yes, always/ Yes, sometimes)
Table 3.7.4	Prevalence of reading food label among those who read food label (Yes, always/ Yes, sometimes)
Table 3.7.5	Prevalence of understanding on the interpretation calorie and sugar content on the nutrition labelling among adolescents
Table 3.7.6	Prevalence of understanding on correct interpretation of front of pack labelling for energy among adolescents
Table 3.7.7	Prevalence on the understanding of food ingredients among adolescents

List of Appendices

Appendix 1	Members of Steering Committee NHMS 2015-2018
Appendix 2	Terms of Reference for NHMS 2015-2018 Steering Committee
Appendix 3	List of members of Central Coordinating Committee
Appendix 4	Terms of Reference for NHMS 2017 Central Coordinating Team
Appendix 5	List of Research Team Members, NHMS 2017
Appendix 6	List of Data Collection Teams
Appendix 7	Questionnaires
Appendix 8	Consent Form
Appendix 9	List of Abbreviations

Executive Summary

The Adolescent Nutrition Survey (ANS) is the second nation-wide study among adolescents in Malaysia after the Malaysia School-based Nutrition Survey (MSNS) 2012. There are three main scopes in this survey which are Adolescent Nutrition Survey (ANS), Habitual Food Intake and Dietary Intake. ANS consists of six topics such as nutritional status, body weight perception, meal pattern, physical activity, vitamin/mineral, food supplement intakes and food and nutrition labelling. This survey was conducted at 311 randomly selected schools in all states including three federal territories in Malaysia. This school-based survey was a cross-sectional study involving school-going adolescents aged Primary 4 To Secondary 5 attending school in Malaysia. A multistage stratified cluster sampling design was used to recruit national representative samples from students in Standard 4 to 6 (10-12 years of age) and Form 1 to 5 (13-17 years of age). The survey was conducted using self-administered questionnaires. Total response rates for self administered questionnaire were 89.5% for ANS.

Based on the indicator height for age (HAZ), the prevalence of normal height ($HAZ \geq -2SD$) was 90.5% and stunting was 9.5%. The prevalence of stunting was higher in rural areas (11.9%) as compared to urban areas (6.7%). In terms of BMI for age (BAZ), the prevalence of thinness was 6.7%, overweight was 16.3 % and obesity was 16.5%.

Among those school-going adolescents who had actual normal weight, 51.1% correctly perceived their weight to be normal. Among those who were actually thin, 78.3% correctly perceived their weight to be thin, while among those who were actually overweight and obese, 50.5% and 12.6% correctly perceived themselves to be overweight and obese respectively. Health was the main reason among those who wanted to lose and gain weight; with 55.9.3% preferring exercise as an option to lose weight; 52.4% wanted to increase quantity of food to gain weight.

As for meal pattern, the prevalence of breakfast intake for seven days per week among adolescents was 26.1%. The majority of them had breakfast one to six days per week (63.7%) and some of them did not having breakfast in a week (10.2%). Among those who had breakfast, 62.0% had it at home. Adolescents from urban areas (30.7%) reported having breakfast daily (seven days per week), higher than rural areas (22.2%). The two main reasons of skipping breakfast were no appetite (44.4%) and no time (32.7%).

The prevalence of having lunch seven days per week among school-going adolescents was 45.0%; 51.1% had lunch up to six days per week and 3.9% did not have lunch in a week. No appetite (48.0%) and no time (16.8%) were the two main reasons for skipping lunch. As for dinner, 48.5% of school-going adolescents had dinner seven days per week, 48.1% 1-6 days per week and 3.4% did not have dinner in a week. Only 5.7% took heavy meals after dinner seven days per week. There were 2.5% who had fast food daily and 11.8% did not have fast

food. Social media (YouTube, Facebook, Instagram, etc.) and television were reported as the main sources which affected dietary pattern in 39.2% and 38.9%. A percentage of 25.5% reported that their dietary patterns were not affected by any media sources.

The prevalence of physical activity among school-going adolescents in Pahang was 48.9%. Boys and younger adolescents were more active than girls and older adolescents. The most favourite activities during spare time were walking for exercise, jogging / running, badminton, tagging and cycling. More adolescents watched television, played computer or video games over the weekend compared to schooling days.

The prevalence of vitamin/minerals and food supplements intake among adolescence in Pahang was 43.8% and 29.9%. There was no significant difference of vitamin/mineral and food supplement intakes between boys and girls, ethnicity, school classes and localities. In average, the vitamin/mineral and food supplements were consumed everyday by 14.5% and 11.0% by adolescents in Pahang respectively. The most commonly consumed vitamin/minerals and food supplements were Vitamin C, 36.3% and bee product, 19.0%. The main reason for taking vitamin/minerals and food supplements was due to parents advised, with 43.9% and 29.0% respectively.

Food and nutrition labelling use was assessed among secondary school-going adolescents; 32.1% always reading food and nutrition labelling. Another 56.4% reported as sometimes and only 11.5% never reading food label. They were more concerned about fat and total energy compared to other nutrients. 44.2% of adolescents both answered correctly on nutrition facts and 23.6% of adolescents answered correctly questions regarding the front of pack labelling and only 6.6% answered both correctly regarding the most and least ingredients based on the food ingredient list.

1.0 Introduction

Adolescence is a period of transition between childhood and adulthood. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19 (WHO, 2014). Adolescence is a critical period because major biological and psychological changes occur during a very short period of time.

Adolescent health should be given attention because adolescents are the future generation of any country and their health statuses are critical for the well-being of society. Chronic malnutrition is one of the major health problems encountered by adolescents living in developing countries (World Health Organization, 2006). The high rate of malnutrition in girls not only contributes to increased morbidity and mortality associated with pregnancy and delivery but also to increased risk of delivering low birth-weight babies (World Health Organization, 2006). This contributes to the intergenerational cycle of malnutrition.

The nutritional issue in adolescents should be prioritized because growth during adolescence is at a fast pace. Adequate nutrition during adolescence is important to cover the deficits suffered during childhood. Moreover, extra micro and macro-nutrients are required to meet the demands of physical and cognitive growth, as well as provide adequate stores of energy for illnesses and pregnancy. To a more important extent, epidemiological evidence proved that there is a link between child and adolescent poor nutritional status and increased risk of various chronic diseases during adulthood (Case, Fertig, & Paxson, 2005).

Due to the targets of the first Millennium Development goal to "eradicate extreme poverty and hunger, the underweight prevalence in children was projected to decline from 26.5% in 1990 to 17.6% in 2015 across the world and specifically in developing regions; the prevalence was forecasted to decline from 30.2% to 19.3% (Onis, Blossner, Borghi, Frongillo, & Morris, 2004). Undernutrition rate in Malaysian children also showing a decreasing pattern. Data from the Third National Health and Morbidity Survey (NHMS III) 2006 in Malaysia found that the prevalence of underweight, stunted and thinness in children below 18 years old were 13.2%, 15.8% and 7.8% respectively (Institute of Public Health (IPH), 2008). However, these conditions were generally improved when NHMS 2015 showed that the prevalence of underweight, stunting and thinness were reduced to 13.0%, 13.4% and 7.8% respectively (IPH, 2015). NHMS 2011 reported that the national prevalence of thinness among adolescents specifically was 9.7% (IPH, 2011)

Recently, a systematic review reported that the prevalence of overweight and obesity among adolescents worldwide is high, and obesity is higher among boys (Bibiloni, Pons, & Tur, 2013) and Malaysia is showing a similar pattern as well. The prevalence of obesity among children was only 5.7% in the year 2006 (IPH, 2008) and it drastically increased to 11.9% in the year 2015 (IPH, 2015). NHMS in the year 2011 showed that the nationwide prevalence of obesity in adolescent age 10 – 17 was 5.7% (IPH, 2011).

High-calorie intake and sedentary lifestyle are two common behavioral factors related to childhood obesity. Childhood and adolescent obesity are an epidemic and should be given attention because they are associated with various medical chronic conditions in adulthood (Sahoo et al., 2015). Reading food labelling prior to food purchasing can help adolescents in making healthier choices on packaged snacks. However, use of nutritional labelling was found to be low among adolescents (Wojcicki & Heyman, 2012). Thus, Adolescent Nutrition Survey NHMS 2017 aims age 10 – 17 years old to continue exploring issues pertaining to nutrition related component in adolescents in Malaysian such as nutritional status, body weight perception, meal pattern, habitual food intake, dietary intake, physical activity level, vitamin/mineral and food supplement intake and food and nutrition labelling.

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1.1 Objectives

1.1.1 General Objectives

To determine the prevalence of nutritional status, body weight perception, habitual food intake, dietary intake, meal pattern, physical activity level, vitamin/mineral and food supplements and food and nutrition labelling among adolescents in Malaysia.

1.1.2 Specific Objectives

1.1.2.1 To determine the prevalence of nutritional status among of adolescents (Standard 4 to Form 5).

1.1.2.2 To assess self-perception on body weight and intentions on weight management among adolescents (Primary 4 to Secondary 5).

1.1.2.3 To determine the meal pattern among of adolescents (Primary 4 to Secondary 5).

1.1.2.4 To assess physical activity pattern of adolescents (Primary 4 to Secondary 5).

1.1.2.5 To determine the pattern of use of vitamin/mineral and food supplements among adolescents (Primary 4 to Secondary 5).

1.1.2.6 To determine the prevalence of reading food and nutrition labelling among adolescents (Secondary 1 to Secondary 5).

1.2 The NHMS 2017 Organisation Team

The organisation of NHMS 2017 was set up at various levels of the Ministry of Health and Ministry of Education in order to conduct this survey.

1.2.1 NHMS Steering Committee

The NHMS Steering Committee, chaired by the Director-General of Health was set up at the national level to approve scopes of the NHMS 2015-2018 and to facilitate implementation of the survey. The members and terms of reference of this committee are shown in **Appendix 1** and **Appendix 2**.

1.2.2 Central Coordinating Team (CCT)

A working committee within the Institute for Public Health was established to coordinate implementation of the survey according to the scheduled Gantt chart. The Operation Centre was set up and led by the CCT team for coordinating and monitoring progress of the survey.

The list of CCT members and terms of reference are shown in **Appendix 3** and **Appendix 4**. **Figure 1** detailed the organisation chart at the Institute for Public Health level. Adolescent Nutrition Survey was part of NHMS 2017 using the sample from primary and secondary schools.

1.2.3 Research Team Members

Research team members for each sub-scope were established and headed by a key-person (among IPH officers) together with the relevant stakeholders and universities. Research team members were responsible for the technical input in development of the questionnaire manual, variable definition, data analysis and writing of the final report.

The list of members for each research teams are shown in **Appendix 5**.

1.2.4 State Liaison Officers and Data Collection Team

A State Liaison Officer (Nutritionist) was appointed in each State to facilitate planning and implementation of data collection within the States. The list of State Liaison Officers and Data Collection Teams are shown in **Appendix 6**.

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

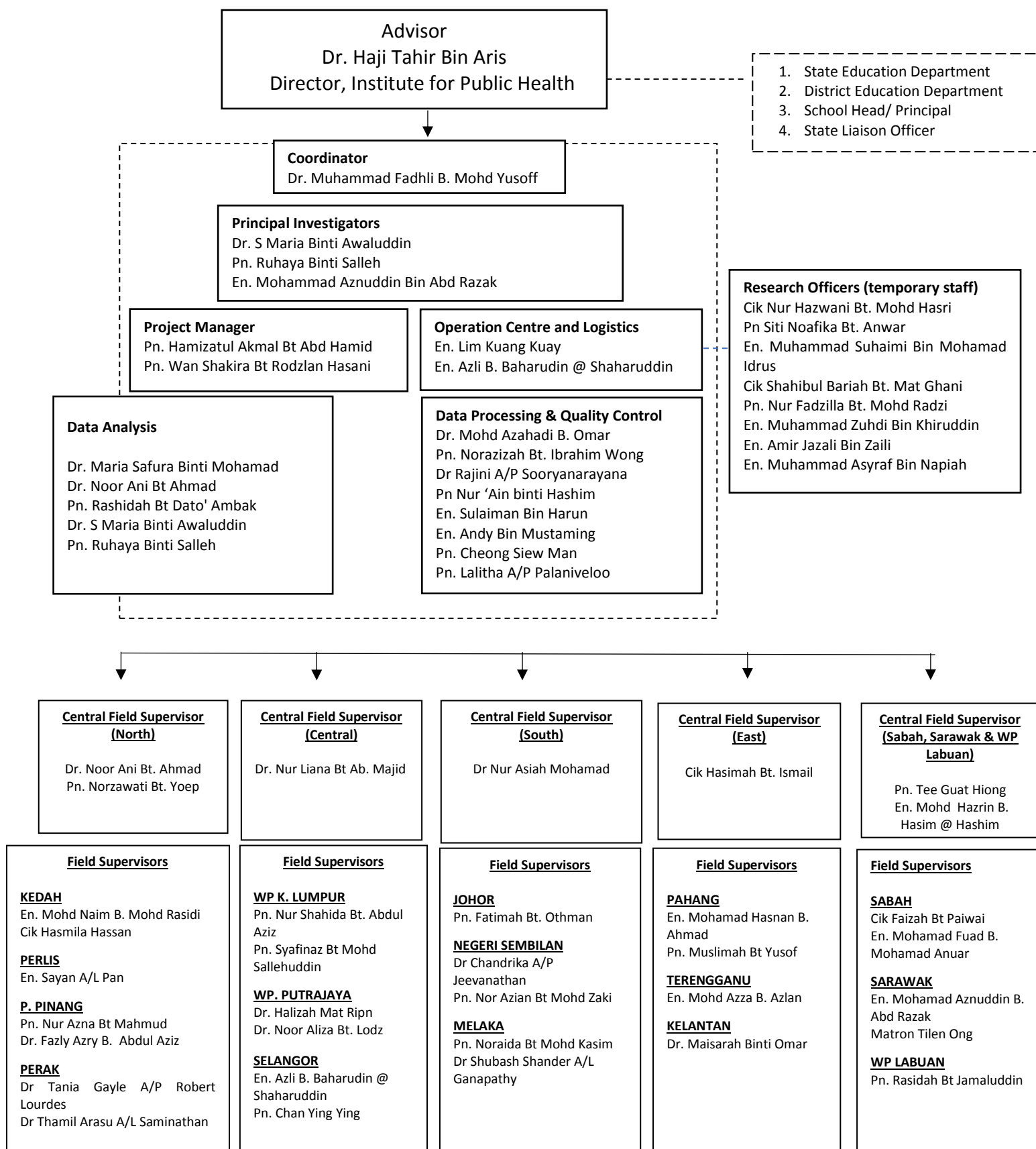


Figure 1: Organisation chart for data collection teams NHMS 2017

2.0 Methodology

Methodology and Sampling Design

Three main scopes of research were incorporated in the survey, namely the Adolescent Nutrition Survey (ANS), Habitual food intake and Dietary Intake.

2.1 Target Population

Generally, the Adolescent Nutrition Survey 2017 was conducted at all 16 states including three federal territories in Malaysia. This school-based survey was a cross-sectional study involving school-going adolescents aged 10 to 17 years old attending public and private schools.

2.2 Sampling Frame

The sampling frame in this survey was a list of primary and secondary schools from the Ministry of Education. Students' enrolment data of 2016 from Standard 4 until Standard 6 (primary school) and Form 1 until Form 5 (secondary school) were used. There were 7926 primary schools and 2688 secondary schools in 2016. Both public and private schools were included in the sampling frame.

2.3 Sample Size Determination

Sample size was calculated using a single proportion formula for estimation of prevalence.

$$n_{SRS} \geq \frac{Z^2_{\alpha/2} (p)(1-p)}{e^2}$$

The sample size calculation was based on a few criteria as below:

1. Variance of proportion of the variable of interest (Based on Malaysia School-Based Nutrition Survey 2012)
2. Margin of error (e) (Between 0.01 to 0.05)
3. Confidence Interval of 95%

To ensure optimum sample size, a few adjustments were made as follows:

1. Adjusted $n(srs)$ for the total number of target population (N) (based on the population size for schoolchildren in 2016)

$$n \geq \frac{n_{SRS}}{1 + \frac{n_{SRS}}{N}}$$

2. Adjusted for the design effect (deff) (based on previous survey: MSNS 2012), $n(\text{complex}) = n * \text{deff}$
3. Adjusted the $n(\text{complex})$ taking into account expected non-response rate of 25%, $n(\text{adj}) = n(\text{complex}) * (1 + \text{non-response rate})$

4. The sample size was then adjusted according to the need of the analysis, whether the estimate was going to be done at the national or the state level.

Based on the requirements for the objectives and abovementioned considerations, the optimum sample size required was 30,496 respondents for secondary schools and 14,000 respondents for primary schools (**Table 2.1**).

Table 2.1: Distribution of Secondary and Primary Schools Sampled by State, NHMS 2017

No.	State	Secondary			Primary		
		Total Number of Schools	Number of Schools Sampled	Number of students sampled	Total Number of Schools	Number of Schools Sampled	Number of students sampled
1	Johor	306	14	1906	921	6	875
2	Kedah	219	14	1906	552	6	875
3	Kelantan	193	14	1906	423	6	875
4	Melaka	87	14	1906	236	6	875
5	Negeri Sembilan	139	14	1906	352	6	875
6	Pahang	209	14	1906	543	6	875
7	Pulau Pinang	141	14	1906	275	6	875
8	Perak	275	14	1906	852	6	875
9	Perlis	33	14	1906	73	6	875
10	Selangor	345	14	1906	727	6	875
11	Terengganu	162	14	1906	354	6	875
12	Sabah	246	14	1906	1,090	8	875
13	Sarawak	220	14	1906	1,274	7	875
14	WP Kuala Lumpur	133	14	1906	227	6	875
15	WP Labuan	19	8	1906	12	6	875
16	WP Putrajaya	11	8	1906	14	6	875
Total		2,738	212	30,496	7,925	99	14,000

2.4 Sampling Design

This survey implemented a multistage stratified cluster sampling design to ensure nationally representative sample of Standard 4 to 6 (10-12 years of age) and Form 1 to 5 (13-17 years of age). Malaysia was stratified into 16 states (including Federal Territory of Kuala Lumpur, Putrajaya and Labuan). The first stage of sampling involved a random selection of school from list of eligible schools provided by Ministry of Education. Schools were selected randomly with probability proportional to school enrolment size. A total of 311 schools were selected to participate in this survey. The second stage of sampling was selection of classes. All classes in each selected school were included in the sampling frame. Systematic random sampling was

used to select classes from each selected school. All students in the selected classes were eligible to participate in the survey. The third stage of sampling was applied for Habitual food intake module and Dietary Intake. Students were selected randomly from each selected class.

2.5 Ethical Approval

This study was approved by the Ministry of Health, Research and Ethics Committee and Ministry of Education Ethics Committee. Approval was also obtained from the relevant Ministry of Education officials at the state and district levels including the selected school itself. Prior to the survey, several meetings with the relevant Ministry of Education officers and person in-charge at the selected school were carried out. Consent form were obtained from parents and the students.

2.6 Data Collection

A total 36 teams were set up, 4 teams for Sabah and Sarawak and the remaining states 2 teams per state. They consist of a field supervisor, research assistants and a driver. The field supervisor was a permanent staff in Ministry of Health.

An initial data collection by the core team members was initiated to observe the flow of data collection on 06 March 2017. The data collection training was conducted for Peninsular in Kuala Lumpur and Sabah, Sarawak and WP Labuan in Kuching, Sarawak simultaneously. Data collection was conducted from 26 March to 03 May 2017.

2.7 Data Management

Quality check on data was conducted throughout the survey based on specific identification (ID) numbers; from the state ID until individual student ID (generated for the study). Upon completing the survey, each student placed his / her answer sheet in an envelope. All answer sheets from the same school were wrapped together to make a bundle. These bundles were collected by assigned drivers for schools in Peninsular Malaysia or using tracked postage for schools in Sabah, Sarawak and WP Labuan.

2.7.1 Data Operation Centre

An operation centre with several stations was set up to receive data “bundles” from the field:

Station 1: Respondent ID checking

Station 2: Scanning

Station 3: Verification

Station 4: Storage

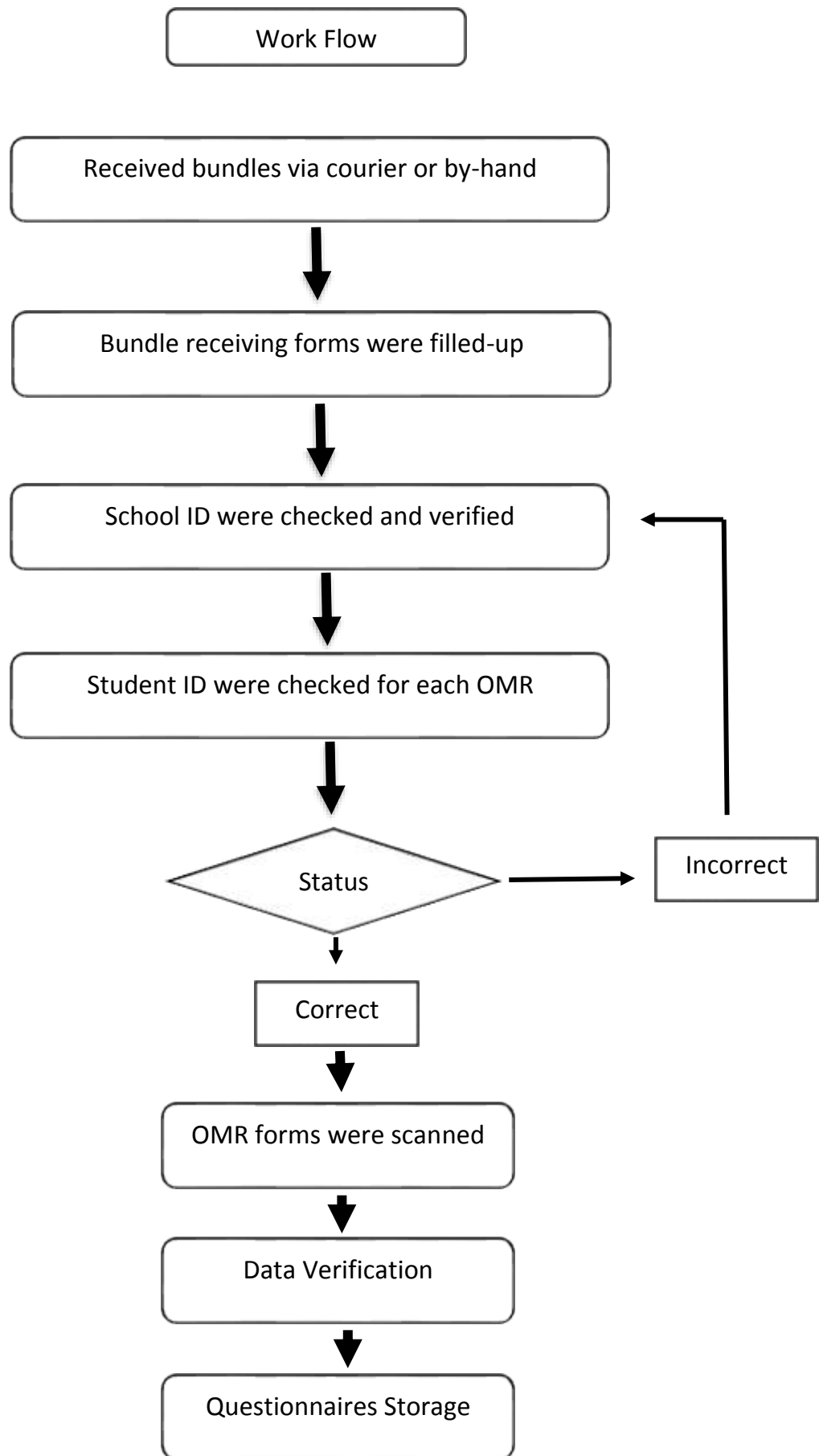


Figure 2: Work Flow of NHMS 2017

2.7.2 Data Analysis

The data set was checked, cleaned and edited for inconsistencies. Data analysis was done using SPSS version 21 by importing the raw dataset which normally in CSV form or excel. The analysis was done according to the objectives, and dummy tables prepared. Complex samples analysis procedures were used in the analysis and was carried out at 95% confidence interval. Finally, the data is representative of all students attending school from Standard 4 to Form 5 in Malaysia.

A weighting factor was applied to each student record to adjust the varying probabilities of selection and for the non-response. The weight used for estimation is given by:

$$W = W1 \times W2 \times W3 \times F \times PS$$

Where;

W1 = the inverse of the probability of selecting the school

W2 = the inverse of the probability of selecting the class within the school

W3 = the inverse of the probability of selecting the student within the class

F = the inverse of a school, class and student level non-response adjustment factor

PS = a post stratification adjustment factor calculated by class and gender

2.8 Survey Instruments

Validated self-administered questionnaires with computer-scanned answer sheets were used. Students' privacy was ensured as the answer sheet were anonymous. The majority of the students completed the survey within two class periods.

The ANS questionnaire contained sub topic which is nutritional status, body weight perception, meal pattern, physical activity level, Vitamin/Mineral and Food Supplement and Food and Nutrition Labelling.

3.0 Findings

3.1 General Findings

A total of 40,087 questionnaires were completed by the respondents for this survey and the response rate was 89.5%. The schools' and classes response rate was 100% respectively, while the students' response rate was 89.5%. (**Table 3.1.1**).

Table 3.1.1: Response Rate at Student Level for Adolescent Nutrition Survey by State, NHMS 2017

State	Selected School	Eligible Student	Interviewed Student	Response Rate (%)
Malaysia	311	44,773	40,087	89.5
Johor	20	2,829	2,565	90.7
Kedah	20	2,790	2,490	89.2
Kelantan	20	2,776	2,464	88.8
Melaka	20	2,862	2,685	93.8
Negeri Sembilan	20	2,823	2,431	86.1
Pahang	20	2,822	2,563	90.8
Pulau Pinang	20	2,846	2,547	89.5
Perak	20	2,832	2,527	89.2
Perlis	20	2,869	2,496	87.0
Selangor	20	2,721	2,503	92.0
Terengganu	20	2,738	2,437	89.0
Sabah	22	2,855	2,437	85.4
Sarawak	21	2,791	2,534	90.8
WP Kuala Lumpur	20	2,699	2,410	89.3
WP Labuan	14	2,789	2,525	90.5
WP Putrajaya	14	2,731	2,473	90.6

Comparison of total estimated population (weighted) with the national school enrolment is shown in **Table 3.1.2** Geographic information system (GIS) on the mapping of selected primary and secondary schools is shown in **Figure 3**.

Table 3.1.2: Comparison between NHMS 2017 respondents and national enrolment of school students in Malaysia 2017

	NHMS 2017			School Enrolment 2017	
	n	Estimated Enrolment (weighted)	Prevalence (%)	Total Enrolment	Prevalence (%)
MALAYSIA	40087	3,480,500	100	3,480,439	100
State					
Johor	2565	439,369	12.6	439,406	12.6
Kedah	2490	250,426	7.2	250,388	7.2
Kelantan	2464	207,201	6	207,206	6
Melaka	2685	106,254	3.1	106,253	3.1
Negeri Sembilan	2431	139,235	4	139,242	4
Pahang	2563	174,713	5	174,721	5
Pulau Pinang	2547	178,446	5.1	178,453	5.1
Perak	2527	281,354	8.1	281,352	8.1
Perlis	2496	38,004	1.1	37,999	1.1
Selangor	2503	651,976	18.7	651,925	18.7
Terengganu	2437	158,658	4.6	158,645	4.6
Sabah	2437	331,295	9.5	331,298	9.5
Sarawak	2534	321,046	9.2	321,063	9.2
WP Kuala Lumpur	2410	177,937	5.1	177,902	5.1
WP Labuan	2525	9,604	0.3	9,602	0.3
WP Putrajaya	2473	14,982	0.4	14,984	0.4
Sex					
Male	19677	1,746,339	50.2	1,746,326	50.2
Female	20410	1,734,161	49.8	1,734,113	49.8
Form					
Standard 4	4617	448,352	12.9	448,329	12.9
Standard 5	4205	442,371	12.7	442,339	12.7
Standard 6	3777	443,262	12.7	443,262	12.7
Form 1	5702	450,996	13	451,024	13
Form 2	5499	426,921	12.3	426,908	12.3
Form 3	5834	431,004	12.4	431,043	12.4
Form 4	5536	414,703	11.9	414,653	11.9
Form 5	4917	422,891	12.2	422,881	12.2

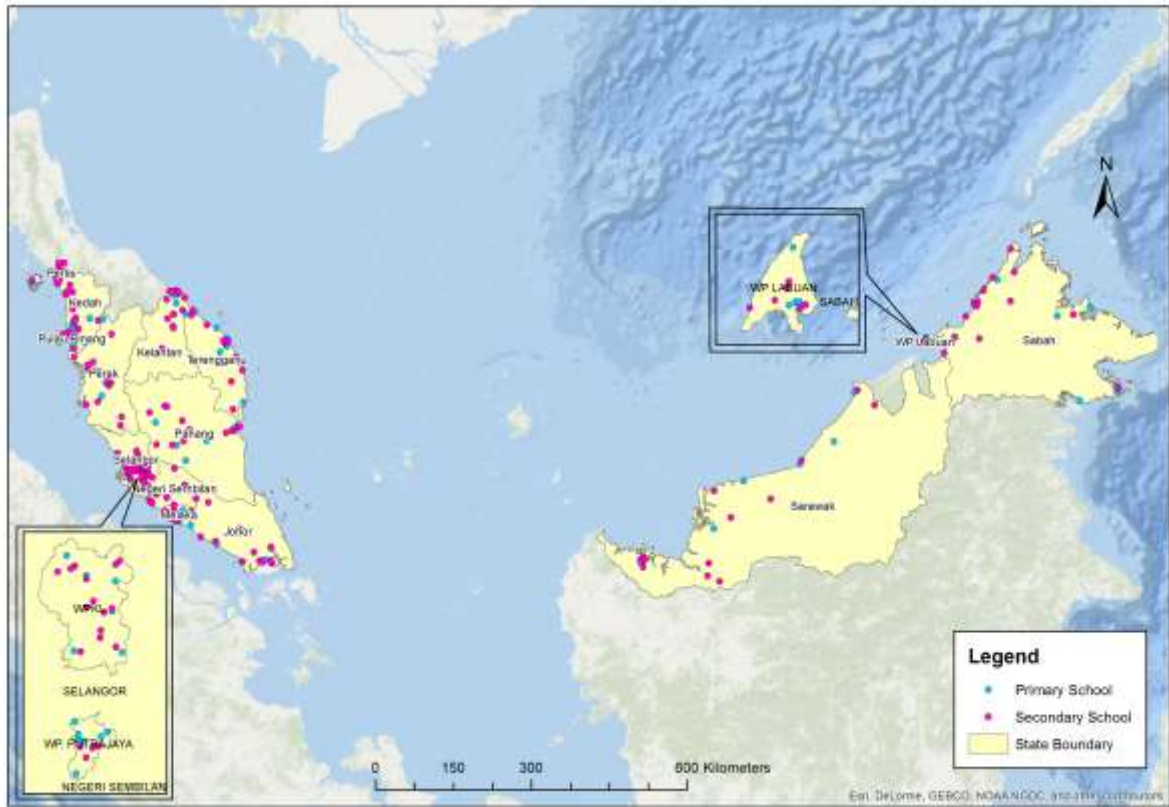


Figure 3: GIS mapping of the selected primary and secondary schools in Malaysia 2017

3.2 Nutritional status among adolescents (Primary 4 to Secondary 5) in Pahang

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3.2.1 Introduction

A good nutritional status contributes to healthy development of children. Anthropometric measurements are part of the nutritional status components in assessing body size and composition. It reflects on adequate, inadequate or excessive food intake. It is also a reflection of the individuals' activity level and disease status. Nutritional deprivation and excess may coexist, not only within the household but also within the community and across the country. Performing simple body measurements also helps specific individuals, families or communities for intervention, which could improve not only nutritional status but also their health as a whole.

3.2.2 Objectives

General objective:

To determine the nutritional status of adolescents (Primary 4 to Secondary 5).

Specific objective:

To determine the prevalence of stunting, thinness, normal weight, overweight and obesity among adolescents (Primary 4 to Secondary 5) in Malaysia according to socio-demographic characteristics.

3.2.3 Variable definition

The nutritional status of adolescents was identified based on the World Health Organization Growth Reference 2007 (WHO 2007)¹. The major indices referred to were:

- a. Height-for-Age z-score (for adolescents between (Primary 4 to Secondary 5), and
- b. BMI-for-Age z-score (for adolescents between Primary 4 to Secondary 5)

3.2.4 Findings

3.2.4.1 Height-for-Age z-score

The findings of the survey showed that 90.5% (95% CI: 88.33-92.25) of the adolescents had normal height-for-age status (HAZ: $\geq -2SD$ to $\leq +2SD$) which was lower than the national prevalence [91.8% (95% CI: 91.19, 92.29)]. Students from rural schools had higher percentage of stunting [11.9% (95% CI: 10.19, 13.89)] compared to students from urban schools [6.7% (95% CI: 4.40, 9.96%)]. The prevalence of overweight was not much different between boys [9.8% (95% CI: 7.45-12.74)] and girls [9.3% (95% CI: 7.47, 11.49)]. Comparing class categories,

students from secondary schools had a higher percentage of stunting [10.0% (95% CI: 7.55, 13.02)] compared to students from primary schools [8.9% (95% CI: 6.62, 11.94)].

3.2.4.2 BMI-for-Age z-score

In terms of BMI-for-age status, the findings showed that 60.4% (95% CI: 57.30, 63.48) of the population was in the normal range ($\geq -2SD$ to $\leq +1SD$) which was lower than the national prevalence [62.9% (95% CI: 61.84, 64.02)]. Students from urban schools had the same percentage of thinness [6.7% (95% CI: 5.53, 8.13)] as students from rural schools [6.7% (95% CI: 5.25, 8.47%)]. More boys [7.5% (95% CI: 6.13, 9.05)] were reported to be thinner than girls [5.9% (95% CI: 4.59, 7.64)]. In term of class categories, students in primary schools had a slightly higher percentage of thinness [7.4% (95% CI: 6.24, 8.67)] compared to students in secondary schools [6.2% (95% CI: 4.92, 7.89)].

On the other hand, the prevalence of overweight in Pahang (BMI-for-age: $\geq +1SD$ to $\leq +2SD$) was 16.3% (95% CI: 15.33, 17.39) which was higher than the national prevalence [15.6% (95% CI: 15.06, 16.19)]. Students from rural schools showed slightly higher prevalence of overweight [16.5% (95% CI: 15.15, 17.99)] than students from urban schools [16.1% (95% CI: 14.68, 17.64)]. Girls had higher prevalence of overweight [17.5% (95% CI: 15.32, 19.86)] than boys [15.2% (95% CI: 13.44, 17.12)]. In term of class categories, student from primary schools had slightly higher prevalence of overweight [16.7% (95% CI: 14.79, 18.80)] compared with students from secondary schools [16.1% (95% CI: 15.09, 17.13)].

For obesity (BMI-for-age: $> +2SD$), Pahang state had a higher prevalence [16.5% (95% CI: 14.33, 19.02)] compared to the national prevalence [14.8 (95% CI: 14.00, 15.73)]. Students from rural schools showed a higher prevalence of obesity [17.7% (95% CI: 14.49, 21.38)] than students from urban schools [15.2% (95% CI: 12.62, 18.12)]. Boy had higher prevalence of obesity [19.0% (95% CI: 16.03, 22.30)] compared to girls [14.1% (95% CI: 11.48, 17.23)]. In terms of class categories, 20.0% (95% CI: 18.67, 21.49) of primary school students were obese compared to 14.1% (95% CI: 11.51, 17.26) of secondary school students.

3.2.5 Conclusion

The prevalence of stunting for adolescents aged 10 to 17 years in Pahang was 9.5%. On the other hand, the prevalence of overweight and obesity among this population were 16.3% and 16.5% respectively. On the contrary, 6.7% of the population were found to experience thinness. High demand of energy and nutrient are very important for physical growth and development at this age. However, the concept of healthy eating and living should be practised at a younger age to ensure healthy physical and mental development. This could reduce the prevalence of stunting, thinness, overweight and obesity.

3.2.6 Recommendation

Thinness, overweight and obesity is still a problem that needs to be addressed for adolescents aged 10 to 17 years in Pahang. Various agencies have to take the initiative to set up an action plan to overcome this problem. Healthy eating and healthy living concepts should be integrated at an earlier age. It can be implemented by developing pro-health policies and regulations to create a health promoting environment in the work place, schools, public areas and even at home.

One of the suggested initiatives which involves collaboration between the Ministry of Health and the Ministry of Education is to empower the Parent and Teacher Association in schools to disseminate and implement healthy eating programs in schools. By doing this, the concept of healthy eating and living can be nurtured among the children during their school hours, and further practise and implement it at home and daily life.

Anthropometry is the measurement of physical dimensions such as height or weight, as well as the fat mass composition of the human body to provide information about a person's nutritional status. An index is a combination of two anthropometric measurements or an anthropometric measurement plus age. Anthropometry is a practical and immediately applicable technique for assessing person's development patterns. An evaluation also provides useful insights into the nutrition and health situation of entire population groups

References

1. World Health Organization, & World Health Organization. (2007). Growth reference data for 5-19 years. Geneva: WHO.
2. WHO Child Growth Standards: Methods and development: Length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age, World Health Organization, Switzerland, 2006

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.2.1: Distribution of adolescents according to Height-For-Age (HAZ) Z-score by sociodemographic characteristics

Characteristic	Stunting (<-2SD)					Normal (≥-2SD)				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	241	16622	9.5	7.75	11.67	2315	157706	90.5	88.33	92.25
Locality of School										
Urban	75	5261	6.7	4.40	9.96	1108	73706	93.3	90.04	95.60
Rural	166	11361	11.9	10.19	13.89	1207	84000	88.1	86.11	89.81
Sex										
Boys	117	8532	9.8	7.45	12.74	1149	78687	90.2	87.26	92.55
Girls	124	8090	9.3	7.47	11.49	1166	79019	90.7	88.51	92.53
Class										
Standard 4	19	1494	6.3	4.64	8.54	276	22164	93.7	91.46	95.36
Standard 5	22	2606	11.1	6.95	17.36	174	20794	88.9	82.64	93.05
Standard 6	25	2232	9.3	5.90	14.48	261	21661	90.7	85.52	94.10
Form 1	25	1890	8.8	4.29	17.22	278	19571	91.2	82.78	95.71
Form 2	15	1014	4.8	2.34	9.74	320	19972	95.2	90.26	97.66
Form 3	41	2256	10.9	7.53	15.42	338	18512	89.1	84.58	92.47
Form 4	35	2104	10.6	7.06	15.75	314	17657	89.4	84.25	92.94
Form 5	59	3026	14.8	10.26	20.96	354	17375	85.2	79.04	89.74
Class Category										
Primary Level	66	6332	8.9	6.62	11.94	711	64619	91.1	88.06	93.38
Secondary Level	175	10290	10.0	7.55	13.02	1604	93087	90.0	86.98	92.45
Ethnicity										
Malay	222	15242	10.0	8.27	12.12	1985	136728	90.0	87.88	91.73
Chinese	5	273	2.1	0.95	4.46	213	12919	97.9	95.54	99.05
Indian	4	315	7.4	2.05	23.46	61	3931	92.6	76.54	97.95
Bumiputera Sabah	1	112	17.3	6.51	38.45	6	536	82.7	61.55	93.49
Bumiputera Sarawak	2	177	13.4	10.85	16.45	14	1144	86.6	83.55	89.15
Others	7	503	17.1	9.15	29.56	36	2448	82.9	70.44	90.85

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.2.2: Distribution of adolescents according to BMI-For-Age status by sociodemographic characteristics (Cont.)

Characteristic	Thinness (<-2SD)					Normal BMI ($\geq -2SD$ to $\leq +1SD$)				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	167	11662	6.7	5.72	7.83	1569	105241	60.4	57.30	63.48
Locality of School										
Urban	81	5301	6.7	5.53	8.13	738	48968	62.0	58.50	65.40
Rural	86	6361	6.7	5.25	8.47	831	56272	59.1	54.38	63.69
Sex										
Boys	97	6494	7.5	6.13	9.05	753	50815	58.4	54.58	62.09
Girls	70	5169	5.9	4.59	7.64	816	54425	62.5	58.68	66.13
Class										
Standard 4	24	1861	7.9	5.51	11.11	177	14521	61.4	55.60	66.86
Standard 5	14	1696	7.3	5.61	9.43	106	12553	54.0	48.16	59.68
Standard 6	19	1648	6.9	4.00	11.73	150	12445	52.3	47.88	56.72
Form 1	25	1780	8.3	5.12	13.17	179	12868	60.0	52.93	66.60
Form 2	13	907	4.3	2.20	8.32	207	12965	61.8	55.01	68.12
Form 3	28	1537	7.4	5.04	10.68	235	12884	61.8	57.55	65.93
Form 4	21	1073	5.4	2.88	10.02	229	12995	65.8	60.13	70.99
Form 5	23	1159	5.7	4.47	7.20	286	14009	68.7	63.71	73.23
Class Category										
Primary Level	57	5205	7.4	6.24	8.67	433	39519	55.9	52.65	59.09
Secondary Level	110	6457	6.2	4.92	7.89	1136	65721	63.5	60.09	66.84
Ethnicity										
Malay	140	9856	6.5	5.40	7.79	1339	90673	59.7	56.54	62.85
Chinese	14	886	6.7	4.48	9.94	142	8424	63.9	60.46	67.13
Indian	8	572	13.5	7.06	24.24	41	2688	63.3	49.18	75.47
Bumiputera Sabah						6	536	82.7	61.55	93.49
Bumiputera Sarawak	1	108	8.2	6.62	10.03	6	490	37.1	28.63	46.43
Others	4	241	8.2	1.56	33.22	35	2430	82.3	56.99	94.23

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.2.2: Distribution of adolescents according to BMI-For-Age status by sociodemographic characteristics

Characteristic	Overweight (> +1SD to ≤ +2SD)					Obese (> +2SD)				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	416	28446	16.3	15.33	17.39	403	28803	16.5	14.33	19.02
Locality of School										
Urban	187	12720	16.1	14.68	17.64	177	11977	15.2	12.62	18.12
Rural	229	15726	16.5	15.15	17.99	226	16826	17.7	14.49	21.38
Sex										
Boys	189	13222	15.2	13.44	17.12	226	16511	19.0	16.03	22.30
Girls	227	15224	17.5	15.32	19.86	177	12292	14.1	11.48	17.23
Class										
Standard 4	36	2972	12.6	10.46	15.02	58	4304	18.2	13.92	23.41
Standard 5	33	3917	16.8	13.92	20.23	42	5092	21.9	15.74	29.60
Standard 6	59	4919	20.7	17.81	23.88	57	4775	20.1	18.92	21.28
Form 1	52	3549	16.5	12.97	20.86	47	3263	15.2	10.96	20.71
Form 2	60	3615	17.2	14.29	20.62	55	3498	16.7	12.14	22.46
Form 3	69	3706	17.8	14.81	21.21	48	2711	13.0	9.89	16.94
Form 4	52	3035	15.4	12.41	18.85	47	2658	13.5	10.82	16.61
Form 5	55	2733	13.4	10.82	16.47	49	2500	12.3	8.91	16.64
Class Category										
Primary Level	128	11808	16.7	14.79	18.80	157	14171	20.0	18.67	21.49
Secondary Level	288	16638	16.1	15.09	17.13	246	14632	14.1	11.51	17.26
Ethnicity										
Malay	365	25168	16.6	15.33	17.91	362	26096	17.2	15.07	19.54
Chinese	36	2280	17.3	15.68	19.00	26	1602	12.1	10.26	14.32
Indian	7	403	9.5	4.89	17.63	9	582	13.7	6.65	26.18
Bumiputera Sabah	1	112	17.3	6.51	38.45					
Bumiputera Sarawak	5	369	27.9	23.21	33.22	4	354	26.8	21.61	32.73
Others	2	114	3.9	1.37	10.36	2	168	5.7	1.03	25.87

3.3 Perception on body weight management among adolescents (Primary 4 to Secondary 5) in Pahang

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3.3.1 Introduction

Body weight perception refers to the personal evaluation of one’s weight as “underweight”, “normal weight” or “overweight” irrespective of their actual body mass index. Adolescent estimation of weight status may reflect an adolescent’s perception of where they are on the spectrum of body weight relative to their peers.

3.3.2 Objective

General objective:

To assess self-perception on body weight and intentions on weight management among Malaysian adolescents aged 10 to 17 years

Specific Objectives

- I. To determine body weight perception among adolescents
- II. To determine body weight perception among adolescents in comparison to actual BMI- for-age status
- III. To describe intended action on their perceived body weight status
- IV. To describe motivating factors to change their body weight.
- V. To identify preferred options to change their body weight.

3.3.3 Variable definition

- **Body weight perception:** An interpretation or impression; an opinion or belief
- (Ref: Collins English Dictionary – Complete and Unabridged, 12th Edition 2014 © HarperCollins Publishers 1991, 1994, 1998, 2000, 2003, 2006, 2007, 2009, 2011, 2014)
- **Actual body weight:** Body weight that was measured during the survey.
- **Misperception:** - a wrong perception

(Ref: (Collins English Dictionary – Complete and Unabridged, 12th Edition 2014 © HarperCollins Publishers 1991, 1994, 1998, 2000, 2003, 2006, 2007, 2009, 2011, 2014)

3.3.4 Findings

Overall, 40.7% (95% CI: 38.04, 43.47) of the adolescents in Pahang perceived that they have normal weight. There was no significant difference in school locality and sex, however there was a significant difference in school category whereby students from primary schools had a higher perception of thinness 36.8% (95%CI: 31.96, 41.99) as compared to those in secondary schools (**Table 3.3.1**).

Among the actual normal, 51.1% (95% CI: 47.53, 54.70) correctly perceived their weight to be normal, 32.0% (95% CI: 26.71, 37.90) perceived themselves to be thin, and 15.6% (95% CI: 12.20, 19.90) , 1.2% (95% CI: 0.70, 2.20) perceived themselves to be overweight, and obese respectively. However, among the actual overweight 50.5% (95% CI: 41.00, 60.00) correctly perceived their weight to be overweight, but 15.0% (95% CI: 9.20, 23.52) and 29.7% (95% CI: 22.30, 38.30), perceived themselves to be thin or normal respectively (**Table 3.3.2**).

Among all the adolescents who correctly perceived themselves to be thin, 71.0% (95% CI: 58.91, 80.70) reported they wanted to increase their weight while adolescents who correctly perceived their weight to be normal, 28.6% (95% CI: 24.75, 32.77) had no plan to change their weight. There was no significant difference in school locality, sex and school category among adolescents who correctly perceived themselves to be thin and overweight between four category of action taken. However, there was significant difference according to sex among adolescents who correctly perceived their weight to be normal whereby more girls [35.3% (95%CI: 28.73, 42.54)] perceived their weight to be normal compare to boys [22.3% (95% CI: 17.18, 28.45)] and wanted to lose weight (**Table 3.3.3**). However, adolescents who misinterpreted, that is, those who perceived themselves to be thin but actually are overweight or obese categories, 63.2% (95%CI: 46.01, 77.65) wanted to lose weight while 18.9% (95%CI: 11.02, 30.46) wanted to increase their weight. (**Table 3.3.4**).

About 67.0% (95% CI: 61.50, 71.99) adolescents chose health as the main factor that motivated weight loss followed by increase in self-confidence [25.0% (95% CI: 19.88, 30.98)]. Health purpose were higher among rural 67.8% (95%CI: 61.04, 73.87), boys 67.2% (95%CI: 59.92, 73.68) and among primary 76.6% (95% CI: 71.72, 80.92) (**Table 3.3.5**).

In addition, the main factor that motivated adolescents to increase body weight was also health purposes [59.8% (95% CI: 54.09, 65.17)] followed by increase in self-confidence [27.7% (95% CI: 22.37, 33.63)] (**Table 3.3.6**). Exercise was the most preferred option by adolescents to lose body weight [55.9% (95% CI: 51.19, 60.53)] (**Table 3.3.7**), while increasing the quantity of food was the most preferred option to increase their body weight, [56.9% (95% CI: 50.87, 62.72)] (**Table 3.3.8**).

3.3.5 Discussion/Conclusion

Perception of having normal weight among adolescents in Pahang was slightly lower than the national prevalence, 40.7% and 41.4% respectively.

Among the adolescents who were actually thin in Pahang, 73.8% correctly perceived thinness, which is higher compared to the national prevalence, 69.9%. Adolescents with actual normal body weight, 51.1% correctly perceived their weight to be normal and it is slightly higher than national prevalence, 50.2%.

In Pahang, the trend of main factors to lose body weight among adolescents were similar with the national trend. Health (67.0%) is the main factor to lose body weight; followed by to increase self confidence (25.0%), beauty purpose (6.6%) and to have more friends (1.4%).

Health purpose is the highest 59.8% main factor to increase body weight. But it was lower compared with the national prevalence. It is followed by to increase self confidence 27.7%, beauty purpose 9.2% and to have more friends 3.4%.

Adolescents chose exercise as the preferred option to lose weight. However it was lower compared with the national prevalence, 55.9% and 62.5% respectively. This is followed by reducing the consumption of high fat foods (25.1%), increasing the intake of fruits and vegetables (7.9%) and reducing the intake of high sugar foods (4.7%). This trend is similar to the national trend.

3.3.6 Recommendation

Body weight perception is a rather complex concept affected by `ideal` as well as `normative` body image. Our adolescents live in a society where increasingly larger proportions of the populations are overweight and obese. They are surrounded by overweight and obese peers, hence leading to them developing an inaccurate perception of healthy body weight or image. On the other hand, mass media often portray unusually thin models, especially among females, emphasizing `thin` rather than `healthy` body shapes.

Findings from this study should be utilised by relevant programme managers. Intervention to promote healthy lifestyles should be one of the approaches undertaken to halt this problem from worsening. Nutrition education should be systematically conducted in all schools, utilizing educational modules. Parents should act as role models and be actively involved in all efforts to promote healthy eating and active living among children. The media should also play an important role, by broadcasting more information to adolescents and families about healthy eating and active lifestyles.

In addition, a school-based health promotion programme incorporating a holistic curriculum may prove to be a good platform from which to tackle body image problems, encourage good eating habits and instil a healthy body image amongst adolescents.

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NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.1 : Body weight perception among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Perceived thin					Perceived Normal				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	698	50908	29.2	24.76	34.03	1042	71053	40.7	38.04	43.47
Locality of School										
Urban	301	21504	27.2	19.88	35.93	486	32333	40.9	35.91	45.98
Rural	397	29404	30.9	26.06	36.10	556	38720	40.6	37.98	43.34
Sex										
Boys	403	28940	33.1	28.22	38.37	541	36815	42.1	38.75	45.53
Girls	295	21968	25.2	20.54	30.61	501	34238	39.3	35.08	43.79
School Category										
Primary	287	26118	36.8	31.96	41.99	323	29594	41.7	37.06	46.56
Secondary	411	24790	23.9	19.84	28.59	719	41459	40.0	36.96	43.20
Class										
Standard 4	147	11834	49.9	45.54	54.21	103	8222	34.7	30.44	39.12
Standard 5	68	8054	34.6	21.47	50.54	90	10703	46.0	34.91	57.41
Standard 6	72	6230	26.1	18.68	35.13	130	10669	44.7	38.01	51.49
Form 1	79	5898	27.5	19.39	37.39	120	8476	39.5	32.38	47.08
Form 2	74	4914	23.5	16.68	31.98	142	8874	42.4	36.26	48.79
Form 3	89	5153	24.7	17.43	33.84	154	8483	40.7	35.16	46.50
Form 4	71	3969	20.1	15.65	25.40	129	7064	35.7	29.91	42.03
Form 5	98	4857	23.6	18.62	29.50	174	8562	41.7	36.77	46.72
Ethnicity										
Malay	617	45023	29.6	25.50	34.07	898	62344	41.0	38.32	43.73
Chinese	32	2017	15.2	10.11	22.25	97	5685	42.9	30.71	55.94
Indian	21	1613	38.0	23.37	55.18	19	1082	25.5	15.51	38.90
Bumiputera Sabah	4	407	62.9	38.37	82.20	3	240	37.1	17.80	61.63
Bumiputera Sarawak	7	597	45.2	36.04	54.61	6	450	34.1	21.91	48.75
Others	17	1251	42.9	31.97	54.51	19	1252	42.9	30.82	55.95

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.1 : Body weight perception among adolescents by socio-demographic characteristics

Characteristics	Perceived Overweight					Perceived Obese				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	720	46113	26.4	22.83	30.38	99	6380	3.7	2.59	5.14
Locality of School										
Urban	349	22148	28.0	22.45	34.27	51	3166	4.0	2.25	7.02
Rural	371	23965	25.1	20.73	30.15	48	3214	3.4	2.29	4.94
Sex										
Boys	292	19263	22.0	18.57	25.93	35	2419	2.8	1.84	4.13
Girls	428	26849	30.9	26.19	35.95	64	3961	4.6	2.88	7.11
School Category										
Primary	147	13350	18.8	17.33	20.42	20	1850	2.6	1.81	3.75
Secondary	573	32762	31.6	28.69	34.75	79	4530	4.4	2.86	6.64
Class										
Standard 4	41	3279	13.8	12.81	14.89	5	393	1.7	0.72	3.75
Standard 5	32	3917	16.8	11.61	23.73	5	618	2.7	1.16	5.95
Standard 6	74	6155	25.8	22.39	29.45	10	839	3.5	2.54	4.84
Form 1	89	6082	28.3	21.16	36.82	15	1006	4.7	2.71	7.99
Form 2	111	6734	32.2	26.11	38.92	7	406	1.9	0.85	4.38
Form 3	119	6287	30.2	24.80	36.14	18	916	4.4	2.03	9.26
Form 4	130	7544	38.2	32.97	43.66	19	1184	6.0	3.56	9.93
Form 5	124	6115	29.8	27.49	32.13	20	1017	4.9	2.12	11.11
Ethnicity										
Malay	618	39678	26.1	22.38	30.18	77	5016	3.3	2.23	4.85
Chinese	73	4499	33.9	30.28	37.77	17	1061	8.0	4.96	12.65
Indian	20	1247	29.4	22.48	37.36	5	304	7.2	3.65	13.54
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	3	274	20.8	16.78	25.43	-	-	-	-	-
Others	6	414	14.2	11.00	18.14	-	-	-	-	-

Table 3.3.2: Body weight perception among adolescent by actual BMI for age status (Cont.)

Perceived	Actual thin															
	Thin				Normal				Overweight				Obese			
	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper
Pahang	128	73.8	64.18	81.64	36	23.6	16.03	33.20	3	2.6	0.87	7.54	-	-	-	-
Locality of school																
Urban	60	73.2	56.65	85.08	20	24.5	14.15	38.89	1	2.3	0.33	14.73	-	-	-	-
Rural	68	74.4	62.32	83.59	16	22.8	13.03	36.78	2	2.8	0.79	9.63	-	-	-	-
Sex																
Boys	73	73.2	63.61	81.04	23	24.9	16.62	35.49	1	1.9	0.23	13.93	-	-	-	-
Girls	55	74.6	55.89	87.22	13	21.9	9.49	42.84	2	3.5	0.81	13.80	-	-	-	-
School Category																
Primary	38	64.9	51.26	76.50	17	30.9	19.37	45.46	2	4.2	1.18	13.68	-	-	-	-
Secondary	90	81.0	70.11	88.61	19	17.6	10.15	28.82	1	1.3	0.18	9.37	-	-	-	-

Table 3.3.2: Body weight perception among adolescent by actual BMI for age status (Cont.)

Perceived	Actual normal															
	Thin				Normal				Overweight				Obese			
	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper
Pahang	466	32.0	26.71	37.90	818	51.1	47.53	54.68	264	15.6	12.16	19.86	19	1.2	0.68	2.16
Locality of school																
Urban	195	28.4	20.53	37.86	391	51.6	45.00	58.15	140	18.4	13.01	25.37	12	1.6	0.74	3.43
Rural	271	35.2	28.91	42.10	427	50.7	47.27	54.10	124	13.2	9.68	17.79	7	0.9	0.38	1.98
Sex																
Boys	256	35.9	30.61	41.50	406	52.5	47.42	57.56	81	10.4	8.44	12.74	9	1.2	0.66	2.20
Girls	210	28.5	22.17	35.75	412	49.8	45.01	54.59	183	20.5	15.27	26.97	10	1.2	0.52	2.84
School Category																
Primary	183	42.5	37.17	47.95	203	47.2	42.86	51.56	40	9.1	6.86	12.03	6	1.2	0.59	2.49
Secondary	283	25.8	21.03	31.21	615	53.5	48.93	57.95	224	19.5	15.71	24.02	13	1.2	0.53	2.74

Table 3.3.2: Body weight perception among adolescent by actual BMI for age status (Cont.)

Perceived	Actual overweight															
	Thin				Normal				Overweight				Obese			
	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper
Pahang	51	15.0	9.18	23.52	114	29.7	22.32	38.29	230	50.5	40.99	59.95	20	4.8	2.85	8.07
Locality of school																
Urban	24	15.6	6.80	32.02	45	26.6	15.21	42.30	106	51.5	35.99	66.68	12	6.3	3.27	11.73
Rural	27	14.5	8.10	24.48	69	32.2	23.71	42.04	124	49.7	38.20	61.22	8	3.7	1.58	8.23
Sex																
Boys	35	22.1	13.15	34.77	59	31.9	24.22	40.60	89	42.6	31.37	54.75	6	3.4	1.74	6.46
Girls	16	8.8	4.62	16.02	55	27.8	18.97	38.80	141	57.3	47.63	66.48	14	6.1	2.96	12.16
School Category																
Primary	31	24.2	13.77	38.88	53	41.1	29.48	53.78	39	30.5	29.09	32.00	5	4.2	1.84	9.39
Secondary	20	8.5	4.80	14.45	61	21.6	16.39	27.85	191	64.7	57.64	71.18	15	5.3	2.69	10.07

Table 3.3.2: Body weight perception among adolescent by actual BMI for age status

Perceived	Actual obese															
	Thin				Normal				Overweight				Obese			
	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper
Pahang	51	14.8	9.98	21.46	73	21.2	15.15	28.90	220	51.4	43.86	58.79	59	12.6	7.81	19.68
Locality of school																
Urban	20	13.6	6.01	28.07	29	19.5	9.96	34.70	101	53.6	40.59	66.18	27	13.2	5.78	27.47
Rural	31	15.7	10.44	22.86	44	22.4	15.51	31.32	119	49.7	41.00	58.50	32	12.1	6.83	20.67
Sex																
Boys	37	18.0	12.56	25.20	52	26.1	19.76	33.64	118	48.3	38.40	58.29	19	7.6	4.05	13.77
Girls	14	10.5	5.32	19.77	21	14.7	8.46	24.21	102	55.5	48.59	62.20	40	19.3	10.91	31.89
School Category																
Primary	35	22.2	16.33	29.46	50	32.0	26.53	38.03	64	40.4	33.13	48.07	8	5.4	2.85	10.03
Secondary	16	7.7	3.59	15.68	23	10.8	6.36	17.69	156	62.0	55.07	68.46	51	19.6	12.55	29.16

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.3: Action taken according to correctly perceived body weight among adolescents (Cont.)

Characteristic	Perceived thin - actual thin									
	Lose weight					Increase weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	11	870	10.1	5.59	17.61	93	6114	71.0	58.91	80.70
Locality of school										
Urban	4	277	7.1	2.33	19.88	45	2872	74.0	52.92	87.83
Rural	7	593	12.5	6.48	22.86	48	3243	68.5	53.87	80.25
Sex										
Boys	8	624	13.1	6.98	23.33	52	3281	69.0	54.29	80.70
Girls	3	246	6.4	2.25	16.84	41	2833	73.4	57.63	84.90
School category										
Primary	7	623	18.4	12.31	26.67	22	2042	60.4	45.52	73.63
Secondary	4	248	4.7	1.39	14.88	71	4072	77.8	61.18	88.66

Table 3.3.3: Action taken according to correctly perceived body weight among adolescents (Cont.)

Characteristic	Perceived thin - actual thin									
	No action					Maintain body weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	15	988	11.5	5.99	20.84	9	639	7.4	3.73	14.21
Locality of school										
Urban	7	434	11.2	3.57	30.03	4	297	7.6	3.03	18.00
Rural	8	553	11.7	5.50	23.16	5	342	7.2	2.64	18.35
Sex										
Boys	8	526	11.1	5.22	21.92	5	323	6.8	2.56	16.78
Girls	7	462	12.0	5.20	25.22	4	316	8.2	3.25	19.22
School category										
Primary	4	325	9.6	3.82	22.15	5	389	11.5	6.29	20.17
Secondary	11	663	12.7	5.37	27.03	4	250	4.8	1.18	17.38

Table 3.3.3: Action taken according to correctly perceived body weight among adolescents (Cont.)

Characteristic	Perceived normal - actual normal									
	Lose weight					Increase weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	230	15511	28.9	24.75	33.39	74	5183	9.6	7.39	12.50
Locality of school										
Urban	100	6698	26.5	19.28	35.25	26	1785	7.1	4.27	11.47
Rural	130	8814	31.0	27.57	34.61	48	3398	11.9	9.38	15.10
Sex										
Boys	85	5942	22.3	17.18	28.45	49	3322	12.5	9.24	16.64
Girls	145	9570	35.3	28.73	42.54	25	1861	6.9	4.73	9.88
School category										
Primary	73	6772	36.4	30.62	42.63	26	2441	13.1	11.02	15.56
Secondary	157	8739	24.9	20.95	29.28	48	2742	7.8	5.23	11.50

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.3: Action taken according to correctly perceived body weight among adolescents (Cont.)

Characteristic	Perceived normal - actual normal									
	No action					Maintain body weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	234	15360	28.6	24.75	32.77	280	17664	32.9	28.70	37.36
Locality of school										
Urban	122	8050	31.9	26.22	38.08	143	8736	34.6	26.47	43.69
Rural	112	7311	25.7	21.40	30.52	137	8928	31.4	28.96	33.90
Sex										
Boys	127	8067	30.3	25.36	35.72	145	9301	34.9	28.84	41.54
Girls	107	7293	26.9	19.90	35.34	135	8363	30.9	24.60	37.95
School category										
Primary	54	4858	26.1	19.59	33.91	50	4526	24.3	20.80	28.27
Secondary	180	10502	29.9	25.45	34.77	230	13138	37.4	33.44	41.55

Table 3.3.3: Action taken according to correctly perceived body weight among adolescents (Cont.)

Characteristic	Perceived overweight - actual overweight									
	Lose weight					Increase weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	199	12367	86.3	78.77	91.43	1	70	0.5	0.06	3.89
Locality of school										
Urban	87	5329	81.4	69.24	89.48	1	70	1.1	0.13	7.90
Rural	112	7038	90.4	81.75	95.19	-	-	-	-	-
Sex										
Boys	75	4703	83.4	69.77	91.61	1	70	1.2	0.16	8.89
Girls	124	7664	88.2	81.32	92.72	-	-	-	-	-
School category										
Primary	34	3137	87.0	73.40	94.22	-	-	-	-	-
Secondary	165	9230	86.0	76.56	92.08	1	70	0.6	0.08	5.10

Table 3.3.3: Action taken according to correctly perceived body weight among adolescents

Characteristic	Perceived overweight - actual overweight									
	No action					Maintain body weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	19	1167	8.1	5.28	12.36	11	728	5.1	2.34	10.68
Locality of school										
Urban	12	793	12.1	7.73	18.48	6	356	5.4	1.84	14.97
Rural	7	375	4.8	2.37	9.54	5	373	4.8	1.58	13.60
Sex										
Boys	7	419	7.4	3.62	14.62	6	448	8.0	3.39	17.53
Girls	12	749	8.6	4.85	14.85	5	280	3.2	1.34	7.53
School category										
Primary	4	360	10.0	4.92	19.20	1	108	3.0	0.40	18.95
Secondary	15	808	7.5	4.37	12.67	10	621	5.8	2.51	12.79

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.4: Action taken according to misperception of body weight among adolescents (Cont.)

Characteristic	Perceived thin -Actual overweight/obese									
	Lose weight					Increase weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	66	5392	63.2	46.01	77.65	17	1610	18.9	11.02	30.46
Locality of school										
Urban	23	1755	48.4	26.67	70.82	9	861	23.8	10.68	44.85
Rural	43	3637	74.2	60.05	84.61	8	749	15.3	9.13	24.45
Sex										
Boys	47	3857	65.4	49.01	78.73	12	1081	18.3	10.40	30.22
Girls	19	1535	58.5	29.04	82.93	5	529	20.2	8.72	40.07
School category										
Primary	42	3704	61.7	40.00	79.60	13	1324	22.1	12.47	36.01
Secondary	24	1688	66.9	44.03	83.81	4	286	11.3	5.40	22.30

Table 3.3.4: Action taken according to misperception of body weight among adolescents (Cont.)

Characteristic	Perceived thin -Actual overweight/obese									
	No action					Maintain body weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	15	1187	13.9	7.63	24.07	4	336	3.9	1.72	8.78
Locality of school										
Urban	10	828	22.8	14.63	33.85	2	179	4.9	1.49	15.23
Rural	5	359	7.3	2.90	17.34	2	157	3.2	0.99	9.80
Sex										
Boys	10	715	12.1	6.70	20.93	3	249	4.2	1.50	11.26
Girls	5	472	18.0	5.65	44.57	1	87	3.3	0.37	24.18
School category										
Primary	9	810	13.5	6.13	27.19	2	162	2.7	1.05	6.81
Secondary	6	377	14.9	5.94	32.75	2	174	6.9	1.79	23.01

Table 3.3.4: Action taken according to misperception of body weight among adolescents (Cont.)

Characteristic	Actual Normal - Perceived thin/overweight/obese									
	Lose weight					Increase weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	348	23590	46.0	42.09	49.92	217	13978	27.2	23.05	31.89
Locality of school										
Urban	166	11567	48.8	44.56	53.07	94	5974	25.2	19.06	32.53
Rural	182	12023	43.6	38.17	49.10	123	8004	29.0	23.81	34.80
Sex										
Boys	125	8758	36.5	31.16	42.19	125	7979	33.2	26.84	40.35
Girls	223	14832	54.3	47.42	61.06	92	5998	22.0	17.46	27.25
School category										
Primary	104	9308	44.7	37.43	52.24	50	4471	21.5	17.31	26.34
Secondary	244	14282	46.8	42.76	50.97	167	9506	31.2	26.10	36.76

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.4: Action taken according to misperception of body weight among adolescents

Characteristic	Actual Normal - Perceived thin/overweight/obese									
	No action					Maintain body weight				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	126	9494	18.5	13.86	24.28	57	4241	8.3	5.89	11.48
Locality of school										
Urban	62	4276	18.0	13.91	23.07	25	1883	7.9	4.38	14.00
Rural	64	5218	18.9	11.62	29.25	32	2358	8.5	5.79	12.44
Sex										
Boys	56	4268	17.8	12.39	24.86	39	2993	12.5	8.67	17.62
Girls	70	5226	19.1	13.35	26.67	18	1248	4.6	2.72	7.59
School category										
Primary	53	4985	24.0	15.95	34.33	22	2049	9.8	5.49	17.03
Secondary	73	4509	14.8	10.52	20.40	35	2192	7.2	5.24	9.79

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.5 : Main factors that motivate to lose body weight among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Health purpose					Beauty purpose				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	796	56324	67.0	61.50	71.99	87	5533	6.6	4.99	8.63
Locality of school										
Urban	347	24055	65.9	56.65	74.03	44	2742	7.5	5.29	10.56
Rural	449	32269	67.8	61.04	73.87	43	2791	5.9	3.85	8.84
Sex										
Boys	350	24932	67.2	59.92	73.68	26	1972	5.3	3.50	8.00
Girls	446	31393	66.8	58.71	73.99	61	3560	7.6	5.47	10.40
School category										
Primary	295	26851	76.6	71.72	80.92	19	1664	4.7	2.99	7.47
Secondary	501	29473	60.1	55.80	64.16	68	3868	7.9	5.86	10.52
Class										
Standard 4	111	8971	76.3	65.96	84.25	5	358	3.0	0.57	14.71
Standard 5	69	8349	78.1	70.87	83.93	4	487	4.6	3.14	6.56
Standard 6	115	9531	75.7	69.14	81.24	10	819	6.5	3.01	13.47
Form 1	95	6633	69.3	63.02	74.96	11	877	9.2	4.82	16.75
Form 2	101	6326	59.7	54.46	64.78	14	783	7.4	3.92	13.52
Form 3	118	6532	65.0	57.26	72.09	18	940	9.4	5.68	15.03
Form 4	91	5261	53.1	44.49	61.47	11	628	6.3	3.15	12.32
Form 5	96	4722	52.7	42.78	62.37	14	640	7.1	3.54	13.89
Ethnicity										
Malay	707	50467	67.2	61.10	72.77	72	4611	6.1	4.59	8.18
Chinese	43	2724	56.7	46.50	66.29	11	652	13.6	9.32	19.30
Indian	26	1597	74.4	55.14	87.29	3	187	8.7	2.67	24.95
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	8	699	80.3	69.55	87.94	-	-	-	-	-
Others	12	836	69.8	57.89	79.49	1	82	6.9	2.40	18.11

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.5 : Main factors that motivate to lose body weight among adolescents by socio-demographic characteristics

	To increase self-confidence					To have more friends				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	336	21048	25.0	19.88	30.98	17	1215	1.4	0.70	2.96
Locality of school										
Urban	142	8859	24.3	16.71	33.83	12	862	2.4	1.06	5.19
Rural	194	12189	25.6	19.08	33.45	5	353	0.7	0.28	1.94
Sex										
Boys	139	9352	25.2	18.57	33.23	12	861	2.3	0.96	5.52
Girls	197	11697	24.9	18.52	32.57	5	354	0.8	0.27	2.11
School category										
Primary	60	5634	16.1	11.17	22.60	12	891	2.5	1.11	5.71
Secondary	276	15415	31.4	26.31	36.99	5	324	0.7	0.29	1.49
Class										
Standard 4	22	1841	15.7	7.06	31.22	8	588	5.0	1.85	12.80
Standard 5	15	1856	17.4	11.99	24.46	-	-	-	-	-
Standard 6	23	1937	15.4	9.39	24.19	4	303	2.4	0.97	5.87
Form 1	29	2059	21.5	16.79	27.15	-	-	-	-	-
Form 2	56	3366	31.8	26.44	37.64	2	117	1.1	0.25	4.76
Form 3	48	2439	24.3	17.13	33.22	2	133	1.3	0.32	5.23
Form 4	69	3950	39.8	30.35	50.16	1	75	0.8	0.10	5.67
Form 5	74	3601	40.2	31.09	50.00	-	-	-	-	-
Ethnicity										
Malay	301	18924	25.2	19.48	31.93	15	1094	1.5	0.65	3.23
Chinese	23	1386	28.8	19.81	39.89	1	46	1.0	0.15	5.76
Indian	5	288	13.4	5.01	31.24	1	75	3.5	0.44	22.65
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	3	171	19.7	12.06	30.45	-	-	-	-	-
Others	4	280	23.4	11.59	41.46	-	-	-	-	-

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.6 : Main factor that motivate to increase body weight among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Health purpose					Beauty purpose				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	226	15309	59.8	54.09	65.17	35	2347	9.2	6.94	12.01
Locality of school										
Urban	101	6815	60.7	50.19	70.33	16	941	8.4	5.08	13.54
Rural	125	8493	59.0	53.00	64.74	19	1406	9.8	7.12	13.26
Sex										
Boys	121	7681	53.5	47.19	59.64	20	1611	11.2	7.11	17.24
Girls	105	7628	67.8	59.02	75.44	15	736	6.5	2.74	14.84
School category										
Primary	62	5855	63.6	57.33	69.50	9	878	9.5	6.13	14.55
Secondary	164	9454	57.6	49.90	64.90	26	1469	8.9	6.25	12.65
Class										
Standard 4	28	2161	64.7	53.53	74.45	2	140	4.2	1.36	12.12
Standard 5	22	2608	65.1	49.97	77.77	4	482	12.0	5.77	23.42
Standard 6	12	1086	58.5	30.71	81.74	3	256	13.8	6.87	25.80
Form 1	26	1845	71.6	50.98	85.97	4	303	11.8	4.91	25.66
Form 2	29	1785	59.1	41.68	74.43	5	318	10.5	3.36	28.46
Form 3	33	1906	53.6	38.98	67.65	2	110	3.1	0.71	12.65
Form 4	30	1596	61.6	43.95	76.58	2	133	5.1	1.34	17.69
Form 5	46	2322	49.7	40.21	59.17	13	604	12.9	7.87	20.53
Ethnicity										
Malay	201	13609	59.3	53.84	64.54	33	2217	9.7	7.15	12.93
Chinese	11	761	61.7	49.98	72.21	2	130	10.5	6.92	15.72
Indian	7	431	64.0	18.07	93.47	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	108	100.0	100.00	100.00	-	-	-	-	-
Others	6	400	73.2	50.62	87.96	-	-	-	-	-

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.6 : Main factor that motivate to increase body weight among adolescents by socio-demographic characteristics

Characteristics	To increase self-confidence					To have more friends				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	116	7084	27.7	22.37	33.63	10	880	3.4	1.44	7.96
Locality of school										
Urban	51	3086	27.5	20.56	35.71	5	383	3.4	0.73	14.40
Rural	65	3999	27.8	20.42	36.56	5	498	3.5	1.28	8.99
Sex										
Boys	77	4621	32.2	25.51	39.64	6	453	3.2	0.80	11.64
Girls	39	2463	21.9	14.77	31.18	4	427	3.8	1.15	11.80
School category										
Primary	21	1757	19.1	13.06	27.05	7	711	7.7	3.45	16.41
Secondary	95	5328	32.4	27.07	38.33	3	169	1.0	0.22	4.60
Class										
Standard 4	11	759	22.7	12.61	37.44	3	281	8.4	1.95	29.79
Standard 5	5	566	14.1	3.68	41.51	3	348	8.7	2.02	30.42
Standard 6	5	432	23.3	6.89	55.43	1	82	4.4	0.80	21.21
Form 1	6	428	16.6	8.37	30.25	-	-	-	-	-
Form 2	12	849	28.1	18.58	40.08	1	70	2.3	0.28	17.02
Form 3	26	1439	40.5	26.95	55.67	2	99	2.8	0.31	20.78
Form 4	16	864	33.3	19.24	51.19	-	-	-	-	-
Form 5	35	1748	37.4	31.76	43.39	-	-	-	-	-
Ethnicity										
Malay	108	6562	28.6	23.55	34.24	6	560	2.4	1.12	5.23
Chinese	5	293	23.8	12.67	40.09	1	49	4.0	0.60	22.34
Indian	1	83	12.3	1.22	61.54	2	160	23.7	2.61	78.27
Bumiputera Sabah	-	-	-	-	-	1	112	100.0	100.00	100.00
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	2	146	26.8	12.04	49.38	-	-	-	-	-

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.7 : Preferred option to lose body weight among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Exercise					Reduce consumption of high fat foods				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	679	47424	55.9	51.19	60.53	323	21247	25.1	21.62	28.82
Locality of school										
Urban	298	20458	56.0	48.33	63.48	138	8880	24.3	19.81	29.49
Rural	381	26967	55.8	49.90	61.57	185	12367	25.6	20.80	31.06
Sex										
Boys	315	21830	57.8	53.80	61.73	124	8963	23.7	19.90	28.05
Girls	364	25594	54.4	46.50	62.07	199	12283	26.1	20.97	31.99
School category										
Primary	245	22468	63.0	60.29	65.71	81	7393	20.7	18.14	23.61
Secondary	434	24956	50.7	45.37	56.11	242	13853	28.2	23.67	33.16
Class										
Standard 4	106	8678	71.9	67.53	75.88	21	1691	14.0	9.92	19.41
Standard 5	56	6853	63.9	59.84	67.76	20	2410	22.5	19.62	25.60
Standard 6	83	6937	54.0	45.79	62.02	40	3293	25.6	20.08	32.12
Form 1	78	5508	56.6	46.13	66.52	34	2386	24.5	17.39	33.38
Form 2	83	5008	48.0	34.35	61.91	49	2952	28.3	19.99	38.35
Form 3	106	5701	57.1	45.15	68.28	45	2508	25.1	16.71	35.93
Form 4	82	4554	46.2	38.25	54.29	55	3169	32.1	22.25	43.90
Form 5	85	4185	45.7	37.03	54.62	59	2839	31.0	24.78	37.99
Ethnicity										
Malay	592	41836	55.3	50.26	60.16	291	19174	25.3	21.76	29.26
Chinese	46	2882	60.7	43.61	75.48	17	1051	22.1	13.15	34.81
Indian	20	1216	55.0	38.02	70.93	11	684	30.9	20.43	43.83
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	7	546	57.4	52.91	61.80	2	163	17.1	15.39	18.97
Others	14	944	78.7	70.89	84.93	2	175	14.6	7.00	28.04

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.7 : Preferred option to lose body weight among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Reduce intake of high sugar foods					Increase intake of fruits & vegetables				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	57	4000	4.7	3.46	6.39	92	6720	7.9	6.33	9.87
Locality of school										
Urban	26	1780	4.9	3.64	6.50	39	2667	7.3	5.40	9.82
Rural	31	2220	4.6	2.78	7.51	53	4053	8.4	6.17	11.30
Sex										
Boys	32	2242	5.9	3.82	9.11	38	3065	8.1	5.18	12.50
Girls	25	1758	3.7	2.66	5.23	54	3654	7.8	5.57	10.73
School category										
Primary	21	1741	4.9	3.50	6.78	36	3247	9.1	6.90	11.94
Secondary	36	2259	4.6	2.83	7.37	56	3473	7.1	5.13	9.65
Class										
Standard 4	11	834	6.9	3.09	14.72	9	739	6.1	3.68	10.00
Standard 5	2	221	2.1	0.32	12.23	7	896	8.4	3.92	16.92
Standard 6	8	686	5.3	2.41	11.41	20	1612	12.5	7.73	19.73
Form 1	6	480	4.9	2.05	11.37	12	851	8.7	4.32	16.90
Form 2	13	846	8.1	4.16	15.20	11	719	6.9	3.41	13.40
Form 3	9	513	5.1	3.11	8.38	8	444	4.5	1.72	11.05
Form 4	4	216	2.2	0.72	6.44	12	788	8.0	4.71	13.24
Form 5	4	204	2.2	0.57	8.28	13	672	7.3	4.51	11.70
Ethnicity										
Malay	50	3536	4.7	3.30	6.58	81	6062	8.0	6.47	9.86
Chinese	5	291	6.1	1.80	18.84	7	391	8.2	2.24	25.99
Indian	1	81	3.7	0.41	25.97	2	117	5.3	1.74	14.91
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	92	9.7	8.75	10.79	2	150	15.8	14.18	17.48
Others	-	-	-	-	-	-	-	-	-	-

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.7 : Preferred option to lose body weight among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Skip main meals					Consume dieting pills/use slimming cream				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	33	1962	2.3	1.49	3.56	3	214	0.3	0.07	0.84
Locality of school										
Urban	15	884	2.4	1.19	4.88	1	51	0.1	0.02	1.11
Rural	18	1078	2.2	1.30	3.80	2	163	0.3	0.08	1.37
Sex										
Boys	8	482	1.3	0.64	2.51	1	108	0.3	0.04	2.14
Girls	25	1480	3.1	1.92	5.11	2	105	0.2	0.05	0.94
School category										
Primary	2	152	0.4	0.12	1.49	1	108	0.3	0.04	2.17
Secondary	31	1810	3.7	2.90	4.67	2	105	0.2	0.05	0.85
Class										
Standard 4	-	-	-	-	-	-	-	-	-	-
Standard 5	-	-	-	-	-	1	108	1.0	0.14	7.01
Standard 6	2	152	1.2	0.37	3.70	-	-	-	-	-
Form 1	5	359	3.7	1.34	9.77	-	-	-	-	-
Form 2	7	431	4.1	1.85	8.96	-	-	-	-	-
Form 3	6	303	3.0	1.45	6.26	-	-	-	-	-
Form 4	6	393	4.0	1.42	10.64	1	51	0.5	0.06	4.02
Form 5	7	324	3.5	1.67	7.32	1	55	0.6	0.07	4.64
Ethnicity										
Malay	29	1695	2.2	1.39	3.58	3	214	0.3	0.08	0.94
Chinese	2	134	2.8	2.03	3.94	-	-	-	-	-
Indian	1	53	2.4	0.44	12.17	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	79	6.6	2.32	17.51	-	-	-	-	-

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.7 : Preferred option to lose body weight among adolescents by socio-demographic characteristics

Characteristics	Fasting					Professional advise				
	Unweighted count	Estimated population	Prevalence (%)	95% CI		Unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	46	2628	3.1	1.67	5.69	10	621	0.7	0.36	1.48
Locality of school										
Urban	23	1490	4.1	1.68	9.59	5	294	0.8	0.31	2.06
Rural	23	1139	2.4	1.10	4.97	5	326	0.7	0.24	1.91
Sex										
Boys	12	726	1.9	0.89	4.12	5	345	0.9	0.37	2.24
Girls	34	1903	4.0	2.00	7.99	5	276	0.6	0.24	1.45
School category										
Primary	5	422	1.2	0.41	3.36	1	108	0.3	0.04	2.16
Secondary	41	2207	4.5	2.41	8.20	9	512	1.0	0.52	2.06
Class										
Standard 4	2	129	1.1	0.31	3.58	-	-	-	-	-
Standard 5	1	129	1.2	0.14	9.41	1	108	1.0	0.16	6.22
Standard 6	2	164	1.3	0.39	4.05	-	-	-	-	-
Form 1	1	74	0.8	0.11	5.00	1	74	0.8	0.11	5.00
Form 2	7	397	3.8	1.66	8.49	1	85	0.8	0.10	6.20
Form 3	8	360	3.6	1.41	8.96	3	154	1.5	0.58	4.05
Form 4	11	693	7.0	3.46	13.77	-	-	-	-	-
Form 5	14	682	7.4	3.11	16.80	4	199	2.2	0.76	6.08
Ethnicity										
Malay	45	2569	3.4	1.87	6.09	10	621	0.8	0.41	1.65
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	1	60	2.7	0.34	18.44	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.8 : Preferred option to increase body weight among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Increase quantity of food					Taking supplement				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	232	14886	56.9	50.87	62.72	101	6906	26.4	22.23	31.02
Locality of school										
Urban	108	6760	57.0	45.54	67.73	42	2949	24.9	18.35	32.75
Rural	124	8126	56.8	51.19	62.29	59	3957	27.7	22.69	33.28
Sex										
Boys	137	8667	56.3	49.63	62.71	57	3782	24.6	20.04	29.71
Girls	95	6219	57.8	49.74	65.43	44	3124	29.0	22.91	36.01
School category										
Primary	53	4838	49.7	42.61	56.89	30	2821	29.0	23.41	35.32
Secondary	179	10048	61.1	54.10	67.72	71	4084	24.8	19.58	30.98
Class										
Standard 4	27	2040	56.9	36.33	75.27	13	967	27.0	17.29	39.48
Standard 5	16	1906	47.7	37.95	57.69	11	1301	32.6	20.32	47.80
Standard 6	10	893	41.6	30.60	53.49	6	553	25.8	16.00	38.73
Form 1	19	1321	51.6	38.95	63.97	11	758	29.6	16.21	47.71
Form 2	25	1560	52.2	36.79	67.15	11	773	25.8	13.94	42.85
Form 3	41	2341	65.6	51.43	77.52	14	764	21.4	13.53	32.22
Form 4	27	1445	54.6	40.60	67.97	14	782	29.6	16.59	47.03
Form 5	67	3381	72.3	59.11	82.54	21	1007	21.5	10.99	37.93
Ethnicity										
Malay	215	13740	58.3	51.20	65.06	89	6175	26.2	21.40	31.63
Chinese	10	631	59.4	50.83	67.43	5	309	29.1	15.86	47.13
Indian	3	209	27.4	13.77	47.09	3	156	20.4	5.52	52.97
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	1	108	100.0	100.00	100.00
Others	4	306	55.9	29.49	79.41	3	158	29.0	13.92	50.72

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.3.8 : Preferred option to increase body weight among adolescents by socio-demographic characteristics

Characteristics	Take high calorie foods					Others				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	34	2429	9.3	6.96	12.28	25	1943	7.4	5.44	10.06
Locality of school										
Urban	18	1316	11.1	7.34	16.41	11	839	7.1	4.18	11.71
Rural	16	1114	7.8	5.63	10.68	14	1104	7.7	5.31	11.11
Sex										
Boys	25	1769	11.5	7.79	16.62	16	1184	7.7	4.68	12.36
Girls	9	660	6.1	2.95	12.33	9	760	7.1	3.71	13.01
School category										
Primary	11	1035	10.6	6.34	17.33	11	1032	10.6	7.55	14.70
Secondary	23	1394	8.5	6.30	11.32	14	911	5.5	3.56	8.53
Class										
Standard 4	3	239	6.7	0.89	36.17	4	341	9.5	3.27	24.54
Standard 5	4	457	11.5	3.91	29.14	3	329	8.2	2.74	22.23
Standard 6	4	339	15.8	6.88	32.17	4	363	16.9	8.96	29.55
Form 1	3	245	9.6	3.14	25.64	3	238	9.3	3.13	24.52
Form 2	6	420	14.0	7.70	24.24	3	237	7.9	3.22	18.28
Form 3	7	400	11.2	6.16	19.52	1	61	1.7	0.26	10.63
Form 4	4	203	7.7	2.06	24.76	4	214	8.1	3.61	17.19
Form 5	3	126	2.7	0.86	8.15	3	160	3.4	1.21	9.32
Ethnicity										
Malay	28	1971	8.4	6.19	11.20	22	1686	7.2	4.83	10.48
Chinese	1	60	5.7	1.81	16.47	1	62	5.8	1.86	16.91
Indian	4	315	41.3	22.97	62.47	1	83	10.9	1.11	56.93
Bumiputera Sabah	-	-	-	-	-	1	112	100.0	100.00	100.00
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	82	15.1	3.19	48.84	-	-	-	-	-

3.4 Meal pattern among adolescents (Primary 4 to Secondary 5) in Pahang

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3.4.1 Introduction

The term 'meal patterns' is often used to describe individuals' eating patterns at the level of a 'meal', such as a main meal (for example, breakfast, lunch or dinner) or a smaller-sized meal (for example, supper or snack). It can also be described in three constructs, meal pattern (frequency, spacing, regularity, skipping, timing), meal format (types of food combinations, sequencing of foods, nutrient profile/content); and meal context (eating with others or with the family, eating in front of the television or out of the home). Understanding the ways in which different meal patterns make an impact on diet quality is very important as it is believed to affect the growth of the individual and elucidate important diet–disease relationships, especially among adolescents. Therefore, meal pattern-based approach could complement current nutrition advice to enhance healthy eating campaign strategies.

3.4.2 Objective

General objective:

To determine the meal pattern of adolescents in Pahang (Primary 4 to Secondary 5).

Specific objective:

- To determine the prevalence of consumption of individual main meals (breakfast, lunch, dinner) and intermeals (during recess, afternoon tea and heavy meal after dinner).
- To identify the sources of food and/or drink consumed for main meals (breakfast, lunch, dinner) and intermeals (during recess, afternoon tea and heavy meal after dinner).
- To identify reasons for skipping main meals (breakfast, lunch and dinner).
- To determine the prevalence of the practice of bringing food or drinks to school.
- To identify common types of food or drink brought to school.
- To determine the prevalence of eating out among adolescents.
- To determine the prevalence of snacking and the practice of buying snacks outside the school area.
- To identify common types of snacks consumed and bought outside the school area.
- To identify the source of media that affect the meal patterns of adolescents.

3.4.3 Variable Definition

- **Main meal:** the traditional meal; breakfast, lunch, dinner.
- **Breakfast:** defined as the first food taken after waking from sleep, food intake in the early morning, between 6.00 am to 8.00 am.
- **Lunch:** defined as foods consumed or meal between 11.00 am to 3.00 pm.
- **Dinner:** defined as foods consumed or meal between 6.00 pm to 10.00 pm.
- **Afternoon tea:** defined as food and/ or drinks taken between lunch and dinner, between 3.00 pm to 6.00 pm.
- **Heavy meal after dinner:** food taken at night after dinner after 10.00 pm. Examples of foods that are considered heavy are high calorie food such as *nasi lemak*, *roti canai*, fried noodles, burgers, fried chicken and so on. It does not include two small snacks like crackers and/or a glass of milk.
- **Skipping meal:** the omission or lack of consumption of one or more of the traditional main meals (breakfast, lunch or dinner) throughout the day.
- **Dieting:** to limit food intake in terms of the amount of frequency of eating for weight loss purposes.
- **Fast food:** meant in this question, including ready-to-eat food. Ready-to-eat foods is foods that can be eaten immediately after purchase. It consists of cooked food, hot or cold food and food that can be eaten without further cooking or heating.
- **Snacking:** consumption of energy outside traditional meals such as breakfast, lunch, and dinner.
- **Eating during school break time:** Eating time between the intervals of classes after school has started.
- **Eating out:** either eating at restaurant or a hawker stall and does not includes buying outside food and eat it at home.
- **Snack food:** snacks such as bun, biscuits, fruits, nuts, crackers, ice cream, junk foods, pickles, flavored/carbonated drinks, fries/ nuggets/sausages, candy or chocolate.

3.4.4 Findings

There were 2,563 school children which represented 174,713 school children aged 10 to 17 years old in Pahang who responded to this module. The analysis showed that 26.1% (95% CI: 21.53, 31.16), 45.0% (95% CI: 40.39, 49.77) and 48.5% (95% CI: 42.92, 54.09) adolescents took breakfast, lunch and dinner every day, respectively. Most of the respondents claimed that the food for breakfast, lunch and dinner was prepared at home. No appetite [44.4% (95% CI: 40.40, 48.48)] and no time (32.7% (95% CI: 27.99, 37.72)) were identified as reasons as to why they skipped breakfast. On top of that, 48.0% (95% CI: 44.12, 51.84) and 51.7% (95% CI: 47.79, 55.58) of the adolescents reported that having no appetite was a major concern why they skipped lunch and dinner. More than half of the students reported that they eat and/ or drink during recess time every day and the main food source of the meal was from the school canteen (75.5% (95% CI: 68.42, 81.38)). There were 5.7% (95% CI: 4.34, 7.49) adolescents who had a heavy meal after dinner every day, whilst majority of them (70.3% (95% CI: 66.20, 74.03)) had a heavy meal after dinner at least once a week and the remaining 24.0% (95% CI: 19.79, 28.83) never took heavy supper. The analysis also showed that 85.7% (95% CI: 82.92, 88.06) adolescents consumed fast food at least once a week and 2.5% (95% CI: 1.81, 3.54) took fast food every day. There were 6.8% (95% CI: 5.05, 9.18) and 39.7% (95% CI: 33.36, 46.36) adolescents who brought food and drinks to school every day, respectively. The most common food brought to school were nasi lemak/ fried rice/ mixed rice [47.7% (95% CI: 39.70, 55.91)], followed by bread/ buns/ sandwiches [26.4% (95% CI: 19.79, 34.23)]. In the meantime, majority of the students brought plain water to school (90.3% (95% CI: 87.96, 92.20)). More than half of the students spent their pocket money to buy food and/ or drinks. In terms of the frequency of eating out, 71.2% (95% CI: 67.69, 74.43) of the adolescents had eaten out at least one to three times per week. About 66.4% (95% CI: 62.97, 69.71) of the adolescents in Pahang consumed snacks one to three times in a week. There were 30.6% (95% CI: 26.72, 34.68) of them who claimed they took bread/ buns/ sandwiches as a snack. Overall, 20.3% (95% CI: 16.58, 24.57) and 20.2% (95% CI: 17.53, 23.18) of the adolescents reported they took biscuits and fruits as snacks, respectively. About 31.0% (95% CI: 24.86, 37.79) of the students claimed that they do not buy food and/ or drinks outside the school. In contrast, 24.1% (95% CI: 20.85, 27.73) of them bought flavoured/ carbonated drinks outside the school perimeters. More than half of the adolescents bought food and/or drinks outside the school premises one to four times in a week. The analysis also revealed that social media [39.2% (95% CI: 34.54, 43.98)] and television [38.9% (95% CI: 35.25, 42.72)] were the most influential media that will alter their eating habits.

3.4.5 Discussions/Conclusion

Eating habits for the three main meals (ie. breakfast, lunch and dinner) among the adolescents in Pahang is a concern. No appetite was found to be a major reason for them to skip meals. Therefore, further studies should be conducted to understand the behaviour of skipping meals among adolescents. Meanwhile, the prevalence of having meals after dinner and

consumption of fast foods was quite alarming. The frequency of the students buying foods and drinks outside the school perimeters is a concern, since the analysis showed that unhealthy foods and drinks such as nuggets and carbonated drinks are available outside the school premises. Social media and television would be the best platform to influence the adolescents in practising healthy eating in their daily life.

3.4.6 Recommendation

We have proposed several recommendations based on the findings from this survey. Advocacy on proper meal pattern practice among adolescents is crucial therefore, a holistic and comprehensive nutrition intervention should be implemented nation-wide, where every stakeholder must work together. Adolescents are the future adults, thus a healthier adolescent generation is warranted for a healthier nation. As most of the adolescents are school-going individuals, therefore, more health promotion such as healthy eating habits at home, in the school and eating out must be addressed systematically. Positive behavioural changes on dietary patterns need a longer time but the support and intervention must be continuous. The Ministry of Health and the Ministry of Education together with support and cooperation from the Parent and Teacher Association and also professional bodies (Nutrition Society of Malaysia, Malaysian Dietitians' Association, Malaysian Association for the Study of Obesity), that are related to diet and lifestyle should work hand-in-hand to educate and empower adolescents on proper nutrition intake.

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NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.1 : Prevalence of breakfast per week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Socio-demographic Characteristics	Breakfast frequency per week									
	Daily (7 days)					1 to 6 days				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	643	45452	26.1	21.53	31.16	1645	111113	63.7	58.78	68.36
Locality of school										
Urban	345	24253	30.7	25.25	36.70	718	47126	59.6	54.20	64.79
Rural	298	21199	22.2	16.56	29.15	927	63987	67.1	59.91	73.56
Sex										
Boys	340	23513	26.9	22.25	32.14	785	53966	61.8	55.77	67.42
Girls	303	21939	25.2	19.77	31.55	860	57146	65.6	60.67	70.30
Ethnicity										
Malay	546	39100	25.7	20.95	31.14	1447	98428	64.7	59.58	69.56
Chinese	64	3814	28.9	24.54	33.67	115	7064	53.5	50.45	56.54
Indian	13	944	22.2	11.22	39.27	41	2608	61.4	48.37	73.01
Bumiputera Sabah	4	407	62.9	38.37	82.20	3	240	37.1	17.80	61.63
Bumiputera Sarawak	6	517	39.1	30.92	48.04	8	631	47.7	41.21	54.36
Others	10	670	22.7	8.40	48.48	31	2143	72.6	48.14	88.30
School level										
Primary school	252	23047	32.5	25.62	40.14	453	41793	58.9	50.40	66.82
Secondary school	391	22406	21.7	17.64	26.32	1192	69319	67.0	62.32	71.42
Class										
Standard 4	88	7131	30.1	20.78	41.33	177	14273	60.2	51.13	68.58
Standard 5	68	7963	34.0	20.99	50.05	112	13704	58.6	41.99	73.41
Standard 6	96	7953	33.3	27.04	40.18	164	13816	57.8	51.61	63.79
Form 1	78	5349	25.0	19.62	31.26	193	13929	65.1	57.27	72.17
Form 2	69	4452	21.2	16.03	27.53	234	14420	68.7	61.64	75.01
Form 3	83	4482	21.5	13.64	32.21	251	13882	66.6	55.72	75.98
Form 4	72	3812	19.3	13.72	26.43	231	13090	66.2	59.80	72.13
Form 5	89	4311	21.1	16.09	27.18	283	13998	68.5	62.98	73.59
School session										
Morning session	311	22324	24.9	19.78	30.73	803	56119	62.5	57.17	67.50
Evening session	12	984	22.0	12.48	35.69	37	3030	67.6	55.01	78.05
Morning and evening session	319	22110	27.7	21.89	34.29	802	51806	64.8	58.50	70.65
BMI-for-age status (BAZ)										
Thinness (<-2sd)	46	3394	29.1	21.34	38.31	102	7082	60.7	53.83	67.22
Normal (≥-2sd - ≤+1sd)	424	29844	28.4	22.23	35.48	992	65577	62.4	55.84	68.49
Overweight (>+1sd - ≤+2sd)	87	6115	21.6	17.44	26.39	284	19331	68.2	62.73	73.23
Obese (>+2sd)	84	5934	20.6	16.92	24.95	262	18773	65.3	59.23	70.96
Height-for-age status (HAZ)										
Stunting (<-2sd)	62	4422	26.7	19.24	35.80	162	11126	67.2	58.13	75.15
Normal (≥-2sd)	580	40971	26.0	21.36	31.28	1478	99707	63.3	58.33	68.03

Table 3.4.1 : Prevalence of breakfast per week among adolescents by socio-demographic characteristics and nutritional status

	Did not take breakfast				
	Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
Pahang	270	17859	10.2	7.89	13.19
Locality of school					
Urban	122	7679	9.7	6.85	13.59
Rural	148	10180	10.7	7.36	15.25
Sex					
Boys	144	9896	11.3	8.44	15.04
Girls	126	7963	9.1	6.58	12.59
Ethnicity					
Malay	216	14529	9.6	7.20	12.57
Chinese	39	2324	17.6	14.60	21.07
Indian	11	694	16.4	7.80	31.13
Bumiputera Sabah					
Bumiputera Sarawak	2	173	13.1	10.61	16.08
Others	2	139	4.7	1.23	16.40
School level					
Primary school	73	6171	8.7	5.18	14.23
Secondary school	197	11688	11.3	8.61	14.71
Class					
Standard 4	31	2314	9.8	4.36	20.40
Standard 5	16	1732	7.4	2.94	17.41
Standard 6	26	2125	8.9	4.60	16.51
Form 1	31	2123	9.9	6.07	15.79
Form 2	32	2114	10.1	5.98	16.47
Form 3	46	2475	11.9	7.59	18.10
Form 4	46	2859	14.5	8.05	24.65
Form 5	42	2117	10.4	7.86	13.55
School session					
Morning session	172	11378	12.7	9.58	16.56
Evening session	5	469	10.5	4.00	24.67
Morning and evening session	93	6012	7.5	5.66	9.93
BMI-for-age status (BAZ)					
Thinness (<-2sd)	19	1186	10.2	6.05	16.61
Normal (≥-2sd - ≤+1sd)	151	9704	9.2	6.85	12.33
Overweight (>+1sd - ≤+2sd)	43	2893	10.2	6.83	14.99
Obese (>+2sd)	56	4029	14.0	10.05	19.23
Height-for-age status (HAZ)					
Stunting (<-2sd)	16	1007	6.1	3.60	10.10
Normal (≥-2sd)	253	16805	10.7	8.25	13.70

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.2 : Source of food for breakfast among adolescents by socio-demographic characteristics and nutritional status (Cont.)

	Prepared at home					School canteen				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	1331	95912	62.0	52.83	70.46	333	25196	16.3	12.26	21.34
Locality of school										
Urban	640	44856	63.8	55.00	71.68	161	11349	16.1	9.84	25.31
Rural	691	51056	60.6	45.49	73.95	172	13848	16.4	11.81	22.43
Sex										
Boys	640	45787	59.7	51.79	67.10	191	14419	18.8	14.16	24.51
Girls	691	50125	64.4	52.88	74.41	142	10778	13.8	9.47	19.78
Ethnicity										
Malay	1143	83690	61.6	51.40	70.87	277	21316	15.7	11.52	21.01
Chinese	117	7033	66.5	62.80	70.04	29	1751	16.6	12.02	22.38
Indian	37	2501	70.4	52.72	83.55	8	659	18.6	7.61	38.68
Bumiputera Sabah	5	493	76.2	56.87	88.60	1	108	16.7	6.30	37.26
Bumiputera Sarawak	8	722	62.9	56.49	68.93	4	324	28.2	21.95	35.39
Others	21	1474	52.4	36.78	67.58	14	1039	36.9	24.47	51.43
School level										
Primary school	468	43024	67.2	57.60	75.62	145	13847	21.6	15.63	29.16
Secondary school	863	52889	58.4	44.93	70.68	188	11349	12.5	8.79	17.54
Class										
Standard 4	182	14955	71.4	62.66	78.80	62	4950	23.6	18.11	30.23
Standard 5	116	13802	64.1	52.88	74.02	48	5929	27.6	17.27	40.92
Standard 6	170	14267	66.3	42.49	83.96	35	2968	13.8	7.92	22.92
Form 1	149	11089	59.6	44.75	72.87	32	2387	12.8	7.38	21.37
Form 2	167	10811	57.9	42.68	71.73	43	2867	15.4	8.94	25.09
Form 3	207	11838	64.5	52.63	74.76	37	2187	11.9	7.10	19.31
Form 4	171	10109	60.5	46.74	72.81	35	1909	11.4	6.67	18.89
Form 5	169	9041	49.5	31.07	68.12	41	1999	11.0	5.10	21.95
School session										
Morning session	707	50254	65.0	57.30	71.91	160	12597	16.3	11.30	22.90
Evening session	25	2036	54.1	45.42	62.62	7	640	17.0	6.70	36.97
Morning and evening session	596	43465	59.3	45.39	71.90	166	11959	16.3	12.09	21.68
BMI-for-age status (BAZ)										
Thinness (<-2sd)	90	6594	63.4	52.72	72.90	23	1718	16.5	10.72	24.59
Normal (≥-2sd - ≤+1sd)	823	58354	61.9	52.02	70.93	208	15858	16.8	11.89	23.27
Overweight (>+1sd - ≤+2sd)	216	15841	62.8	50.54	73.58	50	3559	14.1	10.38	18.88
Obese (>+2sd)	198	14760	61.0	51.63	69.57	52	4061	16.8	10.98	24.77
Height-for-age status (HAZ)										
Stunting (<-2sd)	129	9138	59.7	46.90	71.30	38	3223	21.1	13.70	30.95
Normal (≥-2sd)	1200	86659	62.4	53.19	70.74	294	21902	15.8	11.78	20.78

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.2 : Source of food for breakfast among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Socio-demographic Characteristics	Source of food for breakfast									
	Restaurant/ kiosk					Hostel				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	111	7686	5.0	3.54	6.95	446	23147	15.0	6.89	29.52
Locality of school										
Urban	59	3885	5.5	3.05	9.78	165	8752	12.4	4.72	28.93
Rural	52	3801	4.5	3.23	6.28	281	14394	17.1	5.60	41.72
Sex										
Boys	69	4793	6.2	4.37	8.86	193	10344	13.5	6.42	26.14
Girls	42	2893	3.7	2.53	5.42	253	12803	16.4	7.17	33.39
Ethnicity										
Malay	82	5845	4.3	3.23	5.71	434	22708	16.7	7.82	32.20
Chinese	23	1447	13.7	11.03	16.86	1	34	0.3	0.03	3.88
Indian	3	166	4.7	1.35	14.84	5	185	5.2	0.55	35.52
Bumiputera Sabah						1	46	7.1	0.54	52.14
Bumiputera Sarawak	1	69	6.0	4.74	7.65	1	33	2.9	0.15	35.87
Others	2	159	5.7	2.01	14.91	4	141	5.0	0.40	41.09
School level										
Primary school	32	2887	4.5	3.45	5.88	42	3446	5.4	0.76	29.77
Secondary school	79	4799	5.3	3.15	8.77	404	19701	21.7	9.99	41.02
Class										
Standard 4	11	749	3.6	1.22	10.06	2	149	0.7	0.25	2.03
Standard 5	10	1203	5.6	3.25	9.45	1	108	0.5	0.06	4.04
Standard 6	11	935	4.3	2.42	7.68	39	3188	14.8	1.99	59.89
Form 1	18	1413	7.6	2.55	20.51	56	3199	17.2	5.64	41.92
Form 2	12	755	4.0	1.91	8.36	77	4154	22.2	10.48	41.15
Form 3	16	908	4.9	3.82	6.39	65	2957	16.1	6.24	35.63
Form 4	10	555	3.3	1.48	7.31	80	3940	23.6	12.53	39.95
Form 5	23	1167	6.4	3.39	11.73	126	5451	29.9	14.26	52.14
School session										
Morning session	52	3387	4.4	2.72	6.96	161	9731	12.6	5.91	24.77
Evening session	11	865	23.0	12.98	37.45	2	135	3.6	0.27	33.48
Morning and evening session	48	3434	4.7	3.53	6.20	282	13247	18.1	7.08	38.99
BMI-for-age status (BAZ)										
Thinness (<-2sd)	7	547	5.3	2.62	10.28	20	1063	10.2	3.81	24.64
Normal (≥-2sd - ≤+1sd)	62	4276	4.5	3.09	6.61	290	14577	15.5	6.99	30.83
Overweight (>+1sd - ≤+2sd)	18	1232	4.9	2.35	9.87	79	4293	17.0	7.91	32.85
Obese (>+2sd)	21	1478	6.1	3.75	9.79	57	3215	13.3	5.83	27.47
Height-for-age status (HAZ)										
Stunting (<-2sd)	8	554	3.6	1.69	7.58	43	2260	14.8	6.76	29.28
Normal (≥-2sd)	100	6980	5.0	3.56	7.05	403	20887	15.0	6.88	29.77

Table 3.4.2 : Source of food for breakfast among adolescents by socio-demographic characteristics and nutritional status

Socio-demographic Characteristics	Source of food for breakfast				
	Count	Estimated Population	Prevalence (%)	Others	
				95% CI Lower	95% CI Upper
Pahang	41	2649	1.7	1.22	2.40
Locality of school					
Urban	24	1519	2.2	1.55	3.00
Rural	17	1130	1.3	0.75	2.39
Sex					
Boys	21	1375	1.8	1.15	2.78
Girls	20	1274	1.6	0.86	3.08
Ethnicity					
Malay	35	2300	1.7	1.17	2.43
Chinese	5	308	2.9	2.23	3.80
Indian	1	41	1.2	0.12	10.35
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	8	782	1.2	0.56	2.65
Secondary school	33	1867	2.1	1.51	2.81
Class					
Standard 4	2	139	0.7	0.12	3.71
Standard 5	4	479	2.2	0.76	6.37
Standard 6	2	164	0.8	0.23	2.48
Form 1	7	520	2.8	1.22	6.26
Form 2	1	90	0.5	0.06	3.80
Form 3	9	473	2.6	1.39	4.72
Form 4	4	189	1.1	0.41	3.06
Form 5	12	596	3.3	2.18	4.85
School session					
Morning session	20	1403	1.8	1.01	3.22
Evening session	1	84	2.2	1.04	4.74
Morning and evening session	20	1162	1.6	0.95	2.63
BMI-for-age status (BAZ)					
Thinness (<-2sd)	7	479	4.6	2.13	9.67
Normal (≥-2sd - ≤+1sd)	17	1170	1.2	0.70	2.20
Overweight (>+1sd - ≤+2sd)	5	306	1.2	0.49	2.99
Obese (>+2sd)	12	694	2.9	1.23	6.54
Height-for-age status (HAZ)					
Stunting (<-2sd)	3	132	0.9	0.24	3.04
Normal (≥-2sd)	38	2518	1.8	1.29	2.53

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.3 : Reasons for skipping breakfast among adolescents by socio-demographic characteristics nutritional status (Cont.)

Socio-demographic Characteristics	Reasons for skipping breakfast									
	No time					On diet/ control body weight				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	591	37997	32.7	27.99	37.72	99	6582	5.7	4.05	7.85
Locality of school										
Urban	277	17511	36.6	29.97	43.82	36	2322	4.9	3.31	7.06
Rural	314	20486	29.9	24.16	36.37	63	4260	6.2	3.90	9.78
Sex										
Boys	256	17162	29.6	24.80	34.93	58	3877	6.7	5.02	8.87
Girls	335	20835	35.7	30.53	41.23	41	2705	4.6	2.86	7.44
Ethnicity										
Malay	514	33112	32.0	26.95	37.52	89	5965	5.8	4.01	8.22
Chinese	44	2697	35.2	27.76	43.38	4	240	3.1	1.80	5.40
Indian	15	941	43.5	27.28	61.33	3	150	6.9	2.28	19.24
Bumiputera Sabah	2	128	100.0	100.00	100.00					
Bumiputera Sarawak	2	125	15.6	7.70	28.99	2	161	20.1	17.69	22.66
Others	14	993	47.6	31.63	64.06	1	66	3.1	1.48	6.58
School level										
Primary school	134	12476	29.9	23.43	37.30	25	2082	5.0	2.73	8.96
Secondary school	457	25520	34.2	28.13	40.86	74	4501	6.0	4.09	8.82
Class										
Standard 4	51	4091	28.2	16.45	43.81	7	481	3.3	1.14	9.21
Standard 5	36	4433	33.8	22.93	46.62	4	485	3.7	0.70	17.33
Standard 6	47	3953	28.1	19.90	38.12	14	1116	7.9	4.23	14.39
Form 1	61	4286	30.7	23.09	39.63	13	908	6.5	1.92	19.86
Form 2	85	4936	32.2	24.45	41.14	16	1071	7.0	2.91	15.90
Form 3	89	4689	31.3	23.65	40.22	14	846	5.7	2.88	10.80
Form 4	97	5530	37.2	28.34	46.94	15	857	5.8	3.49	9.35
Form 5	125	6080	39.2	30.99	48.12	16	818	5.3	2.72	10.00
School session										
Morning session	296	19689	32.3	27.04	38.07	53	3801	6.2	3.98	9.65
Evening session	11	897	33.6	19.33	51.62	2	146	5.5	2.39	12.06
Morning and evening session	283	17349	33.0	26.54	40.22	44	2634	5.0	3.19	7.79
BMI-for-age status (BAZ)										
Thinness (<-2sd)	32	2104	29.5	17.94	44.40	2	104	1.5	0.35	5.88
Normal (≥-2sd - ≤+1sd)	359	23028	33.8	28.32	39.68	48	3159	4.6	3.22	6.62
Overweight (>+1sd - ≤+2sd)	103	6294	31.7	24.78	39.51	19	1281	6.4	3.81	10.70
Obese (>+2sd)	97	6570	31.7	25.25	38.84	30	2038	9.8	6.45	14.68
Height-for-age status (HAZ)										
Stunting (<-2sd)	50	3334	29.9	20.47	41.48	9	605	5.4	2.83	10.19
Normal (≥-2sd)	541	34663	33.0	28.57	37.86	90	5977	5.7	4.09	7.89

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.3 : Reasons for skipping breakfast among adolescents by socio-demographic characteristics and nutritional status

Socio-demographic Characteristics	Reasons for skipping breakfast									
	No money					Others				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
Lower				Upper	Lower				Upper	
Pahang	54	3658	3.1	2.08	4.72	110	6722	5.8	4.26	7.79
Locality of school										
Urban	26	1549	3.2	1.79	5.80	57	3358	7.0	4.34	11.17
Rural	28	2109	3.1	1.75	5.37	53	3364	4.9	3.47	6.91
Sex										
Boys	32	2109	3.6	2.35	5.61	57	3452	6.0	3.69	9.47
Girls	22	1548	2.7	1.53	4.57	53	3271	5.6	3.83	8.13
Ethnicity										
Malay	41	2805	2.7	1.71	4.28	89	5518	5.3	3.92	7.22
Chinese	8	510	6.6	3.56	12.09	18	1059	13.8	7.01	25.38
Indian	1	68	3.1	0.39	21.31	2	110	5.1	1.21	18.97
Bumiputera Sabah										
Bumiputera Sarawak	1	69	8.6	7.61	9.75					
Others	3	205	9.8	4.54	20.07	1	36	1.7	0.13	19.04
School level										
Primary school	18	1615	3.9	2.10	7.04	19	1620	3.9	2.00	7.41
Secondary school	36	2043	2.7	1.62	4.60	91	5102	6.8	5.07	9.17
Class										
Standard 4	12	1035	7.1	3.27	14.83	6	510	3.5	1.34	8.85
Standard 5	1	147	1.1	0.20	6.10	3	328	2.5	0.97	6.31
Standard 6	5	433	3.1	2.20	4.29	10	782	5.6	2.75	10.95
Form 1	3	205	1.5	0.37	5.69	8	587	4.2	2.71	6.48
Form 2	6	410	2.7	0.85	8.08	6	423	2.8	1.12	6.64
Form 3	10	571	3.8	1.55	9.08	20	1150	7.7	5.16	11.31
Form 4	7	399	2.7	1.10	6.40	27	1528	10.3	5.67	17.90
Form 5	10	458	3.0	0.80	10.28	30	1413	9.1	5.61	14.49
School session										
Morning session	26	1935	3.2	1.65	6.02	59	3812	6.3	4.23	9.16
Evening session	3	283	10.6	3.07	30.77	1	84	3.2	1.32	7.35
Morning and evening session	25	1439	2.7	1.44	5.15	49	2783	5.3	3.28	8.45
BMI-for-age status (BAZ)										
Thinness (<-2sd)	1	60	0.8	0.10	6.66	8	468	6.6	3.04	13.56
Normal (≥-2sd - ≤+1sd)	43	2907	4.3	2.75	6.55	68	4048	5.9	4.21	8.30
Overweight (>+1sd - ≤+2sd)	3	163	0.8	0.24	2.77	16	985	5.0	2.58	9.32
Obese (>+2sd)	7	527	2.5	1.27	5.00	16	1128	5.4	3.17	9.15
Height-for-age status (HAZ)										
Stunting (<-2sd)	5	307	2.8	1.24	6.00	5	304	2.7	1.23	5.94
Normal (≥-2sd)	49	3351	3.2	2.02	5.01	102	6254	6.0	4.36	8.10

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.4 : Prevalence of lunch per week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Daily (7 days)					1 to 6 days				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	1184	78519	45.0	40.39	49.77	1281	89054	51.1	47.02	55.12
Locality of school										
Urban	614	40144	50.7	43.96	57.47	539	36799	46.5	39.75	53.37
Rural	570	38375	40.3	35.51	45.30	742	52255	54.9	51.12	58.59
Sex										
Boys	580	37752	43.3	36.82	49.92	628	44996	51.5	45.62	57.43
Girls	604	40766	46.8	42.78	50.91	653	44058	50.6	46.80	54.40
Ethnicity										
Malay	977	65817	43.3	39.28	47.46	1149	80182	52.8	49.70	55.83
Chinese	149	8914	67.2	63.84	70.43	62	3770	28.4	23.03	34.51
Indian	36	2176	51.3	33.09	69.10	28	1980	46.6	29.14	64.99
Bumiputera Sabah	4	413	63.9	35.27	85.17	2	126	19.5	2.23	71.88
Bumiputera Sarawak	6	468	35.4	23.36	49.66	10	853	64.6	50.34	76.64
Others	12	730	24.7	13.12	41.65	30	2143	72.6	58.84	83.07
School level										
Primary school	302	28218	39.8	34.59	45.31	434	39080	55.2	51.95	58.32
Secondary school	882	50300	48.6	42.67	54.57	847	49973	48.3	42.53	54.09
Class										
Standard 4	101	8647	36.7	28.33	45.97	177	13722	58.3	48.16	67.70
Standard 5	82	9668	41.3	26.85	57.46	100	12197	52.1	37.50	66.40
Standard 6	119	9904	41.4	35.48	47.68	157	13161	55.1	50.13	59.93
Form 1	139	9706	45.5	35.32	56.08	150	10711	50.2	40.24	60.18
Form 2	153	9541	45.5	37.96	53.17	176	11050	52.7	44.76	60.41
Form 3	173	9338	44.8	31.94	58.42	194	10755	51.6	37.75	65.23
Form 4	187	10545	53.4	47.38	59.25	152	8630	43.7	37.65	49.89
Form 5	230	11170	54.3	47.13	61.23	175	8828	42.9	36.39	49.63
School session										
Morning session	635	43157	48.0	41.10	55.08	598	42734	47.6	41.84	53.38
Evening session	20	1617	36.1	19.98	56.05	28	2383	53.1	37.32	68.37
Morning and evening session	526	33607	42.1	37.20	47.12	654	43883	55.0	50.39	59.43
BMI-for-age status (BAZ)										
Thinness (<-2sd)	80	5480	47.0	34.96	59.37	82	5806	49.8	38.79	60.79
Normal (≥-2sd - ≤+1sd)	754	49364	47.0	41.61	52.49	760	51759	49.3	44.57	54.03
Overweight (>+1sd - ≤+2sd)	182	12344	43.5	39.27	47.76	217	14980	52.7	48.44	57.01
Obese (>+2sd)	166	11179	38.9	31.94	46.36	217	16159	56.2	48.45	63.73
Height-for-age status (HAZ)										
Stunting (<-2sd)	101	6861	41.3	33.15	49.90	130	8998	54.1	46.03	62.02
Normal (≥-2sd)	1082	71612	45.5	40.86	50.25	1147	79847	50.7	46.61	54.87

Table 3.4.4 : Prevalence of lunch per week among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Lunch frequency per week				
	Did not take lunch				
	Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper	
Pahang	93	6778	3.9	2.45	6.11
Locality of school					
Urban	34	2199	2.8	1.66	4.61
Rural	59	4579	4.8	2.67	8.51
Sex					
Boys	61	4539	5.2	2.78	9.53
Girls	32	2239	2.6	1.89	3.49
Ethnicity					
Malay	82	5923	3.9	2.33	6.44
Chinese	8	578	4.4	1.33	13.33
Indian	1	90	2.1	0.22	17.51
Bumiputera Sabah	1	108	16.7	6.30	37.26
Bumiputera Sarawak					
Others	1	79	2.7	0.96	7.30
School level					
Primary school	40	3551	5.0	2.23	10.90
Secondary school	53	3227	3.1	2.32	4.17
Class					
Standard 4	16	1188	5.0	2.96	8.47
Standard 5	14	1534	6.6	1.62	23.01
Standard 6	10	829	3.5	1.56	7.56
Form 1	12	912	4.3	2.64	6.85
Form 2	6	395	1.9	0.85	4.12
Form 3	13	746	3.6	1.92	6.56
Form 4	10	586	3.0	1.48	5.84
Form 5	12	587	2.9	1.36	5.89
School session					
Morning session	53	3927	4.4	2.37	7.94
Evening session	6	483	10.8	5.99	18.64
Morning and evening session	34	2368	3.0	1.93	4.54
BMI-for-age status (BAZ)					
Thinness (<-2sd)	5	377	3.2	1.11	9.07
Normal (≥-2sd - ≤+1sd)	52	3871	3.7	2.21	6.08
Overweight (>+1sd - ≤+2sd)	16	1075	3.8	2.45	5.80
Obese (>+2sd)	19	1395	4.9	2.50	9.23
Height-for-age status (HAZ)					
Stunting (<-2sd)	10	763	4.6	2.13	9.61
Normal (≥-2sd)	81	5884	3.7	2.37	5.86

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.5 : Source of food for lunch among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Source of food for lunch									
	Prepared at home					School canteen				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	1232	87240	52.3	44.44	60.08	546	41352	24.8	18.27	32.73
Locality of school										
Urban	545	37412	48.8	40.40	57.23	272	20022	26.1	14.51	42.38
Rural	687	49828	55.3	42.91	67.13	274	21330	23.7	18.49	29.81
Sex										
Boys	571	40378	49.0	41.70	56.38	319	23627	28.7	22.02	36.42
Girls	661	46862	55.5	46.17	64.55	227	17725	21.0	14.12	30.09
Ethnicity										
Malay	1045	75496	52.0	43.11	60.78	494	37489	25.8	18.85	34.29
Chinese	111	6562	51.7	43.63	59.75	21	1338	10.5	6.58	16.49
Indian	47	3012	72.5	47.93	88.27	8	681	16.4	5.55	39.51
Bumiputera Sabah	2	191	35.5	14.80	63.51	2	194	35.9	9.29	75.43
Bumiputera Sarawak	6	486	36.8	28.29	46.20	9	802	60.7	47.66	72.42
Others	21	1493	52.0	28.69	74.42	12	848	29.5	12.37	55.47
School level										
Primary school	386	35421	53.0	44.01	61.77	257	24038	36.0	27.98	44.80
Secondary school	846	51818	51.9	40.27	63.28	289	17314	17.3	11.63	25.05
Class										
Standard 4	159	13056	59.2	50.53	67.27	96	7683	34.8	26.37	44.34
Standard 5	87	10702	49.3	34.20	64.48	81	9543	43.9	32.74	55.79
Standard 6	140	11663	50.6	33.49	67.52	80	6813	29.5	20.20	40.98
Form 1	141	10372	51.3	40.29	62.18	49	3766	18.6	11.10	29.56
Form 2	166	10773	52.5	40.38	64.30	57	3839	18.7	11.26	29.44
Form 3	194	10902	54.3	43.72	64.43	58	3295	16.4	10.49	24.73
Form 4	179	10790	56.5	42.77	69.30	49	2619	13.7	7.30	24.30
Form 5	166	8980	45.0	24.26	67.65	76	3794	19.0	7.91	39.07
School session										
Morning session	709	48872	57.3	49.69	64.57	234	18899	22.2	15.48	30.66
Evening session	22	1818	45.5	35.43	55.87	10	868	21.7	8.72	44.60
Morning and evening session	498	36391	47.1	35.83	58.69	302	21585	27.9	20.42	36.95
BMI-for-age status (BAZ)										
Thinness (<-2sd)	87	6293	56.1	47.06	64.75	41	2977	26.5	18.34	36.74
Normal (≥-2sd - ≤+1sd)	736	51521	51.1	42.59	59.53	336	25116	24.9	17.75	33.76
Overweight (>+1sd - ≤+2sd)	200	14404	53.0	44.07	61.71	78	5995	22.1	15.82	29.86
Obese (>+2sd)	207	14810	54.8	44.81	64.36	88	7066	26.1	18.94	34.87
Height-for-age status (HAZ)										
Stunting (<-2sd)	118	8372	53.4	41.91	64.45	53	3983	25.4	17.72	34.96
Normal (≥-2sd)	1113	78798	52.2	44.50	59.87	491	37276	24.7	18.09	32.79

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.5 : Source of food for lunch among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Source of food for lunch									
	Restaurant/ kiosk					Hostel				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	189	12410	7.4	4.44	12.21	446	23068	13.8	6.31	27.67
Locality of school										
Urban	143	9031	11.8	6.19	21.26	167	8761	11.4	4.30	27.00
Rural	46	3379	3.8	2.89	4.86	279	14308	15.9	5.14	39.70
Sex										
Boys	105	6982	8.5	5.41	13.05	185	9950	12.1	5.73	23.69
Girls	84	5428	6.4	3.45	11.69	261	13118	15.5	6.79	31.78
Ethnicity										
Malay	104	7062	4.9	3.50	6.73	434	22629	15.6	7.24	30.41
Chinese	76	4631	36.5	30.04	43.51	1	34	0.3	0.02	3.27
Indian	4	278	6.7	1.85	21.46	5	185	4.5	0.47	31.73
Bumiputera Sabah	1	108	20.0	1.70	78.34	1	46	8.6	0.70	55.63
Bumiputera Sarawak						1	33	2.5	0.13	32.88
Others	4	331	11.5	7.12	18.15	4	141	4.9	0.40	39.96
School level										
Primary school	38	3234	4.8	3.35	6.93	41	3358	5.0	0.66	29.49
Secondary school	151	9177	9.2	4.75	17.02	405	19711	19.7	8.90	38.23
Class										
Standard 4	15	1069	4.8	2.47	9.26	1	60	0.3	0.05	1.51
Standard 5	9	1002	4.6	2.10	9.83	1	108	0.5	0.06	4.13
Standard 6	14	1163	5.0	3.37	7.48	39	3190	13.8	1.75	59.05
Form 1	40	2885	14.3	7.02	26.84	54	3053	15.1	4.70	39.07
Form 2	19	1173	5.7	1.74	17.15	79	4294	20.9	9.53	39.91
Form 3	40	2331	11.6	5.09	24.33	67	3091	15.4	6.11	33.68
Form 4	31	1787	9.4	5.80	14.75	72	3532	18.5	9.15	33.83
Form 5	21	1001	5.0	2.32	10.51	133	5741	28.8	13.57	50.96
School session										
Morning session	102	6499	7.6	4.32	13.10	161	9723	11.4	5.24	23.03
Evening session	13	1094	27.4	14.59	45.36	2	135	3.4	0.25	32.66
Morning and evening session	74	4817	6.2	3.89	9.86	282	13178	17.1	6.60	37.43
BMI-for-age status (BAZ)										
Thinness (<-2sd)	11	729	6.5	2.89	13.97	18	980	8.7	3.25	21.43
Normal (≥-2sd - ≤+1sd)	123	7943	7.9	4.80	12.65	287	14379	14.3	6.37	28.91
Overweight (>+1sd - ≤+2sd)	34	2181	8.0	3.96	15.59	83	4517	16.6	7.73	32.16
Obese (>+2sd)	21	1557	5.8	3.32	9.80	58	3192	11.8	5.24	24.49
Height-for-age status (HAZ)										
Stunting (<-2sd)	14	996	6.3	3.46	11.36	39	2050	13.1	5.72	27.11
Normal (≥-2sd)	175	11414	7.6	4.41	12.68	407	21019	13.9	6.35	27.89

Table 3.4.5 : Source of food for lunch among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Source of food for lunch				
	Count	Estimated Population	Other Prevalence (%)	95% CI	
				Lower	Upper
Pahang	41	2667	1.6	1.08	2.35
Locality of school					
Urban	22	1467	1.9	1.15	3.17
Rural	19	1200	1.3	0.77	2.30
Sex					
Boys	22	1440	1.7	1.10	2.77
Girls	19	1227	1.5	0.88	2.40
Ethnicity					
Malay	38	2489	1.7	1.14	2.57
Chinese	2	119	0.9	0.66	1.32
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	59	2.1	0.72	5.77
School level					
Primary school	9	798	1.2	0.53	2.64
Secondary school	32	1870	1.9	1.24	2.81
Class					
Standard 4	3	199	0.9	0.16	4.95
Standard 5	3	363	1.7	0.69	4.01
Standard 6	3	236	1.0	0.31	3.37
Form 1	2	142	0.7	0.18	2.75
Form 2	7	448	2.2	0.75	6.14
Form 3	8	473	2.4	1.09	5.03
Form 4	7	371	1.9	0.96	3.91
Form 5	8	436	2.2	1.01	4.65
School session					
Morning session	20	1308	1.5	0.83	2.80
Evening session	1	84	2.1	1.04	4.24
Morning and evening session	20	1276	1.7	1.03	2.63
BMI-for-age status (BAZ)					
Thinness (<-2sd)	4	238	2.1	0.74	5.96
Normal (≥-2sd - ≤+1sd)	28	1879	1.9	1.12	3.09
Overweight (>+1sd - ≤+2sd)	2	90	0.3	0.07	1.47
Obese (>+2sd)	6	414	1.5	0.73	3.17
Height-for-age status (HAZ)					
Stunting (<-2sd)	5	290	1.8	0.59	5.68
Normal (≥-2sd)	35	2331	1.5	1.05	2.26

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.6 : Reasons for skipping lunch among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Reasons for skipping lunch									
	No food available					No appetite				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	141	10307	12.3	9.46	15.84	569	40208	48.0	44.12	51.84
Locality of school										
Urban	57	3942	11.8	6.79	19.64	207	14386	43.0	37.61	48.47
Rural	84	6365	12.6	9.74	16.26	362	25821	51.3	46.96	55.63
Sex										
Boys	79	5738	13.1	10.22	16.57	271	20133	45.9	40.33	51.52
Girls	62	4569	11.4	7.59	16.90	298	20075	50.3	45.32	55.22
Ethnicity										
Malay	129	9557	12.5	9.49	16.35	525	37185	48.7	44.66	52.79
Chinese	6	368	11.8	7.71	17.71	15	932	30.0	24.93	35.51
Indian	1	41	3.2	0.31	25.31	10	631	48.6	30.45	67.17
Bumiputera Sabah	1	80	63.3	7.63	97.29					
Bumiputera Sarawak						4	379	44.4	44.39	44.39
Others	4	262	12.4	6.75	21.75	15	1081	51.3	27.31	74.76
School level										
Primary school	64	5547	14.9	10.47	20.82	204	18742	50.4	44.49	56.32
Secondary school	77	4761	10.2	7.32	14.07	365	21466	46.0	41.38	50.73
Class										
Standard 4	30	2181	16.6	10.09	26.08	81	6381	48.6	40.80	56.42
Standard 5	17	2013	17.3	10.24	27.79	51	6264	53.9	41.66	65.70
Standard 6	17	1353	10.9	6.06	18.81	72	6097	49.1	37.50	60.75
Form 1	16	1253	12.4	7.05	20.93	73	5116	50.7	38.88	62.38
Form 2	9	584	5.7	2.32	13.39	82	5080	49.7	43.03	56.33
Form 3	19	1132	11.3	6.35	19.31	82	4468	44.6	37.29	52.16
Form 4	16	851	10.9	6.40	17.87	63	3625	46.3	36.00	56.99
Form 5	17	941	11.1	5.22	22.07	65	3177	37.5	31.14	44.30
School session										
Morning session	70	5279	13.0	9.01	18.42	247	18326	45.1	39.81	50.60
Evening session	6	458	19.6	9.56	36.00	10	867	37.1	20.92	56.86
Morning and evening session	65	4571	11.2	8.51	14.59	311	20962	51.3	45.78	56.85
BMI-for-age status (BAZ)										
Thinness (<-2sd)	14	1122	23.1	16.69	31.03	33	2312	47.6	36.74	58.69
Normal (≥-2sd - ≤+1sd)	85	6039	12.3	8.57	17.42	341	23204	47.4	42.53	52.26
Overweight (>+1sd - ≤+2sd)	20	1496	10.8	6.47	17.58	99	6993	50.6	43.09	58.17
Obese (>+2sd)	21	1591	10.1	8.00	12.56	94	7511	47.4	37.78	57.31
Height-for-age status (HAZ)										
Stunting (<-2sd)	18	1325	15.3	9.55	23.68	66	4511	52.2	41.23	62.90
Normal (≥-2sd)	122	8922	11.9	8.94	15.68	502	35651	47.5	43.44	51.70

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.6 : Reasons for skipping lunch among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Reasons for skipping lunch									
	No time					On diet/ control body weight				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	207	14116	16.8	14.00	20.12	125	8353	10.0	8.19	12.08
Locality of school										
Urban	98	6818	20.4	16.27	25.17	53	3519	10.5	8.48	12.95
Rural	109	7298	14.5	11.38	18.30	72	4834	9.6	7.11	12.86
Sex										
Boys	111	7975	18.2	14.65	22.32	59	4130	9.4	7.38	11.93
Girls	96	6141	15.4	11.56	20.17	66	4223	10.6	8.30	13.38
Ethnicity										
Malay	186	12656	16.6	13.70	19.93	112	7326	9.6	7.73	11.86
Chinese	13	826	26.5	20.34	33.85	5	345	11.1	3.82	28.11
Indian	3	266	20.5	8.01	43.24	3	292	22.5	11.69	38.91
Bumiputera Sabah	1	46	36.7	2.71	92.37					
Bumiputera Sarawak	1	92	10.8	10.84	10.84	3	243	28.5	28.52	28.52
Others	3	229	10.9	6.16	18.54	2	148	7.0	2.76	16.77
School level										
Primary school	69	5942	16.0	11.95	21.05	34	2971	8.0	5.52	11.43
Secondary school	138	8174	17.5	13.81	21.99	91	5382	11.5	9.71	13.66
Class										
Standard 4	32	2348	17.9	11.55	26.61	7	491	3.7	1.09	12.00
Standard 5	15	1735	14.9	7.88	26.47	6	707	6.1	2.11	16.30
Standard 6	22	1859	15.0	8.94	23.96	21	1774	14.3	7.35	25.91
Form 1	27	2008	19.9	12.74	29.67	13	935	9.3	4.85	16.97
Form 2	23	1550	15.2	10.78	20.89	23	1348	13.2	8.78	19.33
Form 3	30	1595	15.9	10.51	23.40	16	952	9.5	5.03	17.22
Form 4	23	1213	15.5	9.74	23.78	18	1098	14.0	8.17	23.06
Form 5	35	1808	21.3	11.58	35.96	21	1049	12.4	9.00	16.80
School session										
Morning session	102	7008	17.3	13.86	21.29	69	4684	11.5	8.07	16.24
Evening session	8	653	28.0	14.65	46.72	2	190	8.1	2.95	20.58
Morning and evening session	97	6455	15.8	11.82	20.82	54	3479	8.5	6.41	11.24
BMI-for-age status (BAZ)										
Thinness (<-2sd)	12	783	16.1	7.96	29.90	2	120	2.5	0.52	11.03
Normal (≥-2sd - ≤+1sd)	130	8935	18.2	14.93	22.09	62	4000	8.2	6.15	10.76
Overweight (>+1sd - ≤+2sd)	34	2217	16.1	11.28	22.35	26	1731	12.5	8.82	17.52
Obese (>+2sd)	31	2181	13.8	9.49	19.60	35	2502	15.8	11.19	21.86
Height-for-age status (HAZ)										
Stunting (<-2sd)	21	1419	16.4	10.64	24.45	12	805	9.3	5.27	15.94
Normal (≥-2sd)	186	12697	16.9	13.87	20.51	113	7548	10.1	8.19	12.31

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.6: Reasons for skipping lunch among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Reasons for skipping lunch									
	No money					Others				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	74	5349	6.4	4.09	9.82	90	5487	6.5	4.68	9.09
Locality of school										
Urban	38	2384	7.1	4.88	10.28	42	2440	7.3	4.45	11.69
Rural	36	2964	5.9	2.80	11.99	48	3048	6.1	3.81	9.50
Sex										
Boys	47	3218	7.3	4.53	11.67	43	2693	6.1	3.89	9.55
Girls	27	2131	5.3	3.09	9.05	47	2794	7.0	4.81	10.07
Ethnicity										
Malay	65	4728	6.2	3.66	10.30	79	4874	6.4	4.49	9.01
Chinese	2	108	3.5	2.49	4.85	10	533	17.1	10.28	27.13
Indian	1	68	5.2	0.68	30.81					
Bumiputera Sabah										
Bumiputera Sarawak	2	139	16.2	16.24	16.24					
Others	4	306	14.5	5.52	33.04	1	80	3.8	1.51	9.26
School level										
Primary school	31	2883	7.8	3.78	15.24	13	1095	2.9	1.47	5.80
Secondary school	43	2465	5.3	3.45	8.03	77	4392	9.4	7.69	11.49
Class										
Standard 4	17	1424	10.8	5.21	21.21	4	312	2.4	0.88	6.25
Standard 5	4	577	5.0	0.84	24.34	3	325	2.8	0.43	15.96
Standard 6	10	882	7.1	3.70	13.17	6	459	3.7	1.29	10.13
Form 1	3	237	2.3	0.83	6.45	8	549	5.4	2.64	10.89
Form 2	11	703	6.9	3.75	12.30	15	961	9.4	5.45	15.73
Form 3	12	677	6.8	3.51	12.65	22	1192	11.9	7.17	19.11
Form 4	4	216	2.8	1.05	7.06	14	822	10.5	7.39	14.72
Form 5	13	632	7.5	2.34	21.37	18	868	10.2	5.71	17.70
School session										
Morning session	29	2247	5.5	3.32	9.10	47	3050	7.5	5.24	10.66
Evening session	2	167	7.2	1.23	32.44					
Morning and evening session	43	2934	7.2	4.69	10.87	43	2438	6.0	3.78	9.29
BMI-for-age status (BAZ)										
Thinness (<-2sd)	4	261	5.4	1.84	14.70	4	260	5.3	2.29	11.99
Normal (≥-2sd - ≤+1sd)	48	3519	7.2	4.46	11.38	55	3289	6.7	4.61	9.68
Overweight (>+1sd - ≤+2sd)	9	599	4.3	2.08	8.81	13	773	5.6	2.21	13.44
Obese (>+2sd)	12	924	5.8	3.74	8.99	17	1120	7.1	3.66	13.22
Height-for-age status (HAZ)										
Stunting (<-2sd)	6	420	4.9	2.52	9.17	3	166	1.9	0.58	6.13
Normal (≥-2sd)	67	4882	6.5	3.97	10.50	86	5275	7.0	4.98	9.85

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.7 : Prevalence of dinner per week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Dinner frequency per week									
	Daily (7 days)					1 to 6 days				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	1226	84123	48.5	42.92	54.09	1236	83538	48.1	42.97	53.36
Locality of school										
Urban	673	44545	56.4	48.16	64.28	477	32280	40.9	33.71	48.42
Rural	553	39579	41.9	36.63	47.30	759	51258	54.2	48.93	59.43
Sex										
Boys	666	44543	51.2	44.77	57.53	564	39875	45.8	39.88	51.86
Girls	560	39581	45.8	38.93	52.79	672	43663	50.5	43.83	57.15
Ethnicity										
Malay	970	67698	44.8	40.58	49.08	1149	77902	51.5	47.59	55.49
Chinese	188	11520	87.1	83.34	90.17	28	1592	12.0	9.71	14.85
Indian	34	2239	52.7	37.28	67.69	29	1903	44.8	30.09	60.55
Bumiputera Sabah	5	521	80.5	28.12	97.77	1	46	7.1	0.54	52.14
Bumiputera Sarawak	12	975	73.8	67.99	78.87	4	346	26.2	21.13	32.01
Others	17	1170	39.6	24.88	56.56	25	1748	59.2	41.08	75.14
School level										
Primary school	374	34317	49.0	43.07	54.86	367	33289	47.5	42.18	52.85
Secondary school	852	49807	48.2	39.80	56.64	869	50249	48.6	40.74	56.51
Class										
Standard 4	122	9859	42.3	32.58	52.72	152	11968	51.4	42.48	60.19
Standard 5	104	12290	52.8	37.26	67.89	87	10459	45.0	30.07	60.83
Standard 6	148	12167	51.7	43.47	59.75	128	10863	46.1	38.58	53.84
Form 1	169	11806	55.0	41.09	68.19	128	9268	43.2	30.84	56.43
Form 2	129	8225	39.3	29.87	49.60	189	11667	55.7	46.38	64.72
Form 3	170	9482	45.7	31.08	61.14	194	10477	50.5	36.80	64.18
Form 4	177	9967	50.6	41.11	60.05	160	9123	46.3	37.02	55.88
Form 5	207	10327	50.2	44.67	55.65	198	9714	47.2	41.57	52.87
School session										
Morning session	656	45347	50.9	43.92	57.93	569	40181	45.1	38.93	51.51
Evening session	28	2341	52.2	29.56	74.01	24	1956	43.6	27.21	61.58
Morning and evening session	539	36297	45.5	39.57	51.51	642	41347	51.8	45.82	57.72
BMI-for-age status (BAZ)										
Thinness (<-2sd)	105	7401	63.5	51.76	73.76	61	4217	36.2	25.98	47.75
Normal (≥-2sd - ≤+1sd)	786	53019	50.8	44.90	56.63	725	48269	46.2	40.69	51.86
Overweight (>+1sd - ≤+2sd)	176	12338	44.0	37.55	50.58	220	14664	52.2	45.80	58.63
Obese (>+2sd)	154	11098	38.5	31.83	45.70	227	16093	55.9	49.51	62.05
Height-for-age status (HAZ)										
Stunting (<-2sd)	108	7797	47.3	37.54	57.31	120	8031	48.7	39.11	58.48
Normal (≥-2sd)	1113	76059	48.6	42.72	54.43	1114	75389	48.1	42.69	53.60

Table 3.4.7 : Prevalence of dinner per week among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Dinner frequency per week				
	Did not take dinner				
	Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper	
Pahang	87	5852	3.4	2.51	4.52
Locality of school					
Urban	35	2169	2.7	1.46	5.10
Rural	52	3682	3.9	3.00	5.04
Sex	37	2630	3.0	2.32	3.93
Boys	50	3221	3.7	2.44	5.64
Girls					
Ethnicity					
Malay	81	5526	3.7	2.81	4.74
Chinese	2	108	0.8	0.18	3.57
Indian	2	103	2.4	0.65	8.63
Bumiputera Sabah	1	80	12.3	0.94	67.48
Bumiputera Sarawak					
Others	1	34	1.2	0.10	12.20
School level					
Primary school	28	2498	3.6	1.99	6.30
Secondary school	59	3353	3.2	2.44	4.29
Class					
Standard 4	18	1466	6.3	3.13	12.24
Standard 5	4	509	2.2	0.79	5.89
Standard 6	6	524	2.2	1.35	3.64
Form 1	6	387	1.8	0.82	3.93
Form 2	16	1038	5.0	3.16	7.70
Form 3	14	777	3.7	1.94	7.11
Form 4	11	606	3.1	1.64	5.69
Form 5	12	545	2.6	1.47	4.71
School session					
Morning session	52	3485	3.9	2.77	5.51
Evening session	2	186	4.1	0.53	26.12
Morning and evening session	33	2181	2.7	1.95	3.82
BMI-for-age status (BAZ)					
Thinness (<-2sd)	1	44	0.4	0.04	3.21
Normal (≥-2sd - ≤+1sd)	48	3131	3.0	2.03	4.41
Overweight (>+1sd - ≤+2sd)	16	1064	3.8	2.06	6.88
Obese (>+2sd)	22	1612	5.6	3.78	8.22
Height-for-age status (HAZ)					
Stunting (<-2sd)	11	648	3.9	2.05	7.39
Normal (≥-2sd)	76	5204	3.3	2.43	4.52

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.8 : Source of food for dinner among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Socio-demographic Characteristics	Source of food for dinner									
	Prepared at home					Restaurant/ kiosk				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	1691	121585	73.2	63.08	81.39	230	16346	9.8	7.80	12.35
Locality of school										
Urban	804	55823	73.3	63.99	80.85	129	8854	11.6	8.27	16.08
Rural	887	65762	73.2	55.40	85.71	101	7492	8.3	6.49	10.66
Sex										
Boys	843	60500	72.5	63.44	79.94	132	9316	11.2	8.75	14.12
Girls	848	61085	74.0	62.13	83.14	98	7030	8.5	6.43	11.19
Ethnicity										
Malay	1422	104114	72.2	60.93	81.28	180	13024	9.0	6.91	11.73
Chinese	168	10095	77.3	68.14	84.41	37	2341	17.9	14.86	21.45
Indian	51	3435	82.9	70.22	90.92	7	522	12.6	8.12	19.03
Bumiputera Sabah	5	521	91.8	41.24	99.45					
Bumiputera Sarawak	11	965	77.8	71.90	82.78	2	162	13.0	10.41	16.21
Others	34	2454	84.1	70.65	92.09	4	298	10.2	4.75	20.60
School level										
Primary school	581	54049	81.1	69.70	88.85	86	7438	11.2	8.07	15.22
Secondary school	1110	67535	67.9	53.96	79.31	144	8908	9.0	6.54	12.16
Class										
Standard 4	220	17851	83.1	72.82	89.99	36	2761	12.8	8.77	18.43
Standard 5	163	19561	87.4	77.31	93.37	20	2271	10.1	5.92	16.85
Standard 6	198	16637	73.0	50.20	87.86	30	2406	10.6	6.15	17.52
Form 1	196	14447	69.5	53.43	81.91	34	2632	12.7	7.97	19.54
Form 2	201	13077	65.9	51.95	77.60	29	1878	9.5	5.54	15.72
Form 3	259	14677	73.5	59.24	84.16	27	1516	7.6	4.69	12.07
Form 4	223	13176	69.5	57.21	79.48	24	1353	7.1	4.00	12.41
Form 5	231	12158	61.3	42.00	77.54	30	1529	7.7	5.06	11.56
School session										
Morning session	916	64996	76.7	68.48	83.30	105	7772	9.2	6.83	12.22
Evening session	36	3044	73.0	62.69	81.37	10	844	20.2	12.67	30.73
Morning and evening session	736	53387	69.4	54.18	81.26	115	7731	10.0	7.44	13.43
BMI-for-age status (BAZ)										
Thinness (<-2sd)	121	8729	75.6	65.37	83.55	18	1388	12.0	7.96	17.73
Normal (≥-2sd - ≤+1sd)	1034	73684	73.3	62.54	81.86	130	9029	9.0	7.16	11.21
Overweight (>+1sd - ≤+2sd)	262	18781	70.0	59.25	78.96	44	3139	11.7	8.13	16.56
Obese (>+2sd)	269	19981	75.0	63.66	83.64	37	2745	10.3	6.98	14.94
Height-for-age status (HAZ)										
Stunting (<-2sd)	160	11632	73.5	60.76	83.23	20	1532	9.7	6.28	14.62
Normal (≥-2sd)	1527	109720	73.2	63.14	81.31	209	14768	9.9	7.70	12.52

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.8 : Source of food for dinner among adolescents by socio-demographic characteristics and nutritional status

Socio-demographic Characteristics	Source of food for dinner									
	Hostel					Others				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	438	22973	13.8	6.64	26.61	81	5158	3.1	2.07	4.64
Locality of school										
Urban	173	9155	12.0	4.69	27.49	34	2371	3.1	1.94	4.97
Rural	265	13819	15.4	5.32	37.04	47	2787	3.1	1.64	5.78
Sex										
Boys	193	10580	12.7	6.38	23.59	50	3109	3.7	2.26	6.09
Girls	245	12394	15.0	6.78	30.01	31	2050	2.5	1.50	4.09
Ethnicity										
Malay	427	22460	15.6	7.51	29.56	70	4534	3.1	2.11	4.68
Chinese	3	179	1.4	0.39	4.66	7	448	3.4	1.04	10.68
Indian	2	68	1.6	0.18	13.44	3	117	2.8	0.30	21.70
Bumiputera Sabah	1	46	8.2	0.55	58.76					
Bumiputera Sarawak	2	113	9.1	4.32	18.30					
Others	3	107	3.7	0.29	33.09	1	59	2.0	0.74	5.47
School level										
Primary school	43	3528	5.3	0.94	24.81	20	1656	2.5	1.37	4.47
Secondary school	395	19446	19.6	9.17	36.96	61	3503	3.5	2.10	5.85
Class										
Standard 4	5	369	1.7	0.80	3.63	8	508	2.4	0.54	9.70
Standard 5	2	217	1.0	0.12	7.19	3	337	1.5	0.27	7.88
Standard 6	36	2942	12.9	1.80	54.53	9	811	3.6	1.85	6.75
Form 1	54	3055	14.7	4.69	37.60	9	651	3.1	1.56	6.19
Form 2	76	4177	21.1	9.77	39.66	11	702	3.5	1.91	6.48
Form 3	69	3232	16.2	6.89	33.54	9	533	2.7	0.81	8.46
Form 4	73	3600	19.0	9.93	33.24	15	837	4.4	1.92	9.82
Form 5	123	5381	27.1	13.40	47.21	17	779	3.9	2.07	7.30
School session										
Morning session	162	9744	11.5	5.67	21.93	32	2227	2.6	1.61	4.26
Evening session	2	135	3.2	0.23	32.65	2	146	3.5	1.41	8.42
Morning and evening session	273	13061	17.0	7.04	35.55	47	2786	3.6	2.38	5.46
BMI-for-age status (BAZ)										
Thinness (<-2sd)	20	1063	9.2	3.51	22.01	6	369	3.2	1.44	6.97
Normal (≥-2sd - ≤+1sd)	280	14342	14.3	6.87	27.31	56	3478	3.5	2.27	5.24
Overweight (>+1sd - ≤+2sd)	77	4199	15.7	7.36	30.24	10	703	2.6	1.11	6.04
Obese (>+2sd)	61	3370	12.6	5.77	25.47	8	562	2.1	1.07	4.11
Height-for-age status (HAZ)										
Stunting (<-2sd)	41	2277	14.4	6.53	28.79	7	388	2.5	1.18	5.00
Normal (≥-2sd)	397	20697	13.8	6.59	26.67	73	4724	3.2	2.08	4.75

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.9 : Reasons for skipping dinner among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Socio-demographic Characteristics	Reasons for skipping dinner									
	No food available					No appetite				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	121	8971	11.3	9.05	14.11	607	40908	51.7	47.79	55.58
Locality of school										
Urban	59	4258	14.2	10.24	19.45	209	14049	47.0	43.04	50.93
Rural	62	4713	9.6	7.44	12.24	398	26859	54.6	49.32	59.74
Sex										
Boys	76	5486	14.7	12.11	17.69	268	19272	51.6	46.65	56.48
Girls	45	3485	8.3	5.46	12.55	339	21636	51.8	46.72	56.86
Ethnicity										
Malay	116	8652	11.7	9.26	14.57	573	38908	52.4	48.48	56.34
Chinese	4	258	20.6	8.74	41.37	10	475	38.0	16.66	65.21
Indian						8	397	25.8	11.04	49.27
Bumiputera Sabah						1	80	63.3	7.63	97.29
Bumiputera Sarawak						2	173	50.0	50.00	50.00
Others	1	62	3.7	1.77	7.74	13	875	53.2	36.34	69.35
School level										
Primary school	48	4237	13.9	9.85	19.23	185	16895	55.4	48.16	62.36
Secondary school	73	4733	9.7	7.54	12.49	422	24013	49.4	45.48	53.32
Class										
Standard 4	23	1773	15.9	9.98	24.29	78	6291	56.3	51.34	61.11
Standard 5	11	1265	12.8	7.32	21.47	43	5140	52.1	43.03	60.96
Standard 6	14	1200	12.7	8.17	19.14	64	5463	57.7	44.58	69.88
Form 1	15	1141	13.3	8.91	19.44	68	4901	57.2	49.77	64.31
Form 2	18	1325	11.4	8.11	15.81	98	5826	50.2	42.95	57.35
Form 3	11	639	6.2	2.97	12.56	98	5327	51.8	42.08	61.47
Form 4	14	853	10.0	5.26	18.17	61	3363	39.4	31.77	47.52
Form 5	15	775	8.1	5.31	12.06	97	4597	47.8	39.00	56.79
School session										
Morning session	58	4533	11.9	9.03	15.50	278	19512	51.2	42.66	59.65
Evening session	4	354	19.6	9.56	36.11	7	591	32.8	21.93	45.85
Morning and evening session	59	4084	10.4	7.66	14.06	321	20751	53.0	48.94	57.02
BMI-for-age status (BAZ)										
Thinness (<-2sd)	6	505	13.3	4.81	31.77	38	2555	67.2	48.81	81.54
Normal (≥-2sd - ≤+1sd)	70	5119	11.1	7.85	15.48	383	25310	54.9	49.79	59.90
Overweight (>+1sd - ≤+2sd)	20	1516	10.9	6.54	17.74	94	6346	45.8	37.16	54.69
Obese (>+2sd)	24	1725	11.4	8.02	16.08	92	6698	44.4	37.16	51.99
Height-for-age status (HAZ)										
Stunting (<-2sd)	11	759	9.3	5.47	15.38	69	4572	56.1	46.38	65.34
Normal (≥-2sd)	110	8212	11.6	9.18	14.54	537	36265	51.2	47.26	55.09

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.9 : Reasons for skipping dinner among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Socio-demographic Characteristics	Reasons for skipping dinner									
	No time					On diet/ control body weight				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	138	9288	11.7	9.27	14.76	225	14052	17.8	14.43	21.66
Locality of school										
Urban	59	4094	13.7	10.83	17.15	82	5033	16.8	12.50	22.26
Rural	79	5194	10.6	7.35	14.92	143	9019	18.3	13.89	23.79
Sex										
Boys	66	4774	12.8	10.21	15.87	76	5002	13.4	10.25	17.30
Girls	72	4514	10.8	7.41	15.51	149	9050	21.7	16.87	27.39
Ethnicity										
Malay	124	8223	11.1	8.77	13.90	208	12974	17.5	14.04	21.56
Chinese	2	103	8.3	3.96	16.41	3	167	13.4	8.06	21.33
Indian	5	436	28.3	11.37	54.84	10	623	40.5	25.05	58.01
Bumiputera Sabah	1	46	36.7	2.71	92.37					
Bumiputera Sarawak	1	92	26.7	26.71	26.71	1	81	23.3	23.29	23.29
Others	5	386	23.5	17.83	30.25	3	207	12.6	5.81	25.19
School level										
Primary school	44	4159	13.6	9.49	19.20	35	3276	10.7	8.74	13.12
Secondary school	94	5128	10.5	7.96	13.85	190	10776	22.2	18.90	25.82
Class										
Standard 4	20	1575	14.1	8.53	22.39	9	664	5.9	3.70	9.41
Standard 5	14	1717	17.4	10.66	27.08	10	1241	12.6	7.99	19.23
Standard 6	10	867	9.2	4.49	17.79	16	1371	14.5	10.08	20.38
Form 1	14	918	10.7	6.53	17.09	12	857	10.0	6.15	15.86
Form 2	21	1229	10.6	5.96	18.08	38	2315	19.9	14.09	27.43
Form 3	20	1030	10.0	6.78	14.58	48	2565	25.0	16.01	36.72
Form 4	16	844	9.9	5.34	17.56	47	2727	31.9	24.20	40.79
Form 5	23	1108	11.5	7.09	18.19	45	2311	24.0	17.04	32.79
School session										
Morning session	55	4101	10.8	7.37	15.45	109	6955	18.2	13.47	24.24
Evening session	7	584	32.4	13.65	59.19	3	190	10.5	4.37	23.23
Morning and evening session	76	4602	11.8	9.08	15.09	113	6907	17.6	14.63	21.11
BMI-for-age status (BAZ)										
Thinness (<-2sd)	7	420	11.0	4.74	23.64	3	181	4.8	1.42	14.70
Normal (≥-2sd - ≤+1sd)	81	5562	12.1	8.82	16.29	111	6748	14.6	10.87	19.42
Overweight (>+1sd - ≤+2sd)	27	1670	12.1	8.01	17.74	54	3329	24.0	16.94	32.90
Obese (>+2sd)	22	1495	9.9	5.09	18.43	56	3748	24.9	19.40	31.30
Height-for-age status (HAZ)										
Stunting (<-2sd)	15	1024	12.6	6.57	22.68	21	1313	16.1	10.76	23.42
Normal (≥-2sd)	123	8264	11.7	9.20	14.68	203	12693	17.9	14.36	22.13

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.9 : Reasons for skipping dinner among adolescents by socio-demographic characteristics and nutritional status

Socio-demographic Characteristics	Reasons for skipping dinner									
	No money					Others				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	18	1279	1.6	0.71	3.62	71	4629	5.8	4.29	7.93
Locality of school										
Urban	9	535	1.8	0.71	4.44	30	1945	6.5	3.59	11.51
Rural	9	744	1.5	0.44	5.09	41	2684	5.5	3.96	7.47
Sex										
Boys	15	1008	2.7	1.29	5.54	27	1821	4.9	3.36	7.02
Girls	3	271	0.6	0.18	2.38	44	2808	6.7	4.41	10.13
Ethnicity										
Malay	18	1279	1.7	0.77	3.84	64	4182	5.6	4.04	7.80
Chinese						4	247	19.8	13.45	28.15
Indian						1	84	5.5	0.62	34.90
Bumiputera Sabah										
Bumiputera Sarawak										
Others						2	115	7.0	3.42	13.75
School level										
Primary school	9	772	2.5	0.85	7.28	13	1173	3.8	2.28	6.43
Secondary school	9	507	1.0	0.35	3.04	58	3455	7.1	5.09	9.83
Class										
Standard 4	7	532	4.8	1.54	13.75	4	342	3.1	0.98	9.14
Standard 5	1	147	1.5	0.23	8.88	3	363	3.7	1.40	9.28
Standard 6	1	93	1.0	0.16	5.92	6	469	5.0	1.99	11.81
Form 1						10	752	8.8	5.79	13.07
Form 2	2	179	1.5	0.20	10.81	12	742	6.4	3.33	11.91
Form 3	2	109	1.1	0.26	4.21	11	605	5.9	3.28	10.34
Form 4						13	755	8.8	4.64	16.20
Form 5	5	219	2.3	0.82	6.17	12	602	6.3	2.47	15.00
School session										
Morning session	9	765	2.0	0.58	6.75	36	2251	5.9	3.56	9.63
Evening session						1	84	4.7	1.04	18.56
Morning and evening session	9	514	1.3	0.44	3.87	34	2294	5.9	3.96	8.60
BMI-for-age status (BAZ)										
Thinness (<-2sd)						2	139	3.7	0.94	13.24
Normal (≥-2sd - ≤+1sd)	10	648	1.4	0.53	3.69	43	2721	5.9	3.87	8.91
Overweight (>+1sd - ≤+2sd)	5	315	2.3	0.92	5.51	11	681	4.9	2.26	10.37
Obese (>+2sd)	3	316	2.1	0.70	6.11	15	1087	7.2	4.35	11.73
Height-for-age status (HAZ)										
Stunting (<-2sd)						8	485	5.9	3.20	10.80
Normal (≥-2sd)	18	1279	1.8	0.80	4.01	63	4144	5.8	4.21	8.08

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.10 : Prevalence of eating and/or drinking during recess time per week among adolescents by socio-demographics and nutritional status (Cont.)

Characteristics	Frequency of eating and/or drinking during recess time per week									
	5 days					1-4 days				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	1625	113115	64.9	58.84	70.57	868	56917	32.7	27.24	38.61
Locality of school										
Urban	803	53780	68.0	65.27	70.61	356	23579	29.8	27.32	32.44
Rural	822	59335	62.4	51.41	72.20	512	33338	35.0	25.60	45.83
Sex										
Boys	797	55640	63.7	57.82	69.12	431	28995	33.2	27.71	39.13
Girls	828	57475	66.2	59.07	72.67	437	27923	32.2	26.17	38.81
Ethnicity										
Malay	1401	98798	65.1	58.42	71.21	761	49969	32.9	26.98	39.46
Chinese	138	8456	63.8	57.29	69.77	64	3774	28.5	25.22	31.93
Indian	43	2707	63.8	47.26	77.54	22	1539	36.2	22.46	52.74
Bumiputera Sabah	6	539	83.3	24.56	98.71	1	108	16.7	1.29	75.44
Bumiputera Sarawak	12	973	73.7	67.85	78.78	4	348	26.3	21.22	32.15
Others	25	1641	55.6	42.26	68.19	16	1180	40.0	26.61	55.00
School level										
Primary school	574	52754	74.5	69.21	79.21	188	16974	24.0	19.10	29.65
Secondary school	1051	60361	58.4	52.05	64.40	680	39943	38.6	32.52	45.10
Class										
Standard 4	204	16632	70.6	60.34	79.05	79	6110	25.9	19.00	34.30
Standard 5	152	17984	76.9	61.31	87.43	43	5274	22.5	12.11	38.06
Standard 6	218	18138	76.2	70.09	81.36	66	5590	23.5	18.28	29.62
Form 1	193	13493	62.9	51.34	73.10	97	6982	32.5	23.68	42.84
Form 2	183	11237	53.7	43.78	63.39	143	9194	44.0	34.21	54.18
Form 3	217	11744	56.5	48.13	64.44	153	8487	40.8	33.80	48.20
Form 4	201	11336	57.5	47.65	66.77	134	7605	38.6	29.23	48.82
Form 5	257	12550	61.1	54.46	67.39	153	7675	37.4	31.83	43.28
School session										
Morning session	807	57476	64.1	57.07	70.65	434	29443	32.9	26.79	39.56
Evening session	38	3209	71.6	57.91	82.17	14	1107	24.7	15.42	37.09
Morning and evening session	778	52326	65.5	58.25	72.03	418	26280	32.9	26.34	40.15
BMI-for-age status (BAZ)										
Thinness (<-2sd)	111	7859	67.4	56.66	76.56	51	3492	29.9	20.44	41.55
Normal (≥-2sd - ≤+1sd)	1009	69451	66.3	59.35	72.53	518	32930	31.4	25.36	38.18
Overweight (>+1sd - ≤+2sd)	259	17866	62.8	57.45	67.87	149	10076	35.4	30.15	41.07
Obese (>+2sd)	240	17482	60.9	53.46	67.81	148	10313	35.9	28.69	43.83
Height-for-age status (HAZ)										
Stunting (<-2sd)	135	9510	57.2	46.75	67.08	99	6655	40.0	30.77	50.08
Normal (≥-2sd)	1485	103325	65.7	59.78	71.21	767	50156	31.9	26.52	37.82

Table 3.4.10 : Prevalence of eating and/or drinking during recess time per week among adolescents by socio-demographics and nutritional status

Characteristics	Frequency of eating and/or drinking during recess time per week				
	Count	Estimated Population	Prevalence (%)	Never (0 day)	
				Lower	Upper
Pahang	63	4182	2.4	1.49	3.86
Locality of school					
Urban	27	1727	2.2	0.97	4.86
Rural	36	2455	2.6	1.45	4.56
Sex					
Boys	41	2767	3.2	1.87	5.32
Girls	22	1415	1.6	0.93	2.83
Ethnicity					
Malay	44	3020	2.0	1.17	3.37
Chinese	17	1032	7.8	4.57	12.93
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	2	131	4.4	1.23	14.71
School level					
Primary school	14	1055	1.5	0.95	2.34
Secondary school	49	3127	3.0	1.69	5.36
Class					
Standard 4	12	831	3.5	1.80	6.78
Standard 5	1	142	0.6	0.10	3.68
Standard 6	1	83	0.3	0.04	2.76
Form 1	13	985	4.6	1.65	12.14
Form 2	8	485	2.3	1.06	5.00
Form 3	9	570	2.7	0.70	10.18
Form 4	13	778	3.9	2.16	7.11
Form 5	6	308	1.5	0.52	4.24
School session					
Morning session	42	2687	3.0	1.70	5.23
Evening session	2	167	3.7	1.29	10.34
Morning and evening session	19	1327	1.7	1.07	2.56
BMI-for-age status (BAZ)					
Thinness (<-2sd)	5	311	2.7	0.43	14.72
Normal (≥-2sd - ≤+1sd)	36	2444	2.3	1.53	3.54
Overweight (>+1sd - ≤+2sd)	8	503	1.8	0.73	4.24
Obese (>+2sd)	14	924	3.2	1.68	6.08
Height-for-age status (HAZ)					
Stunting (<-2sd)	7	457	2.7	1.09	6.74
Normal (≥-2sd)	56	3725	2.4	1.35	4.12

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.11 : Source of food during recess time among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Source of food during recess time									
	Bring from home					School canteen				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	299	22103	13.1	9.87	17.13	1811	127514	75.5	68.42	81.38
Locality of school										
Urban	172	12270	15.9	10.95	22.55	885	59463	77.1	71.96	81.54
Rural	127	9834	10.7	7.53	15.02	926	68051	74.1	61.48	83.69
Sex										
Boys	148	10952	13.0	9.92	16.91	910	64070	76.2	70.39	81.11
Girls	151	11152	13.1	9.42	18.06	901	63445	74.8	65.64	82.16
Ethnicity										
Malay	228	17668	12.0	8.37	16.82	1585	112560	76.2	68.47	82.54
Chinese	47	2733	22.3	14.83	32.22	138	8472	69.3	61.59	76.01
Indian	17	1174	27.7	18.13	39.74	39	2601	61.3	48.97	72.28
Bumiputera Sabah						6	601	92.9	47.86	99.46
Bumiputera Sarawak	3	232	17.6	14.20	21.52	11	976	73.9	68.54	78.55
Others	4	296	10.5	6.69	16.12	32	2305	81.7	69.42	89.76
School level										
Primary school	133	11947	17.3	12.77	22.96	572	52897	76.5	72.06	80.40
Secondary school	166	10156	10.2	6.84	14.88	1239	74618	74.8	62.83	83.86
Class										
Standard 4	61	4655	20.6	14.71	28.01	208	17045	75.3	64.59	83.66
Standard 5	32	3880	17.0	9.65	28.07	153	18218	79.6	71.43	85.88
Standard 6	40	3412	14.4	10.19	20.04	211	17635	74.6	59.14	85.60
Form 1	26	1995	9.8	6.57	14.48	213	15566	76.8	62.38	86.84
Form 2	28	1919	9.5	5.31	16.36	246	15753	77.8	64.46	87.15
Form 3	48	2704	13.4	7.88	21.75	267	14956	73.9	62.81	82.63
Form 4	34	2031	10.8	6.20	18.04	247	14375	76.2	62.37	86.05
Form 5	30	1506	7.5	3.58	14.93	266	13968	69.2	52.03	82.36
School session										
Morning session	162	11650	13.5	10.14	17.78	951	67125	77.9	72.49	82.46
Evening session	9	711	16.5	9.79	26.43	38	3239	75.0	60.33	85.61
Morning and evening session	128	9742	12.5	8.42	18.03	819	56993	72.8	61.36	81.91
BMI-for-age status (BAZ)										
Thinness (<-2sd)	15	1230	10.9	6.40	17.97	129	8981	79.6	71.68	85.74
Normal (≥-2sd - ≤+1sd)	172	12401	12.2	9.44	15.55	1113	77844	76.4	68.25	82.96
Overweight (>+1sd - ≤+2sd)	54	4151	15.0	9.46	22.89	288	20229	73.0	63.06	81.01
Obese (>+2sd)	55	4145	15.1	10.13	21.89	276	20074	73.1	67.20	78.22
Height-for-age status (HAZ)										
Stunting (<-2sd)	26	2007	12.4	8.84	17.17	172	12263	75.9	68.02	82.28
Normal (≥-2sd)	270	19921	13.1	9.78	17.26	1635	115041	75.5	68.38	81.43

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.11 : Source of food during recess time among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Restaurant/ kiosk					Hostel				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	56	3651	2.2	1.39	3.34	263	12747	7.5	2.60	19.98
Locality of school										
Urban	28	1697	2.2	0.95	5.01	45	2232	2.9	0.67	11.68
Rural	28	1954	2.1	1.45	3.12	218	10515	11.5	3.32	32.73
Sex										
Boys	27	1820	2.2	1.31	3.57	108	5628	6.7	2.62	16.02
Girls	29	1831	2.2	1.27	3.65	155	7119	8.4	2.54	24.38
Ethnicity										
Malay	40	2611	1.8	1.14	2.74	251	12218	8.3	2.89	21.47
Chinese	13	821	6.7	5.20	8.62					
Indian	1	60	1.4	0.23	8.20	6	309	7.3	1.56	28.02
Bumiputera Sabah						1	46	7.1	0.54	52.14
Bumiputera Sarawak	1	81	6.1	4.95	7.50	1	33	2.5	0.13	32.88
Others	1	79	2.8	1.01	7.59	4	141	5.0	0.40	40.95
School level										
Primary school	16	1355	2.0	0.89	4.27	27	2288	3.3	0.57	16.94
Secondary school	40	2296	2.3	1.37	3.84	236	10459	10.5	3.07	30.19
Class										
Standard 4	7	562	2.5	1.13	5.36					
Standard 5	3	325	1.4	0.18	10.40	2	248	1.1	0.14	7.97
Standard 6	6	468	2.0	0.93	4.18	25	2040	8.6	1.19	42.49
Form 1	9	633	3.1	1.64	5.88	38	1994	9.8	2.05	36.22
Form 2	4	206	1.0	0.17	5.73	39	1981	9.8	2.87	28.51
Form 3	9	518	2.6	1.53	4.26	34	1428	7.1	1.91	22.86
Form 4	7	402	2.1	0.92	4.87	38	1614	8.6	2.30	27.10
Form 5	11	537	2.7	1.05	6.56	87	3443	17.1	5.62	41.54
School session										
Morning session	30	2083	2.4	1.28	4.53	64	3809	4.4	1.45	12.71
Evening session	3	231	5.3	3.05	9.19	2	135	3.1	0.23	30.65
Morning and evening session	23	1337	1.7	0.98	2.97	196	8770	11.2	3.38	31.28
BMI-for-age status (BAZ)										
Thinness (<-2sd)	2	113	1.0	0.23	4.18	11	651	5.8	1.92	16.09
Normal (≥-2sd - ≤+1sd)	37	2385	2.3	1.45	3.75	168	7640	7.5	2.32	21.67
Overweight (>+1sd - ≤+2sd)	8	508	1.8	0.86	3.85	50	2547	9.2	3.05	24.55
Obese (>+2sd)	9	646	2.4	0.89	6.06	34	1909	6.9	3.00	15.27
Height-for-age status (HAZ)										
Stunting (<-2sd)	3	186	1.2	0.35	3.73	27	1417	8.8	3.57	19.94
Normal (≥-2sd)	53	3465	2.3	1.47	3.50	236	11330	7.4	2.49	20.18

Table 3.4.11 : Source of food during recess time among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Source of food during school break time				
	Count	Estimated Population	Other Prevalence (%)	95% CI	
				Lower	Upper
Pahang	50	2937	1.7	1.15	2.63
Locality of school					
Urban	26	1465	1.9	1.16	3.10
Rural	24	1472	1.6	0.82	3.11
Sex					
Boys	28	1652	2.0	1.15	3.35
Girls	22	1285	1.5	0.87	2.63
Ethnicity					
Malay	44	2631	1.8	1.12	2.82
Chinese	4	205	1.7	0.86	3.23
Indian	2	101	2.4	0.48	10.93
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	8	673	1.0	0.32	2.89
Secondary school	42	2264	2.3	1.59	3.22
Class					
Standard 4	5	361	1.6	0.55	4.52
Standard 5	2	219	1.0	0.13	6.89
Standard 6	1	93	0.4	0.06	2.62
Form 1	1	84	0.4	0.05	3.47
Form 2	6	386	1.9	0.77	4.66
Form 3	12	625	3.1	0.97	9.40
Form 4	8	448	2.4	1.10	5.07
Form 5	15	721	3.6	2.14	5.90
School session					
Morning session	25	1531	1.8	1.05	2.98
Evening session					
Morning and evening session	25	1407	1.8	1.06	3.04
BMI-for-age status (BAZ)					
Thinness (<-2sd)	4	308	2.7	1.00	7.23
Normal (≥-2sd - ≤+1sd)	30	1639	1.6	0.91	2.82
Overweight (>+1sd - ≤+2sd)	5	291	1.1	0.37	2.91
Obese (>+2sd)	11	699	2.5	1.37	4.68
Height-for-age status (HAZ)					
Stunting (<-2sd)	6	292	1.8	0.65	4.90
Normal (≥-2sd)	44	2646	1.7	1.12	2.68

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.12 : Prevalence of afternoon tea per week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Afternoon tea frequency per week									
	Daily (7 days)					1 to 6 days				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	673	48702	28.0	23.87	32.46	1457	99995	57.4	54.04	60.72
Locality of school										
Urban	288	20084	25.4	19.67	32.22	679	45344	57.4	52.05	62.66
Rural	385	28619	30.1	24.81	35.87	778	54651	57.4	53.12	61.56
Sex										
Boys	369	26195	30.0	26.60	33.66	718	49615	56.8	53.45	60.18
Girls	304	22507	25.9	20.30	32.43	739	50380	58.0	53.40	62.43
Ethnicity										
Malay	605	44065	29.0	25.01	33.44	1269	87583	57.7	54.57	60.81
Chinese	31	1925	14.5	9.47	21.61	108	6654	50.2	41.83	58.52
Indian	22	1476	34.8	24.36	46.85	35	2389	56.3	44.98	66.94
Bumiputera Sabah	3	302	46.6	13.75	82.69	4	346	53.4	17.31	86.25
Bumiputera Sarawak	4	378	28.6	23.07	34.94	10	793	60.0	51.28	68.12
Others	8	557	18.9	7.55	39.81	31	2231	75.6	53.38	89.32
School level										
Primary school	265	24594	34.8	31.20	38.54	437	39798	56.3	52.00	60.46
Secondary school	408	24109	23.3	19.05	28.19	1020	60198	58.2	53.40	62.83
Class										
Standard 4	93	7752	33.0	25.33	41.65	176	14018	59.6	51.33	67.41
Standard 5	71	8372	35.8	26.09	46.79	106	12846	54.9	43.61	65.70
Standard 6	101	8470	35.6	29.74	41.87	155	12933	54.3	47.38	61.09
Form 1	68	4854	22.7	16.19	30.88	173	12727	59.5	47.67	70.39
Form 2	79	5180	24.7	19.68	30.62	200	12602	60.2	52.30	67.63
Form 3	85	4720	22.7	16.05	31.09	217	12064	58.0	51.98	63.84
Form 4	75	4206	21.3	16.20	27.44	195	11064	56.0	47.29	64.34
Form 5	101	5150	25.0	19.02	32.15	235	11739	57.0	48.24	65.40
School session										
Morning session	342	25010	28.0	23.52	32.90	716	50793	56.8	53.21	60.32
Evening session	7	582	13.0	8.09	20.16	38	3141	70.1	63.09	76.23
Morning and evening session	323	23068	28.8	23.41	34.89	700	45911	57.3	52.20	62.32
BMI-for-age status (BAZ)										
Thinness (<-2sd)	59	4325	37.3	29.03	46.34	90	6208	53.5	44.39	62.38
Normal (≥-2sd - ≤+1sd)	422	30270	28.9	24.10	34.17	882	59310	56.6	51.90	61.14
Overweight (>+1sd - ≤+2sd)	104	7624	26.9	20.54	34.33	237	16464	58.0	51.17	64.62
Obese (>+2sd)	85	6249	21.7	17.62	26.41	246	17898	62.1	56.38	67.58
Height-for-age status (HAZ)										
Stunting (<-2sd)	63	4548	27.4	19.71	36.63	149	10274	61.8	52.85	70.04
Normal (≥-2sd)	607	43990	28.0	23.90	32.49	1306	89605	57.0	53.51	60.45

Table 3.4.12 : Prevalence of afternoon tea per week among adolescents per week by socio-demographic characteristics and nutritional status

Characteristics	Afternoon tea frequency per week				
	Count	Did not take afternoon tea			
		Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper	
Pahang	425	25467	14.6	10.84	19.44
Locality of school					
Urban	217	13512	17.1	12.18	23.52
Rural	208	11954	12.6	7.70	19.80
Sex					
Boys	181	11468	13.1	9.92	17.21
Girls	244	13999	16.1	11.38	22.32
Ethnicity					
Malay	331	20089	13.2	9.82	17.62
Chinese	80	4682	35.3	31.12	39.73
Indian	8	381	9.0	3.84	19.57
Bumiputera Sabah					
Bumiputera Sarawak	2	150	11.4	3.17	33.45
Others	4	164	5.6	1.27	21.32
School level					
Primary school	72	6328	8.9	7.07	11.26
Secondary school	353	19139	18.5	13.39	25.01
Class					
Standard 4	24	1738	7.4	4.90	11.01
Standard 5	19	2182	9.3	5.10	16.46
Standard 6	29	2407	10.1	6.44	15.54
Form 1	61	3796	17.8	9.74	30.16
Form 2	55	3148	15.0	9.83	22.32
Form 3	77	4008	19.3	12.51	28.51
Form 4	79	4491	22.7	15.95	31.31
Form 5	81	3697	18.0	12.04	25.93
School session					
Morning session	222	13615	15.2	11.31	20.19
Evening session	9	760	17.0	11.58	24.15
Morning and evening session	194	11092	13.9	9.09	20.54
BMI-for-age status (BAZ)					
Thinness (<-2sd)	17	1070	9.2	5.57	14.89
Normal (≥-2sd - ≤+1sd)	259	15251	14.5	10.36	20.06
Overweight (>+1sd - ≤+2sd)	74	4278	15.1	10.39	21.38
Obese (>+2sd)	72	4656	16.2	11.56	22.14
Height-for-age status (HAZ)					
Stunting (<-2sd)	29	1799	10.8	7.16	16.03
Normal (≥-2sd)	394	23562	15.0	11.04	20.04

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.13 : Source of food for afternoon tea among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Source of food for afternoon tea									
	Prepared at home					School canteen				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	1227	89100	60.8	51.77	69.06	291	23047	15.7	11.46	21.17
Locality of school										
Urban	510	35754	55.2	48.86	61.37	147	11429	17.6	10.12	28.97
Rural	717	53347	65.1	50.01	77.74	144	11618	14.2	10.67	18.62
Sex										
Boys	584	42207	56.7	47.62	65.34	190	14557	19.6	14.54	25.78
Girls	643	46893	64.9	55.60	73.25	101	8490	11.8	7.91	17.13
Ethnicity										
Malay	1088	79782	61.5	51.61	70.48	253	20089	15.5	11.08	21.22
Chinese	62	3752	44.2	35.42	53.29	17	1329	15.6	4.84	40.37
Indian	41	2727	70.6	45.00	87.55	6	497	12.9	3.61	36.75
Bumiputera Sabah	4	381	58.9	27.74	84.26	1	112	17.3	6.51	38.45
Bumiputera Sarawak	8	734	62.7	57.22	67.84	4	324	27.6	25.35	30.04
Others	24	1723	63.6	52.31	73.62	10	697	25.8	17.12	36.82
School level										
Primary school	427	40059	63.4	49.56	75.34	165	15003	23.7	19.14	29.06
Secondary school	800	49041	58.7	46.99	69.58	126	8045	9.6	6.22	14.64
Class										
Standard 4	158	13190	62.3	51.55	71.91	79	6260	29.6	22.70	37.48
Standard 5	113	13782	66.9	49.91	80.42	47	5481	26.6	16.76	39.51
Standard 6	156	13088	61.1	38.54	79.80	39	3262	15.2	8.91	24.84
Form 1	140	10412	60.6	47.33	72.39	37	2929	17.0	8.14	32.23
Form 2	159	10482	59.7	44.15	73.46	25	1694	9.6	4.63	19.00
Form 3	178	10116	60.3	48.20	71.21	23	1373	8.2	4.30	15.02
Form 4	156	9104	59.9	48.89	69.92	22	1105	7.3	3.41	14.81
Form 5	167	8926	53.4	35.16	70.72	19	944	5.6	2.39	12.76
School session										
Morning session	646	46533	62.4	52.36	71.51	120	10316	13.8	8.57	21.59
Evening session	19	1590	44.5	36.07	53.34	18	1531	42.9	33.62	52.67
Morning and evening session	558	40787	59.7	47.89	70.43	153	11200	16.4	11.78	22.34
BMI-for-age status (BAZ)										
Thinness (<-2sd)	80	6106	59.2	41.52	74.78	23	1630	15.8	9.62	24.85
Normal (≥-2sd - ≤+1sd)	770	54899	62.0	53.19	70.17	168	13149	14.9	10.42	20.75
Overweight (>+1sd - ≤+2sd)	196	14539	60.6	50.29	70.00	41	3216	13.4	8.66	20.16
Obese (>+2sd)	179	13345	56.6	46.51	66.23	58	5006	21.2	15.25	28.81
Height-for-age status (HAZ)										
Stunting (<-2sd)	123	9019	62.3	48.55	74.35	24	1839	12.7	7.55	20.60
Normal (≥-2sd)	1102	79940	60.6	51.87	68.67	266	21162	16.0	11.70	21.58

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.13 : Source of food for afternoon tea among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Source of food for afternoon tea									
	Restaurant/ kiosk					Hostel				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	190	12307	8.4	5.87	11.87	331	18587	12.7	6.24	24.04
Locality of school										
Urban	120	7546	11.7	7.29	18.11	151	8074	12.5	4.68	29.24
Rural	70	4761	5.8	3.87	8.65	180	10513	12.8	4.63	30.88
Sex										
Boys	99	6396	8.6	6.20	11.79	155	8860	11.9	5.93	22.44
Girls	91	5911	8.2	5.28	12.48	176	9727	13.5	6.43	26.06
Ethnicity										
Malay	131	8808	6.8	5.07	9.03	327	18376	14.2	6.98	26.60
Chinese	48	2753	32.4	20.20	47.60					
Indian	6	353	9.1	4.70	17.02	2	129	3.3	0.64	15.58
Bumiputera Sabah	1	108	16.7	1.29	75.44	1	46	7.1	0.54	52.14
Bumiputera Sarawak	2	113	9.7	4.27	20.49					
Others	2	172	6.4	2.53	15.09	1	36	1.3	0.10	14.85
School level										
Primary school	49	4170	6.6	4.01	10.67	39	3203	5.1	0.74	27.55
Secondary school	141	8137	9.7	6.16	15.08	292	15384	18.4	9.28	33.28
Class										
Standard 4	19	1413	6.7	2.90	14.63	1	60	0.3	0.05	1.58
Standard 5	8	879	4.3	1.27	13.40	1	108	0.5	0.07	4.04
Standard 6	22	1878	8.8	5.86	12.94	37	3035	14.2	2.05	56.62
Form 1	21	1429	8.3	3.83	17.11	33	2083	12.1	4.87	27.08
Form 2	21	1312	7.5	3.45	15.43	66	3839	21.9	10.03	41.23
Form 3	36	1995	11.9	6.01	22.16	48	2384	14.2	5.48	32.10
Form 4	25	1525	10.0	5.61	17.29	54	2887	19.0	10.48	31.92
Form 5	38	1876	11.2	7.17	17.13	91	4189	25.0	13.33	42.06
School session										
Morning session	113	7402	9.9	6.57	14.74	137	8674	11.6	5.38	23.36
Evening session	3	230	6.4	3.66	11.10	2	135	3.8	0.29	34.39
Morning and evening session	74	4675	6.8	4.86	9.54	192	9779	14.3	6.35	29.13
BMI-for-age status (BAZ)										
Thinness (<-2sd)	18	1136	11.0	5.83	19.84	16	929	9.0	3.55	21.05
Normal (≥-2sd - ≤+1sd)	106	6917	7.8	5.67	10.69	210	11448	12.9	6.46	24.23
Overweight (>+1sd - ≤+2sd)	34	2207	9.2	5.10	16.02	58	3500	14.6	6.89	28.24
Obese (>+2sd)	31	2000	8.5	5.09	13.83	47	2710	11.5	4.90	24.71
Height-for-age status (HAZ)										
Stunting (<-2sd)	17	1108	7.7	4.40	13.01	34	1934	13.4	5.68	28.32
Normal (≥-2sd)	172	11153	8.5	5.83	12.11	297	16653	12.6	6.23	23.88

Table 3.4.13 : Source of food for afternoon tea among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Source of food for afternoon tea				
	Count	Estimated Population	Prevalence (%)	Other	
				95% CI Lower	95% CI Upper
Pahang	66	3622	2.5	1.36	4.44
Locality of school					
Urban	31	1971	3.0	1.83	5.02
Rural	35	1651	2.0	0.66	5.97
Sex					
Boys	41	2425	3.3	1.89	5.57
Girls	25	1197	1.7	0.58	4.63
Ethnicity					
Malay	52	2724	2.1	1.04	4.20
Chinese	11	661	7.8	4.19	13.97
Indian	2	158	4.1	0.83	17.89
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	79	2.9	1.12	7.45
School level					
Primary school	9	745	1.2	0.40	3.46
Secondary school	57	2877	3.4	1.81	6.47
Class					
Standard 4	4	259	1.2	0.21	6.68
Standard 5	3	345	1.7	0.52	5.28
Standard 6	2	142	0.7	0.09	4.51
Form 1	5	342	2.0	0.88	4.44
Form 2	5	240	1.4	0.41	4.48
Form 3	17	915	5.5	2.65	10.88
Form 4	12	588	3.9	1.23	11.51
Form 5	18	791	4.7	2.46	8.90
School session					
Morning session	27	1623	2.2	1.02	4.59
Evening session	1	84	2.4	1.07	5.13
Morning and evening session	38	1914	2.8	1.40	5.51
BMI-for-age status (BAZ)					
Thinness (<-2sd)	9	513	5.0	2.24	10.71
Normal (≥-2sd - ≤+1sd)	37	2065	2.3	1.26	4.28
Overweight (>+1sd - ≤+2sd)	11	542	2.3	0.79	6.31
Obese (>+2sd)	9	502	2.1	0.88	5.05
Height-for-age status (HAZ)					
Stunting (<-2sd)	10	572	4.0	1.57	9.62
Normal (≥-2sd)	56	3050	2.3	1.26	4.19

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.14 : Prevalence of heavy meal after dinner per week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Heavy meal after dinner frequency per week									
	Daily (7 days)					1 to 6 days				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	145	9954	5.7	4.34	7.49	1820	122399	70.3	66.20	74.03
Locality of school										
Urban	68	4611	5.8	3.50	9.56	797	53100	67.1	60.85	72.81
Rural	77	5343	5.6	4.33	7.26	1023	69299	72.9	67.84	77.41
Sex										
Boys	92	6233	7.1	5.15	9.81	924	62895	72.0	68.11	75.63
Girls	53	3721	4.3	2.73	6.65	896	59504	68.5	62.69	73.77
Ethnicity										
Malay	133	8987	5.9	4.48	7.79	1637	110929	73.1	69.41	76.47
Chinese	2	184	1.4	0.25	7.24	109	6586	49.7	44.03	55.31
Indian	7	510	12.0	4.68	27.49	33	2113	49.8	35.51	64.05
Bumiputera Sabah	1	112	17.3	6.51	38.45	2	128	19.8	8.71	39.08
Bumiputera Sarawak	2	162	12.3	3.80	33.07	9	647	49.0	42.24	55.72
Others						30	1997	67.6	51.28	80.59
School level										
Primary school	64	5345	7.5	5.33	10.60	532	48206	68.1	63.75	72.14
Secondary school	81	4609	4.5	3.23	6.12	1288	74194	71.8	65.65	77.14
Class										
Standard 4	36	2757	11.6	7.40	17.84	192	15033	63.4	56.28	70.06
Standard 5	8	941	4.0	2.29	7.03	133	15958	68.5	55.72	79.01
Standard 6	20	1647	6.9	4.12	11.37	207	17215	72.3	64.34	79.05
Form 1	9	670	3.1	1.55	6.30	213	15106	71.0	59.77	80.07
Form 2	13	817	3.9	1.86	8.03	240	15029	71.8	64.80	77.90
Form 3	19	1078	5.2	2.92	9.01	253	13779	66.1	57.93	73.45
Form 4	18	929	4.7	2.55	8.49	256	14340	72.6	64.71	79.24
Form 5	22	1116	5.4	3.02	9.55	326	15939	77.4	70.51	83.11
School session										
Morning session	83	5995	6.7	4.86	9.14	877	61620	68.8	64.66	72.60
Evening session	1	80	1.8	0.13	19.61	35	2842	63.4	53.79	72.05
Morning and evening session	61	3880	4.9	3.40	6.89	905	57808	72.3	66.70	77.33
BMI-for-age status (BAZ)										
Thinness (<-2sd)	16	1160	10.0	5.31	18.11	121	8253	71.3	64.27	77.49
Normal (≥-2sd - ≤+1sd)	94	6214	5.9	4.11	8.45	1119	73701	70.2	65.50	74.48
Overweight (>+1sd - ≤+2sd)	17	1339	4.7	2.65	8.34	294	19803	70.1	63.01	76.31
Obese (>+2sd)	17	1195	4.1	2.26	7.50	281	20375	70.7	63.34	77.18
Height-for-age status (HAZ)										
Stunting (<-2sd)	23	1682	10.2	7.15	14.44	164	11161	67.9	60.98	74.08
Normal (≥-2sd)	121	8225	5.2	3.91	6.95	1650	110899	70.5	66.53	74.12

Table 3.4.14 : Prevalence of heavy meal after dinner per week among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Heavy meal after dinner frequency per week				
	Did not take heavy meal after dinner				
	Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper	
Pahang	592	41850	24.0	19.79	28.83
Locality of school					
Urban	322	21416	27.1	20.16	35.29
Rural	270	20435	21.5	16.75	27.14
Sex					
Boys	254	18201	20.8	16.80	25.56
Girls	338	23650	27.2	22.29	32.78
Ethnicity					
Malay	437	31861	21.0	17.38	25.13
Chinese	108	6492	49.0	42.97	54.96
Indian	25	1623	38.2	22.85	56.40
Bumiputera Sabah	4	407	62.9	38.37	82.20
Bumiputera Sarawak	5	512	38.8	31.08	47.08
Others	13	955	32.4	19.41	48.72
School level					
Primary school	180	17248	24.4	18.91	30.80
Secondary school	412	24602	23.8	17.96	30.81
Class					
Standard 4	68	5904	24.9	17.91	33.55
Standard 5	54	6392	27.4	17.55	40.20
Standard 6	58	4952	20.8	14.35	29.15
Form 1	79	5514	25.9	16.31	38.53
Form 2	81	5083	24.3	18.18	31.65
Form 3	108	5982	28.7	20.84	38.10
Form 4	75	4492	22.7	15.33	32.34
Form 5	69	3531	17.2	11.98	23.96
School session					
Morning session	324	21988	24.5	20.05	29.66
Evening session	18	1561	34.8	26.78	43.84
Morning and evening session	249	18239	22.8	17.48	29.21
BMI-for-age status (BAZ)					
Thinness (<-2sd)	29	2157	18.6	13.56	25.07
Normal (\geq -2sd - \leq +1sd)	353	25097	23.9	19.37	29.11
Overweight ($>$ +1sd - \leq +2sd)	103	7115	25.2	19.59	31.73
Obese ($>$ +2sd)	105	7233	25.1	18.47	33.18
Height-for-age status (HAZ)					
Stunting (<-2sd)	52	3599	21.9	15.67	29.72
Normal (\geq -2sd)	540	38251	24.3	20.21	28.93

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.15 : Source of food for eating heavy meal after dinner among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Source of food for eating for heavy meal after dinner									
	Home					Restaurant/kiosk				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	909	64515	50.2	43.47	56.86	621	42031	32.7	29.57	35.96
Locality of school										
Urban	420	28755	50.7	44.37	57.09	278	19131	33.8	29.52	38.28
Rural	489	35760	49.7	38.97	60.48	343	22899	31.8	27.66	36.33
Sex										
Boys	453	32222	47.6	42.04	53.30	360	24636	36.4	33.73	39.21
Girls	456	32293	53.0	44.08	61.67	261	17395	28.5	23.71	33.89
Ethnicity										
Malay	794	57003	48.9	41.97	55.94	565	38551	33.1	29.55	36.84
Chinese	72	4416	66.0	55.34	75.19	34	2004	29.9	24.02	36.59
Indian	18	1205	45.9	31.60	61.00	16	1052	40.1	22.55	60.64
Bumiputera Sabah	1	82	64.0	7.85	97.37					
Bumiputera Sarawak	8	613	75.8	66.68	83.10	2	163	20.1	14.14	27.82
Others	16	1196	64.4	41.93	81.88	4	261	14.1	6.79	26.90
School level										
Primary school	315	28818	56.8	48.57	64.59	189	16693	32.9	27.46	38.79
Secondary school	594	35697	45.9	37.32	54.66	432	25337	32.6	28.92	36.41
Class										
Standard 4	124	9541	57.5	47.56	66.81	70	5562	33.5	26.53	41.27
Standard 5	88	10578	66.0	61.10	70.50	38	4527	28.2	25.70	30.90
Standard 6	103	8700	48.0	39.27	56.81	81	6605	36.4	24.68	50.04
Form 1	104	7759	50.4	38.35	62.40	69	4909	31.9	25.12	39.51
Form 2	109	7045	45.1	37.20	53.32	79	5100	32.7	25.87	40.29
Form 3	125	6956	47.2	38.14	56.39	88	4875	33.1	27.31	39.35
Form 4	124	7053	46.8	35.91	57.92	82	4797	31.8	25.14	39.30
Form 5	132	6884	40.5	28.95	53.22	114	5656	33.3	27.75	39.32
School session										
Morning session	481	34586	52.5	47.13	57.73	323	22335	33.9	29.62	38.41
Evening session	23	1894	66.2	51.41	78.34	8	680	23.8	16.53	32.94
Morning and evening session	403	27939	46.8	37.00	56.88	290	19016	31.9	28.46	35.47
BMI-for-age status (BAZ)										
Thinness (<-2sd)	62	4315	47.5	37.92	57.36	50	3386	37.3	26.88	49.07
Normal (≥-2sd - ≤+1sd)	561	39059	50.2	42.86	57.44	372	24796	31.8	28.58	35.28
Overweight (>+1sd - ≤+2sd)	138	9961	48.8	39.69	58.02	103	6898	33.8	27.71	40.49
Obese (>+2sd)	147	11110	52.9	44.24	61.46	92	6766	32.2	27.10	37.84
Height-for-age status (HAZ)										
Stunting (<-2sd)	85	6072	49.7	39.08	60.31	65	4302	35.2	26.97	44.42
Normal (≥-2sd)	823	58374	50.3	43.62	56.97	552	37544	32.3	29.03	35.86

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.15 : Source of food for eating heavy meal after dinner among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Source of food for eating heavy meal after dinner									
	Hostel					Others				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	244	13204	10.3	5.49	18.40	149	8855	6.9	4.77	9.84
Locality of school										
Urban	103	5293	9.3	3.49	22.67	52	3491	6.2	4.49	8.39
Rural	141	7911	11.0	4.88	22.94	97	5364	7.5	4.20	12.91
Sex										
Boys	112	6281	9.3	5.18	16.09	73	4497	6.6	4.89	8.98
Girls	132	6923	11.4	5.74	21.23	76	4358	7.1	4.21	11.89
Ethnicity										
Malay	236	12805	11.0	5.90	19.57	137	8134	7.0	4.81	10.04
Chinese	1	84	1.3	0.31	4.92	3	191	2.8	0.72	10.63
Indian	4	197	7.5	1.49	30.48	2	168	6.4	1.74	20.93
Bumiputera Sabah	1	46	36.0	2.63	92.15					
Bumiputera Sarawak						1	33	4.0	0.23	43.66
Others	2	71	3.8	0.32	33.29	6	330	17.7	10.26	28.90
School level										
Primary school	28	2232	4.4	0.81	20.61	36	3029	6.0	4.25	8.31
Secondary school	216	10972	14.1	7.68	24.45	113	5826	7.5	4.43	12.37
Class										
Standard 4	4	268	1.6	0.54	4.77	17	1231	7.4	4.45	12.11
Standard 5	8	933	5.8	2.77	11.80					
Standard 6	24	1963	10.8	1.64	46.92	11	865	4.8	1.93	11.34
Form 1	30	1832	11.9	5.72	23.11	14	896	5.8	2.73	11.97
Form 2	45	2515	16.1	7.84	30.26	17	950	6.1	3.44	10.54
Form 3	31	1500	10.2	4.07	23.19	26	1416	9.6	5.95	15.14
Form 4	39	1941	12.9	6.93	22.64	26	1294	8.6	4.59	15.47
Form 5	71	3184	18.7	10.46	31.27	30	1270	7.5	3.39	15.68
School session										
Morning session	88	5412	8.2	3.97	16.22	52	3598	5.5	3.90	7.59
Evening session	2	161	5.6	1.96	15.15	2	126	4.4	0.50	29.84
Morning and evening session	153	7596	12.7	6.46	23.54	95	5130	8.6	5.21	13.86
BMI-for-age status (BAZ)										
Thinness (<-2sd)	13	737	8.1	2.80	21.31	9	638	7.0	3.71	12.90
Normal (≥-2sd - ≤+1sd)	158	8454	10.9	5.79	19.43	98	5570	7.2	4.67	10.81
Overweight (>+1sd - ≤+2sd)	38	2112	10.4	5.66	18.20	24	1435	7.0	3.84	12.52
Obese (>+2sd)	35	1899	9.0	4.41	17.67	18	1213	5.8	3.18	10.28
Height-for-age status (HAZ)										
Stunting (<-2sd)	19	1101	9.0	3.69	20.35	11	746	6.1	2.61	13.62
Normal (≥-2sd)	225	12103	10.4	5.60	18.59	137	8037	6.9	4.71	10.07

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.16 : Prevalence of fast food consumption per week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Frequency of fast food consumption per week									
	Daily (7 days)					1 to 6 days				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	59	4415	2.5	1.81	3.54	2188	149255	85.7	82.92	88.06
Locality of school										
Urban	31	2141	2.7	1.63	4.46	1012	67704	85.6	80.04	89.75
Rural	28	2274	2.4	1.53	3.72	1176	81552	85.8	83.15	88.07
Sex										
Boys	41	3117	3.6	2.33	5.40	1079	74290	84.9	81.11	88.05
Girls	18	1299	1.5	0.90	2.49	1109	74965	86.5	83.84	88.72
Ethnicity										
Malay	45	3311	2.2	1.48	3.19	1943	133645	88.1	86.22	89.67
Chinese	5	375	2.8	1.31	5.99	143	8698	65.6	61.27	69.67
Indian	4	298	7.0	2.55	17.90	54	3518	82.9	67.52	91.83
Bumiputera Sabah	1	112	17.3	6.51	38.45	3	236	36.5	11.27	72.27
Bumiputera Sarawak	1	81	6.1	4.95	7.50	13	1040	78.7	73.98	82.82
Others	3	240	8.1	3.06	19.83	32	2117	71.7	59.39	81.48
School level										
Primary school	32	2694	3.8	2.87	5.06	661	60321	85.5	82.32	88.16
Secondary school	27	1722	1.7	1.01	2.73	1527	88934	85.8	81.55	89.23
Class										
Standard 4	19	1537	6.5	2.80	14.56	236	18653	79.5	72.80	84.88
Standard 5	4	436	1.9	0.69	4.96	172	20603	88.5	75.57	95.00
Standard 6	9	721	3.0	1.61	5.61	253	21066	88.5	83.91	91.86
Form 1	5	393	1.8	0.97	3.43	253	18072	84.2	73.24	91.22
Form 2	4	285	1.4	0.39	4.66	291	18241	86.9	80.59	91.40
Form 3	5	285	1.4	0.55	3.37	322	17666	84.8	79.41	88.93
Form 4	4	274	1.4	0.53	3.57	301	17142	86.7	78.71	92.06
Form 5	9	483	2.3	1.39	3.93	360	17813	86.5	81.03	90.62
School session										
Morning session	32	2441	2.7	1.62	4.56	1100	76990	86.1	81.97	89.35
Evening session						46	3836	85.6	79.83	89.88
Morning and evening session	27	1974	2.5	1.69	3.58	1038	68237	85.2	82.49	87.60
BMI-for-age status (BAZ)										
Thinness (<-2sd)	6	383	3.3	1.21	8.60	144	10071	86.4	78.46	91.66
Normal (≥-2sd - ≤+1sd)	39	2973	2.8	1.99	4.02	1337	89591	85.4	82.64	87.72
Overweight (>+1sd - ≤+2sd)	7	566	2.0	0.95	4.20	350	23874	84.6	78.07	89.47
Obese (>+2sd)	6	447	1.6	0.67	3.54	353	25451	88.4	84.21	91.53
Height-for-age status (HAZ)										
Stunting (<-2sd)	7	532	3.2	1.42	7.09	206	14232	85.6	77.98	90.92
Normal (≥-2sd)	51	3836	2.4	1.76	3.37	1978	134790	85.7	82.90	88.19

Table 3.4.16 : Prevalence of fast food consumption per week among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Frequency of fast food consumption per week				
	Count	Estimated Population	Prevalence (%)	Did not ate fast food	
				Lower	Upper
Pahang	311	20529	11.8	9.52	14.50
Locality of school					
Urban	144	9287	11.7	7.71	17.46
Rural	167	11242	11.8	9.83	14.16
Sex					
Boys	152	10089	11.5	8.76	15.03
Girls	159	10440	12.0	9.90	14.56
Ethnicity					
Malay	220	14816	9.8	8.26	11.50
Chinese	71	4189	31.6	27.47	36.01
Indian	7	430	10.1	4.00	23.35
Bumiputera Sabah	3	299	46.2	24.05	69.99
Bumiputera Sarawak	2	200	15.2	12.27	18.59
Others	8	595	20.2	14.51	27.29
School level					
Primary school	81	7552	10.7	8.47	13.43
Secondary school	230	12977	12.5	9.22	16.79
Class					
Standard 4	39	3275	14.0	10.58	18.20
Standard 5	19	2252	9.7	4.10	21.11
Standard 6	23	2024	8.5	4.40	15.79
Form 1	45	2995	14.0	7.27	25.14
Form 2	40	2460	11.7	7.81	17.22
Form 3	53	2888	13.9	9.68	19.46
Form 4	44	2344	11.9	6.56	20.50
Form 5	48	2290	11.1	7.03	17.17
School session					
Morning session	151	10025	11.2	8.41	14.79
Evening session	8	647	14.4	10.12	20.17
Morning and evening session	152	9857	12.3	9.81	15.34
BMI-for-age status (BAZ)					
Thinness (<-2sd)	17	1209	10.4	5.50	18.68
Normal ($\geq-2sd - \leq+1sd$)	190	12393	11.8	9.70	14.30
Overweight ($>+1sd - \leq+2sd$)	57	3775	13.4	8.73	19.97
Obese ($>+2sd$)	44	2905	10.1	6.86	14.59
Height-for-age status (HAZ)					
Stunting (<-2sd)	28	1857	11.2	6.75	17.94
Normal ($\geq-2sd$)	281	18566	11.8	9.43	14.70

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.17 : Practice of bringing food to school among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Bring food to school practices									
	Everyday					Occasionally				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	166	11930	6.8	5.05	9.18	1125	79511	45.5	40.54	50.57
Locality of school										
Urban	96	6564	8.3	5.64	12.01	586	40677	51.4	44.84	57.82
Rural	70	5366	5.6	3.64	8.59	539	38834	40.7	35.33	46.22
Sex										
Boys	84	6229	7.1	5.08	9.86	489	35483	40.5	34.83	46.44
Girls	82	5701	6.5	4.40	9.62	636	44028	50.5	44.44	56.63
Ethnicity										
Malay	136	9979	6.6	4.69	9.08	966	69380	45.6	39.98	51.25
Chinese	16	948	7.1	3.52	13.95	108	6426	48.5	43.62	53.32
Indian	11	774	18.2	9.94	31.01	31	2073	48.8	36.36	61.45
Bumiputera Sabah						4	411	63.5	39.25	82.42
Bumiputera Sarawak	2	150	11.3	9.19	13.93	8	631	47.8	37.17	58.56
Others	1	79	2.7	0.96	7.30	8	590	20.0	10.34	35.14
School level										
Primary school	73	6533	9.2	7.22	11.64	411	38216	53.8	47.78	59.65
Secondary school	93	5397	5.2	3.14	8.52	714	41295	39.8	35.55	44.30
Class										
Standard 4	36	2788	11.7	8.83	15.40	140	11166	46.9	39.20	54.84
Standard 5	16	1958	8.4	6.35	10.95	125	14842	63.4	52.13	73.41
Standard 6	21	1788	7.5	5.56	10.00	146	12208	51.1	44.19	57.96
Form 1	17	1301	6.1	2.60	13.48	125	9033	42.1	35.79	48.66
Form 2	9	578	2.8	1.15	6.47	132	7915	37.7	29.12	47.16
Form 3	25	1397	6.7	3.45	12.62	157	8375	40.2	30.47	50.74
Form 4	15	858	4.3	2.53	7.36	127	7495	37.9	31.55	44.76
Form 5	27	1262	6.1	2.80	12.90	173	8478	41.2	34.62	48.08
School session										
Morning session	93	6843	7.6	5.40	10.62	547	39247	43.7	38.96	48.48
Evening session	4	358	8.0	3.54	16.97	23	1875	41.8	33.63	50.51
Morning and evening session	69	4729	5.9	4.22	8.19	553	38273	47.8	41.21	54.37
BMI-for-age status (BAZ)										
Thinness (<-2sd)	4	346	3.0	1.19	7.21	76	5632	48.3	38.07	58.66
Normal (≥-2sd - ≤+1sd)	96	6653	6.3	4.59	8.64	678	47041	44.7	38.99	50.55
Overweight (>+1sd - ≤+2sd)	32	2352	8.3	5.57	12.10	182	12816	45.1	39.44	50.80
Obese (>+2sd)	34	2579	9.0	5.93	13.30	187	13906	48.3	42.82	53.78
Height-for-age status (HAZ)										
Stunting (<-2sd)	11	817	4.9	2.98	8.01	122	8656	52.1	44.93	59.14
Normal (≥-2sd)	154	11041	7.0	5.15	9.45	1001	70739	44.9	39.71	50.12

Table 3.4.17 : Practice of bringing food to school among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Bring food to school practices				
	Count	Estimated Population	Never Prevalence (%)	95% CI	
				Lower	Upper
Pahang	1272	83272	47.7	41.36	54.04
Locality of school					
Urban	506	31969	40.4	31.97	49.35
Rural	766	51303	53.7	47.03	60.28
Sex					
Boys	700	45892	52.4	45.39	59.29
Girls	572	37379	42.9	35.40	50.76
Ethnicity					
Malay	1111	72927	47.9	40.87	54.99
Chinese	95	5888	44.4	37.20	51.84
Indian	23	1399	32.9	24.29	42.94
Bumiputera Sabah	3	236	36.5	17.58	60.75
Bumiputera Sarawak	6	540	40.9	32.73	49.58
Others	34	2282	77.3	59.20	88.89
School level					
Primary school	295	26331	37.0	30.34	44.28
Secondary school	977	56941	54.9	49.11	60.64
Class					
Standard 4	121	9833	41.3	32.44	50.84
Standard 5	55	6600	28.2	18.07	41.18
Standard 6	119	9898	41.4	33.47	49.86
Form 1	161	11127	51.8	44.63	58.99
Form 2	194	12493	59.5	49.09	69.17
Form 3	198	11067	53.1	41.07	64.79
Form 4	207	11409	57.7	49.88	65.21
Form 5	217	10846	52.7	43.40	61.79
School session					
Morning session	647	43798	48.7	42.67	54.82
Evening session	27	2250	50.2	40.95	59.42
Morning and evening session	596	37148	46.3	38.47	54.42
BMI-for-age status (BAZ)					
Thinness (<-2sd)	87	5684	48.7	36.98	60.64
Normal (≥-2sd - ≤+1sd)	795	51546	49.0	42.11	55.88
Overweight (>+1sd - ≤+2sd)	202	13278	46.7	39.79	53.70
Obese (>+2sd)	182	12317	42.8	35.48	50.38
Height-for-age status (HAZ)					
Stunting (<-2sd)	108	7148	43.0	36.36	49.91
Normal (≥-2sd)	1160	75925	48.1	41.55	54.80

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.18 : Type of food usually bring to school among adolescents by socio-demographic characteristics nutritional status (Cont.)

Characteristics	Type of food									
	Nasi lemak/fried rice/mixed rice					Noodle/Vermicelli/ Kueh Teow				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	552	41269	47.7	39.70	55.91	217	15021	17.4	14.00	21.37
Locality of school										
Urban	249	17744	39.6	31.64	48.13	141	9137	20.4	16.63	24.73
Rural	303	23526	56.5	44.94	67.44	76	5884	14.1	9.25	21.01
Sex										
Boys	285	21625	56.0	47.00	64.59	87	5927	15.3	11.72	19.84
Girls	267	19644	41.1	33.18	49.47	130	9094	19.0	14.57	24.44
Ethnicity										
Malay	515	38804	51.8	44.04	59.51	188	13277	17.7	14.09	22.07
Chinese	20	1201	16.7	9.57	27.60	21	1167	16.3	11.14	23.10
Indian	8	508	18.4	7.23	39.34	5	318	11.5	3.90	29.40
Bumiputera Sabah	1	108	36.1	3.86	88.80	1	108	36.1	3.86	88.80
Bumiputera Sarawak	3	254	32.5	22.23	44.77	2	150	19.2	13.32	26.86
Others	5	395	74.3	58.27	85.69					
School level										
Primary school	248	23064	55.3	46.70	63.57	74	6782	16.3	11.65	22.22
Secondary school	304	18205	40.7	29.92	52.46	143	8239	18.4	13.92	23.98
Class										
Standard 4	83	6480	49.8	43.20	56.48	29	2221	17.1	11.67	24.32
Standard 5	80	9425	59.5	46.64	71.19	16	1997	12.6	6.42	23.27
Standard 6	85	7159	55.6	46.69	64.18	29	2563	19.9	13.24	28.81
Form 1	52	3961	40.1	24.85	57.60	20	1506	15.3	8.61	25.61
Form 2	50	3202	40.0	24.77	57.37	24	1416	17.7	12.28	24.75
Form 3	59	3225	34.8	19.59	53.89	26	1312	14.2	6.12	29.42
Form 4	58	3606	44.6	33.32	56.48	35	2146	26.5	19.41	35.17
Form 5	85	4211	44.4	29.79	59.99	38	1859	19.6	12.48	29.39
School session										
Morning session	274	20609	47.3	36.49	58.41	109	7353	16.9	12.26	22.80
Evening session	8	657	30.5	14.26	53.61	3	251	11.6	5.97	21.46
Morning and evening session	269	19950	49.1	41.35	56.92	105	7417	18.3	13.92	23.57
BMI-for-age status (BAZ)										
Thinness (<-2sd)	32	2665	46.3	27.71	65.93	12	858	14.9	6.71	29.84
Normal (≥-2sd - ≤+1sd)	319	23374	46.3	37.97	54.83	125	8601	17.0	13.90	20.72
Overweight (>+1sd - ≤+2sd)	92	6880	45.9	36.71	55.39	33	2214	14.8	10.54	20.32
Obese (>+2sd)	107	8234	54.6	44.74	64.02	47	3348	22.2	14.97	31.57
Height-for-age status (HAZ)										
Stunting (<-2sd)	61	4542	49.9	39.74	60.00	22	1527	16.8	11.80	23.27
Normal (≥-2sd)	489	36611	47.4	39.18	55.79	195	13494	17.5	14.13	21.42

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.18 : Type of food usually bring to school among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Type of food									
	Bread/bun/sandwich					Nugget/sausage/burger				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	339	22803	26.4	19.79	34.23	114	8139	9.4	6.84	12.83
Locality of school										
Urban	236	15543	34.7	24.51	46.47	71	4954	11.1	7.79	15.46
Rural	103	7260	17.4	14.00	21.52	43	3186	7.7	4.47	12.79
Sex										
Boys	121	8276	21.4	14.92	29.77	50	3481	9.0	6.07	13.18
Girls	218	14527	30.4	23.59	38.15	64	4659	9.7	6.34	14.69
Ethnicity										
Malay	228	16195	21.6	16.84	27.33	108	7640	10.2	7.40	13.92
Chinese	84	4912	68.4	63.76	72.70	2	122	1.7	0.52	5.37
Indian	19	1091	39.4	21.40	60.89	3	265	9.6	2.91	27.27
Bumiputera Sabah	2	191	63.9	11.20	96.14					
Bumiputera Sarawak	4	277	35.5	16.92	59.71	1	112	14.3	9.97	20.10
Others	2	136	25.7	14.31	41.73					
School level										
Primary school	92	8672	20.8	14.73	28.51	54	4640	11.1	7.14	16.93
Secondary school	247	14131	31.6	21.77	43.38	60	3499	7.8	5.20	11.62
Class										
Standard 4	39	3198	24.6	15.44	36.82	18	1326	10.2	7.11	14.42
Standard 5	28	3286	20.7	11.04	35.58	12	1434	9.1	5.50	14.55
Standard 6	25	2188	17.0	12.03	23.47	24	1880	14.6	7.85	25.56
Form 1	56	3868	39.2	23.88	56.97	6	426	4.3	1.88	9.61
Form 2	40	2312	28.8	15.31	47.62	11	652	8.1	4.02	15.76
Form 3	67	3613	39.0	22.85	57.93	18	959	10.3	5.78	17.83
Form 4	29	1632	20.2	13.96	28.29	14	857	10.6	6.44	16.98
Form 5	55	2706	28.5	17.65	42.59	11	604	6.4	3.04	12.88
School session										
Morning session	179	11922	27.4	19.65	36.75	58	3795	8.7	5.22	14.20
Evening session	11	911	42.2	24.83	61.82	2	146	6.8	2.84	15.23
Morning and evening session	149	9970	24.5	17.94	32.61	53	4136	10.2	7.05	14.49
BMI-for-age status (BAZ)										
Thinness (<-2sd)	19	1333	23.1	12.86	38.05	12	770	13.4	6.66	25.02
Normal (≥-2sd - ≤+1sd)	209	13727	27.2	20.26	35.43	56	3808	7.5	5.32	10.58
Overweight (>+1sd - ≤+2sd)	62	4321	28.8	20.04	39.57	22	1689	11.3	6.68	18.39
Obese (>+2sd)	47	3305	21.9	15.87	29.42	24	1872	12.4	6.76	21.67
Height-for-age status (HAZ)										
Stunting (<-2sd)	36	2515	27.6	17.82	40.14	11	712	7.8	4.25	13.92
Normal (≥-2sd)	301	20172	26.1	19.11	34.61	103	7428	9.6	6.87	13.32

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.18 : Type of food usually bring to school among adolescents by socio-demographic characteristics and nutritional status (Cont..)

Characteristics	Type of food									
	Biscuit					Fruits				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	201	11482	13.3	8.57	20.03	34	2736	3.2	1.97	5.06
Locality of school										
Urban	100	6300	14.1	9.44	20.41	16	1354	3.0	1.23	7.24
Rural	101	5183	12.5	5.30	26.56	18	1382	3.3	2.35	4.67
Sex										
Boys	54	3465	9.0	6.51	12.23	18	1306	3.4	2.16	5.25
Girls	147	8017	16.8	9.98	26.80	16	1430	3.0	1.49	5.89
Ethnicity										
Malay	167	9446	12.6	7.60	20.22	27	2173	2.9	1.82	4.60
Chinese	24	1384	19.3	14.57	25.03	4	275	3.8	1.14	12.08
Indian	8	508	18.4	8.66	34.83	2	218	7.9	1.72	29.55
Bumiputera Sabah	1	112	37.3	4.07	89.29					
Bumiputera Sarawak	1	33	4.2	0.24	44.46	1	69	8.9	6.21	12.53
Others										
School level										
Primary school	32	3032	7.3	5.88	8.95	19	1872	4.5	2.50	7.92
Secondary school	169	8450	18.9	11.30	29.87	15	864	1.9	1.21	3.07
Class										
Standard 4	15	1321	10.2	4.64	20.79	9	793	6.1	2.82	12.70
Standard 5	11	1235	7.8	3.12	18.19	6	752	4.7	1.98	10.97
Standard 6	6	477	3.7	1.95	6.93	4	326	2.5	0.95	6.59
Form 1	18	1140	11.6	5.60	22.35	4	276	3.4	1.26	9.02
Form 2	28	1348	16.8	6.97	35.31	4	184	2.0	0.60	6.41
Form 3	40	1974	21.3	11.54	35.95	4	239	3.0	1.59	5.44
Form 4	29	1571	19.4	11.98	29.95	3	165	1.7	0.51	5.82
Form 5	54	2417	25.5	15.01	39.80					
School session										
Morning session	80	5373	12.3	8.33	17.90	18	1549	3.6	1.71	7.24
Evening session	1	85	3.9	1.76	8.59					
Morning and evening session	120	6024	14.8	7.48	27.28	16	1187	2.9	2.08	4.08
BMI-for-age status (BAZ)										
Thinness (<-2sd)	10	617	10.7	4.71	22.59	2	196	3.4	0.87	12.37
Normal (≥-2sd - ≤+1sd)	142	8233	16.3	10.99	23.52	25	2067	4.1	2.69	6.19
Overweight (>+1sd - ≤+2sd)	36	1932	12.9	6.21	24.85	5	324	2.2	0.67	6.73
Obese (>+2sd)	13	700	4.6	2.18	9.59	2	149	1.0	0.26	3.66
Height-for-age status (HAZ)										
Stunting (<-2sd)	22	1274	14.0	8.85	21.41	3	306	3.4	1.09	9.83
Normal (≥-2sd)	179	10208	13.2	8.47	20.06	31	2430	3.1	1.94	5.06

Table 3.4.18 : Type of food usually bring to school among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Type of food				
	Count	Estimated Population	Others Prevalence (%)	95% CI	
				Lower	Upper
Pahang	74	5212	6.0	4.83	7.50
Locality of school					
Urban	42	2939	6.6	5.00	8.55
Rural	32	2273	5.5	3.89	7.62
Sex					
Boys	33	2351	6.1	4.51	8.16
Girls	41	2861	6.0	4.33	8.22
Ethnicity					
Malay	60	4295	5.7	4.54	7.22
Chinese	9	505	7.0	3.08	15.28
Indian	5	411	14.9	6.98	28.90
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	29	2606	6.2	4.43	8.75
Secondary school	45	2606	5.8	4.41	7.65
Class					
Standard 4	7	564	4.3	1.90	9.59
Standard 5	7	790	5.0	2.80	8.73
Standard 6	15	1253	9.7	7.94	11.87
Form 1	9	660	6.7	3.32	13.00
Form 2	11	652	8.1	4.62	13.97
Form 3	7	365	3.9	2.23	6.86
Form 4	7	399	4.9	2.33	10.14
Form 5	11	530	5.6	3.16	9.67
School session					
Morning session	42	2954	6.8	4.73	9.64
Evening session	3	275	12.8	6.26	24.28
Morning and evening session	29	1983	4.9	3.43	6.91
BMI-for-age status (BAZ)					
Thinness (<-2sd)	5	397	6.9	3.01	15.03
Normal (≥-2sd - ≤+1sd)	47	3208	6.4	5.17	7.79
Overweight (>+1sd - ≤+2sd)	10	789	5.3	2.77	9.78
Obese (>+2sd)	12	819	5.4	2.68	10.66
Height-for-age status (HAZ)					
Stunting (<-2sd)	4	321	3.5	0.89	12.92
Normal (≥-2sd)	70	4891	6.3	4.93	8.11

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.19 : Practice of bring drinks to school among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Bring drinks to school practices									
	Everyday					Occasionally				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	1016	69268	39.7	33.36	46.36	966	67482	38.7	34.27	43.24
Locality of school										
Urban	554	37622	47.5	40.40	54.75	400	27118	34.3	28.15	40.93
Rural	462	31646	33.2	25.48	41.89	566	40364	42.3	37.13	47.67
Sex										
Boys	368	26213	29.9	23.46	37.33	495	34822	39.8	33.99	45.85
Girls	648	43055	49.5	42.73	56.26	471	32660	37.5	32.63	42.72
Ethnicity										
Malay	812	56352	37.0	30.61	43.94	895	62774	41.3	37.34	45.27
Chinese	132	8069	60.8	50.40	70.38	37	2158	16.3	11.27	22.94
Indian	44	2803	66.7	51.74	78.93	12	930	22.1	12.56	36.02
Bumiputera Sabah	2	188	29.0	3.32	82.94	3	306	47.2	13.81	83.31
Bumiputera Sarawak	12	956	72.4	66.32	77.76	2	164	12.4	10.07	15.26
Others	14	900	30.5	20.80	42.30	17	1149	38.9	27.69	51.46
School level										
Primary school	339	30931	43.6	36.23	51.22	322	29798	42.0	35.24	49.04
Secondary school	677	38338	37.0	28.28	46.69	644	37684	36.4	31.13	41.98
Class										
Standard 4	140	11257	47.3	38.87	55.94	107	8611	36.2	30.57	42.23
Standard 5	83	10065	43.0	32.62	54.06	89	10631	45.4	32.08	59.48
Standard 6	116	9609	40.4	32.27	49.09	126	10556	44.4	36.35	52.71
Form 1	139	9467	44.1	34.74	53.92	106	7759	36.2	26.71	46.81
Form 2	120	6907	32.9	22.84	44.85	129	8151	38.8	30.95	47.36
Form 3	143	7593	36.4	22.51	53.08	138	7522	36.1	27.09	46.20
Form 4	119	6919	35.1	26.34	44.98	130	7255	36.8	30.00	44.16
Form 5	156	7452	36.2	26.87	46.69	141	6997	34.0	29.40	38.90
School session										
Morning session	513	35469	39.5	31.98	47.47	479	34527	38.4	31.81	45.46
Evening session	23	1955	44.0	36.88	51.47	16	1303	29.4	21.37	38.83
Morning and evening session	479	31782	39.7	31.92	48.05	469	31565	39.4	34.75	44.32
BMI-for-age status (BAZ)										
Thinness (<-2sd)	58	4293	36.8	26.35	48.69	70	5003	42.9	34.24	52.00
Normal (≥-2sd - ≤+1sd)	597	39797	37.9	30.55	45.79	584	39986	38.0	33.47	42.85
Overweight (>+1sd - ≤+2sd)	178	12008	42.2	34.85	49.94	160	11337	39.9	33.67	46.38
Obese (>+2sd)	181	13041	45.3	38.78	51.94	150	10909	37.9	32.39	43.69
Height-for-age status (HAZ)										
Stunting (<-2sd)	79	5515	33.2	25.37	42.03	111	7761	46.7	39.86	53.64
Normal (≥-2sd)	935	63624	40.4	33.91	47.20	854	59650	37.9	33.32	42.62

Table 3.4.19 : Practice of bring drinks to school among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Bring drinks to school practices				
	Count	Estimated Population	Never Prevalence (%)	95% CI	
				Lower	Upper
Pahang	579	37811	21.7	17.35	26.70
Locality of school					
Urban	233	14427	18.2	13.06	24.84
Rural	346	23385	24.5	18.65	31.50
Sex					
Boys	409	26525	30.3	23.89	37.57
Girls	170	11286	13.0	10.29	16.23
Ethnicity					
Malay	505	33052	21.7	16.98	27.35
Chinese	50	3034	22.9	17.83	28.85
Indian	8	468	11.1	3.30	31.56
Bumiputera Sabah	2	154	23.8	11.40	43.13
Bumiputera Sarawak	2	200	15.2	12.27	18.59
Others	12	903	30.6	20.77	42.55
School level					
Primary school	117	10244	14.4	12.16	17.05
Secondary school	462	27568	26.6	21.26	32.76
Class					
Standard 4	50	3919	16.5	11.10	23.76
Standard 5	24	2704	11.6	6.18	20.59
Standard 6	43	3620	15.2	13.00	17.75
Form 1	58	4235	19.7	14.91	25.65
Form 2	86	5929	28.3	19.85	38.49
Form 3	99	5724	27.5	19.39	37.35
Form 4	99	5543	28.1	22.65	34.31
Form 5	120	6136	29.8	19.61	42.51
School session					
Morning session	295	19892	22.1	18.04	26.84
Evening session	14	1181	26.6	15.20	42.29
Morning and evening session	269	16697	20.9	14.89	28.42
BMI-for-age status (BAZ)					
Thinness (<-2sd)	39	2366	20.3	13.48	29.37
Normal (≥-2sd - ≤+1sd)	386	25306	24.1	19.00	30.02
Overweight (>+1sd - ≤+2sd)	78	5101	17.9	13.08	24.09
Obese (>+2sd)	72	4853	16.8	12.02	23.11
Height-for-age status (HAZ)					
Stunting (<-2sd)	51	3347	20.1	14.69	26.95
Normal (≥-2sd)	524	34279	21.8	17.38	26.88

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.20 : Type of drinks usually bring to school among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Type of drinks									
	Plain water					Flavoured water/ packed drink/ syrup drink/ tea/ coffee/ Milo				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	1794	123166	90.3	87.96	92.20	176	12411	9.1	7.01	11.72
Locality of school										
Urban	870	58899	91.1	87.69	93.65	85	5886	9.1	5.59	14.50
Rural	924	64267	89.5	86.13	92.18	91	6526	9.1	7.20	11.42
Sex										
Boys	732	51663	84.8	81.46	87.57	106	7688	12.6	9.89	15.96
Girls	1062	71502	94.7	92.65	96.25	70	4723	6.3	4.20	9.23
Ethnicity										
Malay	1542	107168	90.2	87.65	92.28	155	11120	9.4	7.17	12.14
Chinese	154	9245	90.4	87.26	92.82	17	979	9.6	4.27	20.07
Indian	50	3237	86.7	73.68	93.83	2	125	3.4	0.91	11.67
Bumiputera Sabah	5	493	100.0	0.00	100.00					
Bumiputera Sarawak	14	1121	100.0	0.00	100.00	1	108	9.6	7.50	12.25
Others	29	1902	92.8	85.27	96.64	1	79	3.9	1.40	10.29
School level										
Primary school	579	53642	88.6	87.26	89.86	76	6780	11.2	7.73	15.96
Secondary school	1215	69524	91.6	87.69	94.35	100	5632	7.4	5.66	9.67
Class										
Standard 4	203	16560	83.7	80.80	86.31	33	2510	12.7	8.77	18.02
Standard 5	156	18821	91.4	87.05	94.43	22	2490	12.1	5.58	24.26
Standard 6	220	18260	90.6	85.97	93.75	21	1780	8.8	6.81	11.38
Form 1	220	15299	89.3	82.79	93.49	19	1349	7.9	4.98	12.22
Form 2	232	13887	92.2	84.49	96.28	22	1277	8.5	5.24	13.45
Form 3	260	13896	91.9	85.31	95.72	15	786	5.2	2.60	10.12
Form 4	224	12853	90.7	84.50	94.56	18	971	6.8	4.37	10.57
Form 5	279	13589	94.3	90.23	96.70	26	1249	8.7	5.55	13.26
School session										
Morning session	909	64141	91.6	89.13	93.61	85	5961	8.5	5.95	12.05
Evening session	34	2837	87.1	75.96	93.48	2	169	5.2	2.86	9.26
Morning and evening session	848	56039	88.9	85.59	91.56	89	6281	10.0	7.71	12.80
BMI-for-age status (BAZ)										
Thinness (<-2sd)	115	8223	88.5	81.93	92.83	17	1314	14.1	8.64	22.29
Normal (≥-2sd - ≤+1sd)	1059	71271	89.7	86.69	92.09	98	6747	8.5	6.57	10.92
Overweight (>+1sd - ≤+2sd)	310	21238	91.0	86.98	93.83	35	2458	10.5	7.68	14.28
Obese (>+2sd)	306	22057	92.1	86.18	95.61	26	1892	7.9	4.60	13.22
Height-for-age status (HAZ)										
Stunting (<-2sd)	171	11862	89.9	84.28	93.72	19	1355	10.3	6.00	17.04
Normal (≥-2sd)	1620	111103	90.3	88.12	92.12	157	11056	9.0	6.91	11.61

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.20 : Type of drinks usually bring to school among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Type of drinks									
	Carbonated drink					Milk/ cultured drink				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	31	2287	1.7	1.06	2.65	92	6270	4.6	3.48	6.05
Locality of school										
Urban	14	1005	1.6	0.89	2.69	44	2980	4.6	3.15	6.70
Rural	17	1283	1.8	0.88	3.58	48	3290	4.6	3.05	6.83
Sex										
Boys	23	1674	2.7	1.67	4.48	37	2686	4.4	2.98	6.47
Girls	8	614	0.8	0.35	1.90	55	3585	4.7	3.23	6.92
Ethnicity										
Malay	24	1712	1.4	0.88	2.36	76	5314	4.5	3.28	6.07
Chinese	4	291	2.8	0.85	9.15	10	510	5.0	2.17	11.01
Indian	1	124	3.3	0.47	19.95	3	215	5.8	1.59	18.84
Bumiputera Sabah										
Bumiputera Sarawak						2	163	14.5	11.31	18.46
Others	2	160	7.8	2.78	20.15	30	1981	96.7	74.30	99.66
School level										
Primary school	11	919	1.5	0.88	2.60	37	3356	5.5	3.76	8.11
Secondary school	20	1368	1.8	0.91	3.53	55	2915	3.8	2.76	5.33
Class										
Standard 4	4	289	1.5	0.54	3.86	17	1366	6.9	4.48	10.51
Standard 5	2	237	1.1	0.35	3.69	9	1031	5.0	2.03	11.84
Standard 6	5	394	2.0	0.69	5.45	11	958	4.8	2.65	8.37
Form 1	8	656	3.8	1.26	11.05	6	406	2.4	1.23	4.52
Form 2	5	347	2.3	0.64	7.94	9	497	3.3	1.27	8.29
Form 3	4	200	1.3	0.38	4.47	17	831	5.5	3.34	8.92
Form 4	2	119	0.8	0.19	3.66	10	561	4.0	2.00	7.67
Form 5	1	46	0.3	0.04	2.61	13	620	4.3	2.25	8.07
School session										
Morning session	13	970	1.4	0.86	2.23	49	3456	4.9	3.17	7.61
Evening session	2	169	5.2	2.86	9.26	2	146	4.5	1.72	11.12
Morning and evening session	16	1148	1.8	0.87	3.79	41	2668	4.2	3.01	5.93
BMI-for-age status (BAZ)										
Thinness (<-2sd)	1	124	1.3	0.17	9.89	3	170	1.8	0.52	6.21
Normal (≥-2sd - ≤+1sd)	22	1553	2.0	1.08	3.53	66	4463	5.6	4.27	7.36
Overweight (>+1sd - ≤+2sd)	4	325	1.4	0.54	3.53	13	896	3.8	2.19	6.66
Obese (>+2sd)	4	285	1.2	0.38	3.69	10	741	3.1	1.48	6.34
Height-for-age status (HAZ)										
Stunting (<-2sd)	3	284	2.2	0.75	6.02	8	537	4.1	1.95	8.32
Normal (≥-2sd)	28	2004	1.6	1.04	2.55	84	5733	4.7	3.49	6.20

Table 3.4.20 : Type of drinks usually bring to school among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Type of drinks				
	Count	Estimated Population	Others Percentage (%)	95% CI	
				Lower	Upper
Pahang	25	1865	1.4	0.99	1.88
Locality of school					
Urban	13	918	1.4	0.86	2.35
Rural	12	948	1.3	0.89	1.95
Sex					
Boys	17	1131	1.9	1.22	2.81
Girls	8	734	1.0	0.50	1.88
Ethnicity					
Malay	20	1543	1.3	0.93	1.81
Chinese	3	217	97.9	96.17	98.84
Indian	2	106	2.8	0.45	15.89
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	10	920	1.5	1.04	2.23
Secondary school	15	945	1.2	0.76	2.03
Class					
Standard 4	4	324	1.6	0.73	3.61
Standard 5	2	259	1.3	0.40	3.86
Standard 6	4	337	1.7	0.58	4.70
Form 1	3	240	1.4	0.51	3.76
Form 2	3	214	1.4	0.33	5.86
Form 3	3	181	1.2	0.40	3.55
Form 4	4	201	1.4	0.50	3.95
Form 5	2	110	0.8	0.20	2.84
School session					
Morning session	14	1028	1.5	0.94	2.29
Evening session	1	85	2.6	1.44	4.67
Morning and evening session	10	752	1.2	0.62	2.27
BMI-for-age status (BAZ)					
Thinness (<-2sd)	1	70	0.7	0.09	5.87
Normal (≥-2sd - ≤+1sd)	14	1026	1.3	0.70	2.39
Overweight (>+1sd - ≤+2sd)	8	597	2.6	1.33	4.88
Obese (>+2sd)	2	173	0.7	0.18	2.78
Height-for-age status (HAZ)					
Stunting (<-2sd)	1	93	0.7	0.08	5.84
Normal (≥-2sd)	24	1772	1.4	1.07	1.94

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.21 : Spending of pocket money among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Spending of pocket money									
	Buy food/drinks					Buy stationery				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	1686	115312	67.2	63.17	71.04	87	6062	3.5	2.63	4.73
Locality of school										
Urban	750	50412	64.7	57.62	71.20	36	2537	3.3	2.56	4.13
Rural	936	64901	69.3	65.19	73.16	51	3525	3.8	2.34	6.00
Sex										
Boys	827	57517	67.0	61.62	71.90	51	3574	4.2	2.94	5.86
Girls	859	57796	67.5	62.74	71.91	36	2488	2.9	2.01	4.17
Ethnicity										
Malay	1514	103891	69.4	66.88	71.72	69	4909	3.3	2.32	4.61
Chinese	93	5754	45.1	38.59	51.77	10	613	4.8	3.48	6.58
Indian	34	2212	54.5	43.30	65.35	3	191	4.7	1.43	14.41
Bumiputera Sabah	6	568	87.7	32.52	99.06					
Bumiputera Sarawak	12	1021	77.3	72.24	81.68	1	69	5.2	4.26	6.45
Others	27	1866	63.2	46.04	77.58	4	280	9.5	3.30	24.41
School level										
Primary school	545	49956	71.7	68.54	74.68	25	2109	3.0	1.84	4.94
Secondary school	1141	65356	64.2	58.63	69.34	62	3953	3.9	2.73	5.49
Class										
Standard 4	212	17270	73.8	63.81	81.76	12	818	3.5	1.41	8.41
Standard 5	138	16392	71.6	65.89	76.61	6	697	3.0	1.33	6.81
Standard 6	195	16294	69.8	61.24	77.19	7	595	2.5	1.25	5.12
Form 1	181	12769	60.1	53.59	66.21	26	1763	8.3	5.52	12.27
Form 2	220	13664	66.3	60.34	71.82	14	970	4.7	2.60	8.37
Form 3	245	13248	65.3	55.07	74.27	7	396	2.0	1.04	3.65
Form 4	207	11618	60.0	50.21	69.12	6	366	1.9	0.74	4.76
Form 5	288	14058	69.0	61.64	75.57	9	457	2.2	0.92	5.40
School session										
Morning session	809	56976	64.8	59.25	69.95	41	2882	3.3	2.37	4.52
Evening session	33	2704	60.3	45.94	73.10	3	254	5.7	2.65	11.67
Morning and evening session	843	55579	70.4	65.78	74.70	43	2927	3.7	2.37	5.76
BMI-for-age status (BAZ)										
Thinness (<-2sd)	117	8365	72.4	63.82	79.66	7	508	4.4	1.72	10.77
Normal (≥-2sd - ≤+1sd)	1060	71243	69.0	64.82	72.86	51	3430	3.3	2.28	4.81
Overweight (>+1sd - ≤+2sd)	256	17558	62.5	54.94	69.41	17	1126	4.0	2.43	6.54
Obese (>+2sd)	246	17726	63.2	57.42	68.69	12	998	3.6	1.74	7.14
Height-for-age status (HAZ)										
Stunting (<-2sd)	158	10840	66.0	56.87	74.02	13	970	5.9	3.38	10.11
Normal (≥-2sd)	1521	104086	67.3	63.25	71.06	74	5092	3.3	2.41	4.48

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.21 : Spending of pocket money among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Spending of pocket money									
	Saving					Others				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	627	42539	24.8	22.29	27.50	119	7615	4.4	3.09	6.34
Locality of school										
Urban	316	20618	26.5	22.43	30.93	67	4341	5.6	3.42	8.95
Rural	311	21921	23.4	20.62	26.47	52	3274	3.5	2.15	5.63
Sex										
Boys	306	20624	24.0	20.65	27.72	66	4181	4.9	3.25	7.22
Girls	321	21915	25.6	22.51	28.94	53	3435	4.0	2.52	6.32
Ethnicity										
Malay	517	35743	23.9	21.67	26.20	80	5250	3.5	2.61	4.70
Chinese	77	4574	35.8	31.66	40.25	30	1820	14.3	10.94	18.38
Indian	20	1286	31.7	23.17	41.71	6	366	9.0	4.28	18.07
Bumiputera Sabah	1	80	12.3	0.94	67.48					
Bumiputera Sarawak	3	231	17.5	14.11	21.38					
Others	9	626	21.2	14.67	29.67	3	179.34	6.1	2.14	16.04
School level										
Primary school	174	15882	22.8	20.24	25.58	20	1715	2.5	1.49	4.03
Secondary school	453	26657	26.2	22.63	30.04	99	5900	5.8	4.00	8.31
Class										
Standard 4	57	4516	19.3	13.06	27.54	11	811	3.5	2.09	5.67
Standard 5	42	5149	22.5	16.49	29.86	6	670	2.9	0.73	10.98
Standard 6	75	6217	26.6	20.79	33.43	3	234	1.0	0.28	3.52
Form 1	78	5640	26.5	20.93	33.01	15	1087	5.1	2.73	9.37
Form 2	81	5020	24.4	19.56	29.91	14	949	4.6	2.51	8.31
Form 3	92	5182	25.5	20.15	31.79	26	1466	7.2	4.51	11.39
Form 4	107	6009	31.1	24.22	38.83	23	1358	7.0	3.40	13.94
Form 5	95	4806	23.6	17.29	31.34	21	1041	5.1	3.45	7.52
School session										
Morning session	341	23530	26.8	22.95	30.94	69	4556	5.2	3.30	8.05
Evening session	15	1274	28.4	18.83	40.47	3	252	5.6	2.90	10.58
Morning and evening session	268	17597	22.3	19.14	25.81	47	2808	3.6	2.39	5.26
BMI-for-age status (BAZ)										
Thinness (<-2sd)	30	1940	16.8	11.14	24.54	11	735	6.4	3.20	12.26
Normal (≥-2sd - ≤+1sd)	358	24070	23.3	20.44	26.45	71	4530	4.4	3.10	6.18
Overweight (>+1sd - ≤+2sd)	117	7973	28.4	22.89	34.54	22	1457	5.2	2.57	10.17
Obese (>+2sd)	121	8414	30.0	25.37	35.11	15	894	3.2	1.85	5.43
Height-for-age status (HAZ)										
Stunting (<-2sd)	54	3795	23.1	16.92	30.68	13	828	5.0	2.10	11.62
Normal (≥-2sd)	573	38745	25.0	22.70	27.54	106	6787	4.4	2.98	6.42

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.22 : Prevalence of eating out in a week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Frequency of eating out in a week									
	7 times or more					4 to 6 times				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	105	7600	4.4	3.16	6.01	323	23627	13.6	11.12	16.49
Locality of school										
Urban	59	4126	5.2	3.56	7.62	174	12142	15.4	11.43	20.40
Rural	46	3475	3.7	2.20	6.01	149	11485	12.1	9.48	15.27
Sex										
Boys	60	4212	4.8	3.12	7.42	178	12979	14.9	12.41	17.77
Girls	45	3388	3.9	2.44	6.18	145	10648	12.3	9.16	16.23
Ethnicity										
Malay	82	6117	4.0	2.82	5.74	271	20176	13.3	10.68	16.46
Chinese	19	1248	9.4	7.50	11.75	38	2374	17.9	13.38	23.53
Indian	2	76	1.8	0.35	8.91	8	564	13.4	5.84	27.90
Bumiputera Sabah						1	112	17.3	6.51	38.45
Bumiputera Sarawak						3	242	18.3	14.84	22.48
Others	2	159	5.4	1.68	16.00	2	159	5.4	2.50	11.26
School level										
Primary school	50	4246	6.0	4.33	8.30	137	12467	17.7	14.96	20.71
Secondary school	55	3354	3.2	1.99	5.24	186	11160	10.8	8.31	13.92
Class										
Standard 4	28	2172	9.2	5.54	14.76	61	4947	20.9	17.14	25.11
Standard 5	6	711	3.1	1.75	5.33	37	4359	18.8	15.68	22.39
Standard 6	16	1363	5.7	3.74	8.73	39	3161	13.3	10.38	16.97
Form 1	11	843	4.0	1.94	7.90	37	2691	12.6	9.80	16.16
Form 2	11	724	3.5	1.45	8.00	24	1553	7.4	5.00	10.83
Form 3	13	725	3.5	1.99	6.03	49	2778	13.3	8.37	20.58
Form 4	11	659	3.3	1.76	6.26	28	1631	8.3	5.76	11.75
Form 5	9	403	2.0	0.94	4.06	48	2507	12.2	8.34	17.54
School session										
Morning session	58	4323	4.8	3.40	6.79	152	11271	12.6	9.56	16.37
Evening session	2	169	3.8	1.82	7.83	10	802	18.1	12.96	24.62
Morning and evening session	45	3108	3.9	2.51	6.01	161	11554	14.5	11.37	18.30
BMI-for-age status (BAZ)										
Thinness (<-2sd)	9	672	5.8	2.91	11.25	25	1683	14.5	9.20	22.23
Normal (≥-2sd - ≤+1sd)	56	3980	3.8	2.70	5.31	188	13754	13.1	10.46	16.34
Overweight (>+1sd - ≤+2sd)	21	1519	5.4	3.23	8.80	64	4763	16.8	12.97	21.59
Obese (>+2sd)	18	1383	4.8	2.46	9.20	45	3381	11.8	8.85	15.48
Height-for-age status (HAZ)										
Stunting (<-2sd)	5	315	1.9	0.66	5.30	31	2093	12.6	7.63	20.07
Normal (≥-2sd)	98	7168	4.6	3.24	6.39	291	21488	13.7	11.12	16.74

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.22 : Prevalence of eating out in a week among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Frequency of eating out in a week									
	1 to 3 times					Never				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	1839	123818	71.2	67.69	74.43	287	18920	10.9	8.61	13.64
Locality of school										
Urban	854	56273	71.3	65.96	76.16	97	6346	8.0	6.05	10.63
Rural	985	67545	71.0	66.36	75.31	190	12574	13.2	10.08	17.17
Sex										
Boys	902	61336	70.4	65.72	74.66	127	8611	9.9	7.93	12.25
Girls	937	62482	72.0	68.02	75.59	160	10309	11.9	8.87	15.72
Ethnicity										
Malay	1613	109348	72.1	68.24	75.73	239	15941	10.5	8.23	13.34
Chinese	143	8526	64.3	59.57	68.75	19	1114	8.4	5.97	11.70
Indian	47	3195	76.0	61.67	86.23	7	366	8.7	4.15	17.43
Bumiputera Sabah	4	346	53.4	17.31	86.25	2	190	29.3	10.31	60.02
Bumiputera Sarawak	13	1079	81.7	77.52	85.16					
Others	19	1324	44.9	36.95	53.03	20	1309	44.4	37.14	51.81
School level										
Primary school	514	46913	66.4	63.28	69.46	73	6985	9.9	6.80	14.17
Secondary school	1325	76905	74.4	70.18	78.23	214	11935	11.5	8.61	15.32
Class										
Standard 4	178	14170	59.7	51.85	67.12	29	2438	10.3	6.07	16.86
Standard 5	132	15719	67.8	59.21	75.36	19	2390	10.3	4.34	22.56
Standard 6	204	17024	71.8	66.22	76.81	25	2158	9.1	5.80	14.00
Form 1	214	15148	71.2	62.93	78.19	39	2606	12.2	7.27	19.89
Form 2	260	16181	77.1	68.92	83.65	40	2528	12.0	8.71	16.43
Form 3	288	15875	76.2	70.28	81.22	30	1461	7.0	3.94	12.18
Form 4	257	14526	73.7	68.54	78.23	52	2901	14.7	11.92	18.02
Form 5	306	15175	73.9	68.89	78.43	53	2439	11.9	7.94	17.42
School session										
Morning session	937	64771	72.3	67.65	76.44	137	9274	10.3	8.24	12.92
Evening session	37	3134	70.6	63.34	76.95	4	334	7.5	3.46	15.57
Morning and evening session	861	55722	69.9	66.36	73.25	146	9313	11.7	8.26	16.28
BMI-for-age status (BAZ)										
Thinness (<-2sd)	117	8184	70.7	61.37	78.55	15	1037	9.0	5.58	14.07
Normal (≥-2sd - ≤+1sd)	1143	75731	72.3	68.79	75.48	177	11344	10.8	8.43	13.80
Overweight (>+1sd - ≤+2sd)	283	18905	66.9	60.30	72.83	46	3089	10.9	7.17	16.30
Obese (>+2sd)	292	20740	72.2	66.57	77.13	47	3240	11.3	8.19	15.31
Height-for-age status (HAZ)										
Stunting (<-2sd)	181	12454	74.9	68.48	80.43	24	1760	10.6	7.19	15.34
Normal (≥-2sd)	1655	111212	70.9	66.99	74.44	262	17091	10.9	8.56	13.75

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.23 : Prevalence of consuming snack food in a week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

	7 times or more					4 to 6 times				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	166	11018	6.3	5.22	7.67	640	41067	23.6	20.72	26.80
Locality of school										
Urban	77	5122	6.5	5.11	8.21	301	19309	24.5	20.41	29.05
Rural	89	5896	6.2	4.62	8.31	339	21758	22.9	18.99	27.39
Sex										
Boys	75	5203	6.0	4.27	8.28	310	20776	23.8	20.69	27.30
Girls	91	5814	6.7	5.01	8.94	330	20291	23.4	19.40	27.97
Ethnicity										
Malay	144	9488	6.3	5.11	7.67	567	36501	24.1	21.10	27.39
Chinese	16	1045	7.9	5.20	11.85	49	3003	22.7	15.34	32.30
Indian	1	92	2.2	0.23	17.99	13	819	19.3	13.47	26.83
Bumiputera Sabah	1	108	16.7	6.30	37.26					
Bumiputera Sarawak	2	190	14.4	11.64	17.63	2	173	13.1	10.61	16.08
Others	2	95	3.2	1.35	7.42	9	571	19.4	13.28	27.34
School level										
Primary school	760	51033	64.7	60.76	68.42	46	3429	4.3	2.54	7.33
Secondary school	900	64414	67.9	62.56	72.74	39	2851	3.0	1.99	4.51
Class										
Standard 4	27	2188	9.3	6.32	13.58	49	3827	16.3	11.83	22.11
Standard 5	7	799	3.4	2.06	5.71	46	5314	22.9	16.40	31.09
Standard 6	22	1862	7.8	5.87	10.27	65	5283	22.1	14.85	31.61
Form 1	20	1246	5.8	3.41	9.71	65	4430	20.6	14.88	27.90
Form 2	21	1301	6.3	3.47	11.01	95	5687	27.3	21.80	33.65
Form 3	21	1167	5.6	3.12	9.96	114	5952	28.7	23.83	34.19
Form 4	23	1277	6.5	4.73	8.77	79	4561	23.1	18.64	28.21
Form 5	25	1178	5.7	3.87	8.42	127	6012	29.3	23.59	35.64
School session										
Morning session	84	5910	6.6	5.22	8.30	313	21108	23.6	20.32	27.13
Evening session	2	191	4.3	1.28	13.23	8	646	14.4	7.88	24.91
Morning and evening session	80	4917	6.2	4.39	8.64	318	19260	24.2	20.00	29.01
BMI-for-age status (BAZ)										
Thinness (<-2sd)	12	795	6.8	3.40	13.22	33	2109	18.1	11.28	27.71
Normal (≥-2sd - ≤+1sd)	114	7442	7.1	5.71	8.85	426	27050	25.9	22.51	29.56
Overweight (>+1sd - ≤+2sd)	22	1577	5.6	3.24	9.39	114	7399	26.1	20.73	32.35
Obese (>+2sd)	18	1203	4.2	2.23	7.71	65	4417	15.4	11.76	19.82
Height-for-age status (HAZ)										
Stunting (<-2sd)	16	1060	6.4	3.49	11.50	60	3779	22.9	15.69	32.14
Normal (≥-2sd)	149	9887	6.3	5.03	7.86	578	37195	23.7	20.80	26.88

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.23 : Prevalence of consuming snack food in a week among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Frequency of consuming snack foods per week									
	1-3 times					Never				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	1660	115447	66.4	62.97	69.71	85	6281	3.6	2.53	5.14
Locality of school										
Urban	760	51033	64.7	60.76	68.42	46	3429	4.3	2.54	7.33
Rural	900	64414	67.9	62.56	72.74	39	2851	3.0	1.99	4.51
Sex										
Boys	830	57385	65.8	61.44	69.99	52	3790	4.3	2.87	6.54
Girls	830	58062	67.0	62.23	71.45	33	2491	2.9	1.88	4.38
Ethnicity										
Malay	1432	100925	66.6	62.88	70.21	59	4517	3.0	2.02	4.38
Chinese	134	7984	60.4	49.67	70.24	19	1184	9.0	6.73	11.82
Indian	49	3131	73.7	59.84	84.11	2	204	4.8	1.17	17.64
Bumiputera Sabah	5	460	71.0	45.39	87.86	1	80	12.3	0.94	67.48
Bumiputera Sarawak	12	958	72.5	66.45	77.85					
Others	28	1989	67.4	60.80	73.32	4	297	10.1	6.36	15.56
School level										
Primary school	518	47810	67.8	62.68	72.54	39	3426	4.9	3.45	6.80
Secondary school	1142	67637	65.5	60.88	69.80	46	2855	2.8	1.53	4.94
Class										
Standard 4	196	15802	67.4	58.51	75.23	21	1620	6.9	3.46	13.35
Standard 5	132	16032	69.2	57.25	78.98	9	1034	4.5	1.89	10.17
Standard 6	190	15976	66.9	56.46	75.85	9	772	3.2	1.65	6.22
Form 1	206	14917	69.5	62.58	75.66	12	868	4.0	2.40	6.74
Form 2	206	13217	63.5	57.25	69.33	10	608	2.9	1.25	6.71
Form 3	234	13049	63.0	55.44	69.95	9	547	2.6	1.26	5.45
Form 4	236	13311	67.4	60.99	73.15	11	613	3.1	0.81	11.20
Form 5	260	13143	64.0	56.48	70.80	4	219	1.1	0.40	2.82
School session										
Morning session	832	58525	65.3	61.05	69.33	54	4073	4.5	3.07	6.68
Evening session	41	3407	76.0	66.60	83.41	3	239	5.3	2.92	9.52
Morning and evening session	784	53376	67.1	61.53	72.27	28	1969	2.5	1.49	4.09
BMI-for-age status (BAZ)										
Thinness (<-2sd)	117	8415	72.2	61.71	80.65	5	343	2.9	1.31	6.48
Normal (≥-2sd - ≤+1sd)	963	65839	63.0	59.28	66.56	56	4186	4.0	2.49	6.39
Overweight (>+1sd - ≤+2sd)	270	18685	66.0	58.84	72.44	9	663	2.3	1.04	5.18
Obese (>+2sd)	304	22038	76.7	73.06	79.92	15	1088	3.8	2.06	6.87
Height-for-age status (HAZ)										
Stunting (<-2sd)	156	10975	66.5	55.60	75.82	8	699	4.2	1.68	10.25
Normal (≥-2sd)	1500	104250	66.4	63.09	69.63	77	5581	3.6	2.47	5.09

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.24 : Type of snack foods usually consumed among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Type of snack foods									
	Bread/ bun/ sandwich					French fries				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	799	53113	30.6	26.72	34.68	388	27087	15.6	14.12	17.17
Locality of school										
Urban	413	26570	33.7	27.77	40.25	195	13110	16.6	14.70	18.79
Rural	386	26543	27.9	23.76	32.49	193	13977	14.7	12.75	16.89
Sex										
Boys	421	27726	31.8	26.98	37.13	190	13432	15.4	13.23	17.91
Girls	378	25387	29.3	24.99	33.92	198	13654	15.7	13.24	18.59
Ethnicity										
Malay	682	45873	30.3	26.21	34.68	346	24529	16.2	14.56	17.97
Chinese	65	3769	28.4	24.73	32.42	33	1984	15.0	9.33	23.12
Indian	30	1824	43.0	30.10	56.84	6	357	8.4	4.58	14.89
Bumiputera Sabah	2	220	38.9	15.65	68.55	1	112	19.8	6.31	47.37
Bumiputera Sarawak	6	483	36.5	28.00	46.00	1	69	5.2	4.26	6.45
Others	14	946	32.0	25.23	39.71	1	36	1.2	0.10	12.65
School level										
Primary school	204	18426	26.2	21.18	31.84	131	11950	17.0	15.13	18.98
Secondary school	595	34688	33.5	29.10	38.29	257	15137	14.6	12.77	16.72
Class										
Standard 4	71	5766	24.4	19.70	29.76	52	4026	17.0	13.75	20.89
Standard 5	50	5788	25.1	15.34	38.29	38	4417	19.2	14.12	25.45
Standard 6	83	6871	29.0	24.31	34.09	41	3508	14.8	10.61	20.22
Form 1	85	6095	28.4	20.47	37.93	45	3244	15.1	11.42	19.74
Form 2	92	6035	28.8	22.74	35.80	52	3384	16.2	12.74	20.30
Form 3	130	7082	34.0	27.63	40.97	50	2796	13.4	10.20	17.45
Form 4	130	7403	37.6	29.56	46.32	44	2490	12.6	9.10	17.29
Form 5	158	8073	39.4	33.59	45.56	66	3223	15.7	11.05	21.92
School session										
Morning session	417	28214	31.5	26.80	36.66	200	14122	15.8	13.59	18.24
Evening session	8	667	14.9	7.84	26.42	12	1006	22.4	18.30	27.19
Morning and evening session	372	24128	30.3	25.63	35.38	176	11958	15.0	13.05	17.21
BMI-for-age status (BAZ)										
Thinness (<-2sd)	46	3124	26.8	21.83	32.41	27	1903	16.3	11.85	22.05
Normal (≥-2sd - ≤+1sd)	501	32793	31.3	26.47	36.63	228	15376	14.7	12.98	16.58
Overweight (>+1sd - ≤+2sd)	127	8489	29.9	24.61	35.78	66	5063	17.8	13.49	23.19
Obese (>+2sd)	121	8522	29.8	24.68	35.59	64	4569	16.0	11.60	21.67
Height-for-age status (HAZ)										
Stunting (<-2sd)	82	5458	33.0	26.08	40.64	35	2467	14.9	10.99	19.88
Normal (≥-2sd)	712	47399	30.2	26.55	34.13	350	24444	15.6	13.95	17.36

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.24 : Type of snack foods usually consumed among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Type of snack foods									
	Biscuit					Fruits				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	570	35266	20.3	16.58	24.57	499	35128	20.2	17.53	23.18
Locality of school										
Urban	265	16359	20.8	15.79	26.80	257	17567	22.3	18.48	26.65
Rural	305	18907	19.9	14.79	26.19	242	17561	18.5	15.06	22.45
Sex										
Boys	237	15124	17.4	14.25	21.00	224	15690	18.0	15.01	21.48
Girls	333	20142	23.2	18.50	28.71	275	19437	22.4	18.54	26.79
Ethnicity										
Malay	483	29936	19.8	15.78	24.46	396	28366	18.7	16.51	21.16
Chinese	59	3486	26.3	22.27	30.75	77	4791	36.1	33.20	39.17
Indian	12	752	17.7	10.32	28.69	16	1097	25.8	17.64	36.18
Bumiputera Sabah	1	112	19.8	6.31	47.37	1	112	19.8	6.31	47.37
Bumiputera Sarawak	4	323	24.5	14.97	37.34	5	445	33.7	27.08	41.02
Others	11	657	22.2	12.65	36.12	4	316	10.7	3.51	28.38
School level										
Primary school	111	10237	14.5	12.35	17.03	176	15825	22.5	19.29	26.01
Secondary school	459	25028	24.2	19.45	29.68	323	19302	18.7	15.10	22.84
Class										
Standard 4	36	2853	12.1	8.92	16.12	73	5966	25.2	22.71	27.93
Standard 5	28	3497	15.2	9.84	22.66	37	4315	18.7	13.31	25.66
Standard 6	47	3887	16.4	13.74	19.42	66	5544	23.4	19.45	27.80
Form 1	68	4477	20.9	14.08	29.78	63	4469	20.8	13.99	29.85
Form 2	74	4178	20.0	13.45	28.59	60	3701	17.7	14.34	21.61
Form 3	107	5690	27.3	18.72	37.99	76	4338	20.8	15.22	27.80
Form 4	88	4843	24.6	18.42	31.98	62	3713	18.8	13.20	26.16
Form 5	122	5840	28.5	22.45	35.47	62	3080	15.0	11.72	19.10
School session										
Morning session	269	17422	19.5	15.60	24.01	271	19523	21.8	18.34	25.73
Evening session	7	591	13.2	7.27	22.70	12	1022	22.8	12.60	37.70
Morning and evening session	292	17157	21.5	16.31	27.89	216	14583	18.3	16.03	20.82
BMI-for-age status (BAZ)										
Thinness (<-2sd)	34	2018	17.3	11.08	26.00	29	2229	19.1	12.40	28.29
Normal (≥-2sd - ≤+1sd)	343	20668	19.7	15.65	24.59	317	22381	21.4	18.22	24.92
Overweight (>+1sd - ≤+2sd)	101	6273	22.1	17.03	28.16	80	5761	20.3	15.21	26.54
Obese (>+2sd)	90	6131	21.5	16.56	27.36	73	4757	16.7	12.65	21.63
Height-for-age status (HAZ)										
Stunting (<-2sd)	58	3578	21.6	15.93	28.61	34	2598	15.7	10.86	22.11
Normal (≥-2sd)	511	31618	20.2	16.30	24.64	465	32530	20.7	18.09	23.65

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.24 : Type of snack foods usually consumed among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Type of snack foods									
	Nuts					Fish cracker				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	68	4615.217	2.65	1.99	3.53	468	31870	18.3	16.02	20.89
Locality of school										
Urban	28	1685	2.1	1.22	3.72	165	11709	14.9	12.55	17.52
Rural	40	2930	3.1	2.33	4.06	303	20161	21.2	18.10	24.68
Sex										
Boys	43	2774	3.2	2.30	4.40	237	16534	19.0	15.87	22.56
Girls	25	1842	2.1	1.35	3.33	231	15335	17.7	14.72	21.07
Ethnicity										
Malay	62	4205	2.8	2.04	3.76	427	29069	19.2	16.92	21.68
Chinese	4	257	1.9	0.57	6.36	14	922	7.0	3.53	13.24
Indian						13	927	21.8	15.66	29.58
Bumiputera Sabah						2	154	27.3	3.24	80.81
Bumiputera Sarawak	1	81	6.1	4.95	7.50	2	125	9.5	4.84	17.74
Others	1	73	2.5	0.23	21.60	10	673	22.8	10.07	43.74
School level										
Primary school	20	1722	2.4	1.31	4.51	127	11988	17.0	15.65	18.49
Secondary school	48	2893	2.8	2.14	3.65	341	19882	19.2	15.65	23.40
Class										
Standard 4	9	677	2.9	1.07	7.46	40	3411	14.4	11.19	18.41
Standard 5	3	367	1.6	0.66	3.81	37	4402	19.1	15.74	22.97
Standard 6	8	679	2.9	1.49	5.42	50	4174	17.6	13.63	22.41
Form 1	10	741	3.5	1.72	6.79	54	3802	17.7	11.16	26.95
Form 2	6	389	1.9	0.72	4.70	70	4449	21.3	16.05	27.60
Form 3	9	525	2.5	1.16	5.39	66	3558	17.1	13.11	21.94
Form 4	15	818	4.2	2.40	7.09	75	4284	21.7	16.91	27.50
Form 5	8	420	2.1	1.16	3.59	76	3788	18.5	13.70	24.49
School session										
Morning session	35	2260	2.5	1.69	3.76	240	16955	18.9	15.99	22.29
Evening session	4	285	6.4	1.61	21.97	3	254	5.7	2.65	11.67
Morning and evening session	29	2071	2.6	1.75	3.84	224	14627	18.4	15.29	21.89
BMI-for-age status (BAZ)										
Thinness (<-2sd)	8	556	4.8	2.51	8.88	28	1995	17.1	11.10	25.42
Normal (≥-2sd - ≤+1sd)	35	2354	2.2	1.55	3.25	296	19716	18.8	16.07	21.95
Overweight (>+1sd - ≤+2sd)	11	789	2.8	1.60	4.77	72	4707	16.6	11.85	22.70
Obese (>+2sd)	14	916	3.2	1.72	5.92	71	5406	18.9	14.54	24.27
Height-for-age status (HAZ)										
Stunting (<-2sd)	7	415	2.5	0.96	6.38	41	2769	16.7	11.80	23.14
Normal (≥-2sd)	61	4200	2.7	1.96	3.65	426	29055	18.5	16.25	21.02

Table 3.4.24 : Type of snack foods usually consumed among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Type of snack foods				
	Count	Estimated Population	Percentage (%)	Ice cream	
				Lower	Upper
Pahang	435	29087	16.7	13.84	20.09
Locality of school					
Urban	206	13305	16.9	12.71	22.09
Rural	229	15782	16.6	12.81	21.23
Sex					
Boys	173	11949	13.7	10.71	17.42
Girls	262	17137	19.7	16.08	24.02
Ethnicity					
Malay	388	26095	17.2	14.01	20.99
Chinese	35	2186	16.5	14.09	19.20
Indian	7	439	10.4	3.50	26.87
Bumiputera Sabah					
Bumiputera Sarawak	1	69	5.2	4.26	6.45
Others	4	296	10.0	4.49	20.93
School level					
Primary school	139	12855	18.3	14.42	22.83
Secondary school	296	16231	15.7	11.92	20.39
Class					
Standard 4	53	4354	18.4	13.65	24.37
Standard 5	36	4407	19.1	14.31	25.06
Standard 6	50	4094	17.3	10.93	26.16
Form 1	44	2899	13.5	7.83	22.32
Form 2	73	4262	20.4	13.47	29.57
Form 3	67	3468	16.6	11.90	22.79
Form 4	39	2251	11.4	6.69	18.84
Form 5	73	3352	16.4	9.66	26.37
School session					
Morning session	206	14390	16.1	12.40	20.59
Evening session	13	1072	23.9	16.76	32.91
Morning and evening session	215	13571	17.0	13.74	20.92
BMI-for-age status (BAZ)					
Thinness (<-2sd)	33	2326	19.9	13.45	28.54
Normal (\geq -2sd - \leq +1sd)	271	17462	16.7	13.28	20.74
Overweight (>+1sd - \leq +2sd)	76	5115	18.0	14.43	22.26
Obese (>+2sd)	54	4041	14.2	10.57	18.70
Height-for-age status (HAZ)					
Stunting (<-2sd)	36	2483	15.0	10.42	21.10
Normal (\geq -2sd)	399	26604	17.0	14.05	20.32

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.25 : Prevalence of snack food and/or drinks usually bought out of school area in a week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	frequency of bought snack food and/or drink out of school area in a week									
	5 times or more					1 to 4 times				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	220	16337	9.4	7.29	12.04	1490	103681	59.6	54.34	64.74
Locality of school										
Urban	93	6398	8.1	5.52	11.74	690	46375	58.7	50.62	66.39
Rural	127	9939	10.5	7.60	14.27	800	57306	60.4	53.36	67.05
Sex										
Boys	747	52688	60.5	55.85	64.92	141	10388	11.9	9.12	15.44
Girls	743	50993	58.8	51.46	65.80	79	5949	6.9	5.13	9.12
Ethnicity										
Malay	186	14098	9.3	7.07	12.16	1319	92621	61.1	55.42	66.58
Chinese	21	1317	9.9	7.90	12.41	103	6192	46.7	43.51	49.90
Indian	6	411	9.7	4.71	18.85	36	2467	58.1	42.76	72.03
Bumiputera Sabah						3	331	51.2	28.82	73.11
Bumiputera Sarawak						5	381	28.8	19.56	40.27
Others	7	511	17.8	9.43	31.07	24	1689	58.8	46.86	69.81
School level										
Primary school	88	8098	11.5	7.91	16.41	448	41261	58.6	50.38	66.30
Secondary school	132	8239	8.0	5.90	10.69	1042	62420	60.4	53.44	66.94
Class										
Standard 4	38	3080	13.1	8.39	20.00	161	12957	55.3	48.99	61.43
Standard 5	23	2676	11.5	5.97	20.98	112	13800	59.3	39.83	76.16
Standard 6	27	2343	9.9	5.83	16.23	175	14504	61.1	55.68	66.29
Form 1	32	2361	11.0	7.95	15.15	174	12652	59.2	50.40	67.40
Form 2	18	1198	5.8	3.79	8.65	207	13407	64.5	53.77	73.86
Form 3	33	1943	9.3	6.26	13.67	232	12847	61.6	52.15	70.33
Form 4	29	1715	8.7	4.21	17.05	202	11877	60.1	49.50	69.84
Form 5	20	1022	5.0	2.86	8.48	227	11636	56.5	45.93	66.56
School session										
Morning session	107	8057	9.0	6.59	12.25	763	53893	60.4	55.21	65.31
Evening session	7	595	13.3	4.12	35.24	34	2793	62.3	51.99	71.62
Morning and evening session	106	7686	9.6	6.98	13.13	690	46838	58.6	51.10	65.80
BMI-for-age status (BAZ)										
Thinness (<-2sd)	14	1045	9.0	5.34	14.87	106	7480	64.7	55.99	72.44
Normal (≥-2sd - ≤+1sd)	140	10222	9.8	7.49	12.63	909	62026	59.2	52.84	65.34
Overweight (>+1sd - ≤+2sd)	34	2486	8.8	5.53	13.62	245	17237	60.8	54.78	66.45
Obese (>+2sd)	31	2539	8.9	5.49	14.02	226	16599	58.0	51.54	64.15
Height-for-age status (HAZ)										
Stunting (<-2sd)	21	1517	9.2	6.05	13.82	147	10413	63.3	55.29	70.65
Normal (≥-2sd)	197	14702	9.4	7.23	12.05	1341	93176	59.4	54.03	64.46

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.25 : Prevalence of snack food and/or drinks usually bought out of school area in a week among adolescents by socio-demographic characteristics and nutritional status

Characteristics	snack food and/ or drinks usually bought out of school area in a week				
	Count	Estimated Population	Never Prevalence (%)	95% CI	
				Lower	Upper
Pahang	842	53806	31.0	24.86	37.79
Locality of school					
Urban	402	26190	33.2	24.93	42.59
Rural	440	27617	29.1	20.88	38.99
Sex					
Boys	379	24048	27.6	22.38	33.51
Girls	463	29758	34.3	26.83	42.69
Ethnicity					
Malay	698	44758	29.5	23.07	36.97
Chinese	95	5753	43.4	39.34	47.52
Indian	23	1368	32.2	22.13	44.27
Bumiputera Sabah	4	316	48.8	26.89	71.18
Bumiputera Sarawak	11	940	71.2	59.73	80.44
Others	11	671	23.4	8.66	49.56
School level					
Primary school	236	21097	29.9	19.76	42.59
Secondary school	606	32710	31.6	24.62	39.62
Class					
Standard 4	94	7397	31.6	21.73	43.39
Standard 5	60	6815	29.3	13.34	52.65
Standard 6	82	6885	29.0	21.43	37.98
Form 1	96	6367	29.8	22.06	38.85
Form 2	107	6197	29.8	20.87	40.57
Form 3	115	6049	29.0	20.21	39.77
Form 4	118	6169	31.2	21.72	42.60
Form 5	170	7927	38.5	28.81	49.21
School session					
Morning session	410	27325	30.6	25.50	36.24
Evening session	13	1095	24.4	17.79	32.57
Morning and evening session	418	25352	31.7	23.15	41.79
BMI-for-age status (BAZ)					
Thinness (<-2sd)	46	3045	26.3	17.06	38.29
Normal (≥-2sd - ≤+1sd)	514	32452	31.0	24.14	38.81
Overweight (>+1sd - ≤+2sd)	136	8642	30.5	24.11	37.67
Obese (>+2sd)	143	9491	33.2	25.25	42.14
Height-for-age status (HAZ)					
Stunting (<-2sd)	71	4519	27.5	19.28	37.53
Normal (≥-2sd)	768	49112	31.3	25.25	38.02

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.26 : Type of snack food and/ or drinks usually bought out of school area among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Type of food/ drinks									
	Candy/chocolate					French fries/nugget/sausage				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	376	26331	15.1	12.48	18.14	344	23692	13.6	11.71	15.70
Locality of school										
Urban	150	10059	12.7	10.72	15.04	170	11330	14.3	11.08	18.35
Rural	226	16272	17.1	13.05	21.99	174	12361	13.0	11.10	15.07
Sex										
Boys	192	13903	15.9	12.49	20.08	173	12082	13.8	12.32	15.50
Girls	184	12427	14.3	11.76	17.22	171	11609	13.3	10.31	17.06
Ethnicity										
Malay	320	22781	15.0	12.34	18.09	289	20083	13.2	11.16	15.58
Chinese	31	1905	14.4	11.72	17.50	35	2151	16.2	12.32	21.05
Indian	11	695	16.4	8.23	29.93	10	703	16.6	7.57	32.46
Bumiputera Sabah						2	220	33.9	13.08	63.69
Bumiputera Sarawak	1	69	5.2	4.26	6.45	2	150	11.3	9.19	13.93
Others	13	880	29.8	13.19	54.25	6	386	13.1	5.37	28.50
School level										
Primary school	118	10562	14.9	11.01	19.89	97	8850	12.5	9.79	15.81
Secondary school	258	15769	15.2	11.91	19.25	247	14842	14.3	12.00	17.02
Class										
Standard 4	40	3155	13.3	9.14	18.96	43	3400	14.3	10.31	19.60
Standard 5	28	3254	14.0	8.64	21.81	23	2784	12.0	8.04	17.40
Standard 6	50	4153	17.4	12.01	24.64	31	2665	11.2	7.55	16.28
Form 1	40	3010	14.0	9.66	19.93	44	3141	14.6	11.08	19.08
Form 2	58	3921	18.7	12.67	26.68	46	2919	13.9	9.63	19.68
Form 3	59	3306	15.9	11.40	21.71	44	2484	11.9	8.60	16.34
Form 4	50	2907	14.7	10.00	21.12	45	2807	14.2	8.06	23.82
Form 5	51	2624	12.7	9.05	17.66	68	3491	17.0	12.88	22.00
School session										
Morning session	199	14120	15.7	12.49	19.61	171	12177	13.6	11.36	16.11
Evening session	15	1232	27.5	19.29	37.54	7	589	13.1	7.78	21.35
Morning and evening session	161	10917	13.7	10.81	17.11	165	10863	13.6	11.25	16.33
BMI-for-age status (BAZ)										
Thinness (<-2sd)	26	1727	14.8	10.79	19.99	19	1335	11.5	6.73	18.82
Normal (≥-2sd - ≤+1sd)	229	15997	15.2	12.15	18.92	225	15081	14.4	12.09	16.97
Overweight (>+1sd - ≤+2sd)	66	4567	16.1	13.20	19.44	48	3610	12.7	8.91	17.80
Obese (>+2sd)	54	3994	13.9	9.95	19.09	52	3665	12.8	9.79	16.46
Height-for-age status (HAZ)										
Stunting (<-2sd)	34	2462	14.8	10.70	20.14	32	2267	13.6	9.99	18.35
Normal (≥-2sd)	341	23823	15.1	12.43	18.31	312	21425	13.6	11.74	15.73

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.26 : Type of snack food and/ or drinks usually bought out of school area among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Type of snack food/ drinks									
	Flavoured drink/carbonated drink					Pickles				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	607	42083	24.1	20.85	27.73	79	5470	3.1	2.28	4.30
Locality of school										
Urban	259	16991	21.5	17.98	25.49	32	2200	2.8	1.74	4.44
Rural	348	25093	26.3	21.63	31.59	47	3269	3.4	2.23	5.24
Sex										
Boys	369	25967	29.7	25.21	34.68	41	2867	3.3	2.09	5.12
Girls	238	16116	18.5	15.66	21.74	38	2603	3.0	1.93	4.61
Ethnicity										
Malay	543	37911	24.9	21.37	28.89	72	4967	3.3	2.35	4.53
Chinese	38	2333	17.6	14.79	20.78	3	229	1.7	0.51	5.71
Indian	13	883	20.8	12.87	31.84	3	212	5.0	1.89	12.58
Bumiputera Sabah	1	46	7.1	0.54	52.14					
Bumiputera Sarawak	2	161	12.2	9.89	14.98					
Others	10	749	25.4	14.25	41.05	1	61	2.1	0.20	18.57
School level										
Primary school	179	16369	23.1	18.46	28.53	19	1619	2.3	1.15	4.49
Secondary school	428	25715	24.8	20.51	29.70	60	3851	3.7	2.72	5.06
Class										
Standard 4	52	4116	17.4	12.40	23.75	10	735	3.1	1.22	7.67
Standard 5	45	5527	23.7	16.06	33.59	6	662	2.8	0.71	10.76
Standard 6	82	6726	28.2	22.32	35.04	3	221	0.9	0.26	3.23
Form 1	69	5092	23.7	18.36	30.08	16	1243	5.8	3.64	9.09
Form 2	86	5577	26.6	19.28	35.42	9	648	3.1	1.26	7.36
Form 3	109	6020	28.9	21.87	37.20	11	621	3.0	1.67	5.26
Form 4	87	5049	25.5	20.22	31.72	18	1047	5.3	2.90	9.49
Form 5	77	3977	19.3	13.78	26.40	6	292	1.4	0.74	2.71
School session										
Morning session	325	22652	25.2	21.76	29.03	39	2866	3.2	2.20	4.60
Evening session	14	1160	25.9	20.31	32.35	4	335	7.5	4.40	12.42
Morning and evening session	268	18272	22.9	18.53	27.85	35	2226	2.8	1.73	4.45
BMI-for-age status (BAZ)										
Thinness (<-2sd)	43	3046	26.1	20.31	32.91	9	678	5.8	2.41	13.34
Normal (≥-2sd - ≤+1sd)	356	23795	22.7	19.17	26.56	49	3291	3.1	2.37	4.14
Overweight (>+1sd - ≤+2sd)	102	7282	25.6	20.27	31.84	14	1008	3.5	1.98	6.28
Obese (>+2sd)	102	7619	26.5	21.06	32.80	7	493	1.7	0.70	4.17
Height-for-age status (HAZ)										
Stunting (<-2sd)	62	4257	25.6	19.07	33.47	5	370	2.2	0.89	5.45
Normal (≥-2sd)	542	37663	23.9	20.44	27.79	74	5100	3.2	2.32	4.51

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.26 : Type of snack food and/ or drinks usually bought out of school area among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Type of food/ drink									
	Snack food					Fish cracker				
	Count	Estimated Population	Percentage (%)	95% CI		Count	Estimated Population	Percentage (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	223	14380	8.2	6.80	9.96	235	16575	9.5	7.24	12.38
Locality of school										
Urban	116	7280	9.2	6.76	12.43	110	7906	10.0	6.23	15.68
Rural	107	7100	7.4	5.99	9.21	125	8669	9.1	6.80	12.04
Sex										
Boys	108	7334	8.4	6.72	10.45	117	8267	9.5	7.15	12.43
Girls	115	7046	8.1	6.35	10.26	118	8307	9.5	7.16	12.60
Ethnicity										
Malay	182	11905	7.8	6.33	9.65	221	15611	10.3	7.83	13.36
Chinese	34	1902	14.3	12.50	16.40	6	424	3.2	0.99	9.79
Indian	5	433	10.2	5.15	19.22	4	237	5.6	2.09	14.01
Bumiputera Sabah										
Bumiputera Sarawak	1	81	6.1	4.95	7.50	1	70	5.3	0.28	52.69
Others	1	59	2.0	0.72	5.47	3	234	7.9	4.53	13.50
School level										
Primary school	50	4698	6.6	5.19	8.45	81	7128	10.1	6.68	14.89
Secondary school	173	9682	9.3	7.44	11.68	154	9446	9.1	6.31	12.99
Class										
Standard 4	12	962	4.1	2.28	7.12	26	2005	8.5	5.03	13.88
Standard 5	15	1764	7.6	4.75	11.88	16	1896	8.1	2.88	20.93
Standard 6	23	1972	8.3	5.54	12.21	39	3227	13.6	9.85	18.37
Form 1	29	1913	8.9	6.30	12.46	25	1847	8.6	4.95	14.53
Form 2	25	1494	7.1	4.71	10.62	34	2185	10.4	6.03	17.39
Form 3	41	2249	10.8	6.59	17.24	35	1997	9.6	6.06	14.87
Form 4	32	1790	9.1	6.55	12.40	27	1641	8.3	4.46	14.95
Form 5	46	2235	10.9	8.41	13.91	33	1776	8.6	5.41	13.50
School session										
Morning session	119	7924	8.8	7.03	11.02	132	9517	10.6	7.44	14.88
Evening session	5	372	8.3	5.25	12.85	7	577	12.9	9.11	17.86
Morning and evening session	99	6084	7.6	5.86	9.83	95	6428	8.0	6.15	10.45
BMI-for-age status (BAZ)										
Thinness (<-2sd)	17	1155	9.9	5.79	16.43	13	963	8.3	4.35	15.12
Normal (≥-2sd - ≤+1sd)	143	9057	8.6	6.51	11.33	131	9216	8.8	6.57	11.62
Overweight (>+1sd - ≤+2sd)	30	1859	6.5	4.24	9.96	45	3340	11.8	8.29	16.42
Obese (>+2sd)	32	2250	7.8	6.43	9.50	45	3010	10.5	7.04	15.31
Height-for-age status (HAZ)										
Stunting (<-2sd)	25	1700	10.2	6.20	16.43	27	1818	10.9	7.05	16.57
Normal (≥-2sd)	197	12620	8.0	6.52	9.82	207	14711	9.3	7.10	12.21

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.26: Type of snack food and/ or drinks usually bought out of school area among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Type of snack foods				
	Count	Estimated Population	Percentage (%)	Ice cream	
				Lower	Upper
Pahang	294	21148	12.1	8.64	16.75
Locality of school					
Urban	144	9142	11.6	7.88	16.67
Rural	150	12006	12.6	7.48	20.40
Sex					
Boys	111	7965	9.1	5.86	13.92
Girls	183	13183	15.1	11.01	20.46
Ethnicity					
Malay	268	19514	12.8	9.04	17.93
Chinese	15	866	6.5	2.46	16.25
Indian	7	400	9.4	2.83	27.11
Bumiputera Sabah	1	112	17.3	6.51	38.45
Bumiputera Sarawak	1	69	5.2	4.26	6.45
Others	2	186	6.3	2.41	15.50
School level					
Primary school	110	10888	15.4	9.29	24.37
Secondary school	184	10260	9.9	6.74	14.32
Class					
Standard 4	42	3761	15.9	8.64	27.31
Standard 5	33	4141	17.8	8.14	34.54
Standard 6	35	2986	12.5	7.87	19.39
Form 1	27	1742	8.1	4.64	13.81
Form 2	47	2800	13.3	9.36	18.67
Form 3	34	1801	8.7	4.08	17.41
Form 4	27	1579	8.0	4.06	15.12
Form 5	49	2338	11.4	7.73	16.40
School session					
Morning session	142	10261	11.4	8.52	15.15
Evening session	2	212	4.7	0.37	40.19
Morning and evening session	150	10675	13.4	9.23	18.93
BMI-for-age status (BAZ)					
Thinness (<-2sd)	16	1084	9.3	5.53	15.20
Normal (≥-2sd - ≤+1sd)	182	13218	12.6	8.26	18.71
Overweight (>+1sd - ≤+2sd)	47	3134	11.0	7.14	16.66
Obese (>+2sd)	49	3712	12.9	9.10	18.02
Height-for-age status (HAZ)					
Stunting (<-2sd)	24	1502	9.0	5.15	15.37
Normal (≥-2sd)	270	19646	12.5	8.85	17.32

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.27 : Media sources which affected dietary pattern among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Sources of media									
	Social media					Television				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	1047	68322	39.2	34.54	43.98	978	67907	38.9	35.25	42.72
Locality of school										
Urban	511	33060	41.8	34.74	49.26	417	28353	35.9	30.51	41.60
Rural	536	35262	37.0	31.49	42.77	561	39554	41.4	37.04	46.00
Sex										
Boys	472	31649	36.2	32.96	39.48	486	34082	38.9	34.58	43.48
Girls	575	36673	42.2	35.19	49.50	492	33824	38.9	34.84	43.13
Ethnicity										
Malay	941	61631	40.5	35.45	45.82	895	62213	40.9	37.98	43.92
Chinese	65	3837	28.9	24.02	34.39	40	2464	18.6	16.32	21.08
Indian	22	1511	35.6	23.93	49.23	18	1290	30.4	22.00	40.29
Bumiputera Sabah	3	273	42.3	21.95	65.57	3	302	46.6	13.75	82.69
Bumiputera Sarawak	5	334	25.3	20.60	30.63	8	731	55.3	43.74	66.37
Others	11	736	24.9	14.29	39.79	14	908	30.8	23.48	39.14
School level										
Primary school	262	23985	33.8	28.51	39.52	337	30455	42.9	39.06	46.85
Secondary school	785	44337	42.8	37.10	48.77	641	37451	36.2	31.45	41.20
Class										
Standard 4	102	8061	34.0	28.56	39.98	120	9578	40.4	35.11	46.01
Standard 5	75	8852	37.8	30.02	46.33	83	9810	41.9	32.86	51.58
Standard 6	85	7072	29.6	24.83	34.86	134	11067	46.3	39.47	53.31
Form 1	104	7327	34.3	27.15	42.15	111	7954	37.2	28.28	47.06
Form 2	140	8433	40.3	31.73	49.47	130	7958	38.0	31.39	45.12
Form 3	157	8332	40.0	32.38	48.10	132	7193	34.5	25.93	44.25
Form 4	153	8917	45.1	37.63	52.84	123	7166	36.3	30.20	42.80
Form 5	231	11328	55.0	46.31	63.45	145	7180	34.9	29.02	41.23
School session										
Morning session	530	36099	40.2	35.25	45.42	488	34753	0.4	0.35	0.43
Evening session	11	915	20.4	15.45	26.48	14	1223	0.3	0.15	0.45
Morning and evening session	503	31158	38.9	32.55	45.67	475	31889	0.4	0.35	0.45
BMI-for-age status (BAZ)										
Thinness (<-2sd)	59	3818	32.7	23.54	43.48	75	5281	45.3	35.33	55.61
Normal (≥-2sd - ≤+1sd)	658	42510	40.5	35.66	45.50	586	40031	38.1	34.77	41.59
Overweight (>+1sd - ≤+2sd)	166	10760	37.8	31.88	44.17	155	11004	38.7	32.98	44.72
Obese (>+2sd)	163	11188	38.8	33.36	44.63	157	11276	39.1	33.16	45.48
Height-for-age status (HAZ)										
Stunting (<-2sd)	103	6705	40.3	32.47	48.74	92	6565	39.5	34.14	45.12
Normal (≥-2sd)	943	61570	39.1	34.42	43.98	881	61062	38.8	34.92	42.78

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.4.27 : Media sources which affected dietary pattern among adolescents by socio-demographic characteristics and nutritional status (Cont.)

Characteristics	Sources of media									
	Radio					Printed media				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
Pahang	53	3864	2.2	1.58	3.10	162	11268	6.5	5.06	8.21
Locality of school										
Urban	22	1534	1.9	1.37	2.75	81	5463	6.9	5.39	8.81
Rural	31	2329	2.4	1.48	4.01	81	5806	6.1	4.04	9.07
Sex										
Boys	34	2418	2.8	1.83	4.15	73	4986	5.7	4.11	7.85
Girls	19	1446	1.7	0.96	2.87	89	6282	7.2	5.33	9.73
Ethnicity										
Malay	44	3235	2.1	1.45	3.11	137	9720	6.4	4.91	8.28
Chinese	2	110	0.8	0.17	3.99	15	896	6.8	4.00	11.20
Indian	5	368	8.7	3.39	20.37	3	239	5.6	2.11	14.20
Bumiputera Sabah										
Bumiputera Sarawak	1	69	5.2	4.26	6.45	1	33	2.5	0.13	32.88
Others	1	82	2.8	1.00	7.56	6	380	12.9	8.76	18.58
School level										
Primary school	26	2172	3.1	1.94	4.81	58	5466	7.7	5.50	10.68
Secondary school	27	1691	1.6	1.16	2.29	104	5803	5.6	4.09	7.64
Class										
Standard 4	13	1030	4.4	2.82	6.65	23	1847	7.8	5.27	11.39
Standard 5	2	220	0.9	0.24	3.62	15	1929	8.2	3.97	16.34
Standard 6	11	922	3.9	2.25	6.54	20	1691	7.1	5.34	9.32
Form 1	8	554	2.6	1.29	5.14	18	1176	5.5	3.36	8.88
Form 2	7	512	2.4	1.19	4.97	18	1088	5.2	3.12	8.53
Form 3	6	316	1.5	0.65	3.48	24	1320	6.3	3.76	10.47
Form 4	3	177	0.9	0.34	2.33	21	1120	5.7	3.62	8.76
Form 5	3	132	0.6	0.24	1.68	23	1099	5.3	2.95	9.48
School session										
Morning session	27	2042	2.3	1.54	3.36	85	6360	7.1	5.22	9.55
Evening session	4	268	6.0	1.49	21.07	2	169	3.8	1.77	7.85
Morning and evening session	22	1554	1.9	1.27	2.96	75	4739	5.9	4.19	8.30
BMI-for-age status (BAZ)										
Thinness (<-2sd)	1	57	0.5	0.06	3.97	17	1180	10.1	6.47	15.49
Normal (≥-2sd - ≤+1sd)	30	2214	2.1	1.35	3.27	98	6651	6.3	4.70	8.49
Overweight (>+1sd - ≤+2sd)	7	605	2.1	0.74	5.94	27	1843	6.5	4.35	9.54
Obese (>+2sd)	14	941	3.3	1.99	5.32	20	1593	5.5	3.18	9.44
Height-for-age status (HAZ)										
Stunting (<-2sd)	5	349	2.1	0.70	6.10	15	1100	6.6	3.90	11.00
Normal (≥-2sd)	47	3468	2.2	1.59	3.04	147	10168	6.5	5.00	8.30

Table 3.4.27 : Media sources which affected dietary pattern among adolescents by socio-demographic characteristics and nutritional status

Characteristics	Sources of media				
	Count	Estimated Population	Prevalence (%)	Not affected	
				Lower	Upper
Pahang	663	44488	25.5	21.41	30.07
Locality of school					
Urban	331	21735	27.5	19.76	36.87
Rural	332	22752	23.8	20.72	27.27
Sex					
Boys	344	23252	26.6	21.58	32.23
Girls	319	21235	24.4	20.52	28.79
Ethnicity					
Malay	492	33935	22.3	20.30	24.48
Chinese	126	7683	57.9	54.00	61.77
Indian	25	1382	32.5	19.13	49.61
Bumiputera Sabah	2	154	23.8	2.61	78.50
Bumiputera Sarawak	4	337	25.5	16.02	38.00
Others	14	997	33.8	16.96	56.04
School level					
Primary school	163	15151	21.3	18.35	24.69
Secondary school	500	29336	28.3	22.46	35.07
Class					
Standard 4	56	4707	19.9	17.72	22.22
Standard 5	38	4490	19.2	13.43	26.65
Standard 6	69	5955	24.9	19.02	31.93
Form 1	94	6587	30.8	18.31	46.91
Form 2	97	6237	29.8	24.85	35.26
Form 3	118	6657	31.9	23.40	41.90
Form 4	98	5273	26.7	20.08	34.51
Form 5	93	4582	22.3	17.37	28.05
School session					
Morning session	341	22644	25.2	20.42	30.75
Evening session	27	2246	50.1	31.88	68.27
Morning and evening session	295	19598	24.5	20.83	28.52
BMI-for-age status (BAZ)					
Thinness (<-2sd)	37	2552	21.9	16.28	28.75
Normal (≥-2sd - ≤+1sd)	405	26778	25.5	21.41	30.08
Overweight (>+1sd - ≤+2sd)	117	7817	27.5	22.21	33.46
Obese (>+2sd)	101	7093	24.6	19.14	31.08
Height-for-age status (HAZ)					
Stunting (<-2sd)	52	3465	20.8	14.64	28.80
Normal (≥-2sd)	609	40917	26.0	21.66	30.83

3.5 Physical activity among adolescents (Primary 4 to Secondary 5) in Pahang

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3.5.1 Introduction

Physical activity is defined as any bodily movement produced by the skeletal muscles that require energy expenditure. According to the World Health Organization (2010) and the Malaysian Dietary Guidelines for Children and Adolescents (NCCFN, 2013), children and adolescents should do at least 60 minutes or more of either moderate or vigorous intensity activity daily. Ideally, daily screen time should not be more than two hours a day and children and adolescents should not be sedentary for more than 60 minutes at a time.

3.5.2 Objectives

The general objective of this study was to assess physical activity pattern among adolescents and the specific objectives are as follows:

- To determine the physical activity level.
- To evaluate the five most preferred physical activities done during spare time.
- To assess the level of participation in physical education (PE) classes.
- To evaluate the duration of watching television, using computer and playing video games during weekends and schooling days.

3.5.3 Variable definitions

Physical Activity Assessment - The physical activity Questionnaire for Older Children (PAQ-C) was adapted from Kowalski et al (2004) to assess the general level of physical activity of the adolescents.

Physical Activity Classifications - The total mean scores of PAQ-C was classified into three categories of either 'low physical activity' (Score: 1.00-2.33), 'moderate physical activity' (Score: 2.34-3.66) or 'high physical activity' (Score: 3.67-5.00).

Screen time - Screen time refers to the time spent on screen-based behaviours. For example: Watching television, playing video games and using the computer or surfing the internet.

3.5.4 Findings

The mean score for the physical activity level for adolescents in Pahang was 2.38 (95% CI: 2.28, 2.49) (**Table 3.5.1**). Overall prevalence of being physically active among adolescents was 48.9% (95% CI: 42.46, 55.36) and the prevalence of being physically inactive was 51.1% (95% CI: 44.64, 57.54). In terms of school locality, there was no significant difference in being physically active between students studying in urban areas [(48.6% (95% CI: 38.24, 59.17))] and students from rural areas [(49.1% (95% CI: 41.28, 56.96))]. Boys showed higher prevalence of being physically active [59.4% (95% CI: 51.75, 66.61)] compared to girls, 38.5% (95% CI: 31.62, 45.84). Primary school students [62.7% (95% CI: 58.98, 66.35)] were significantly more active than secondary school students [40.1% (95% CI: 35.34, 44.97)]. In terms of BMI-for-age status, there is no significant difference among thinness [50.6% (95% CI: 39.34, 61.74)], normal [50.36% (95% CI: 42.76, 57.79)], overweight [46.9% (95% CI: 39.62, 54.33)] and obese [45.0% (95% CI: 37.91, 52.31)] (**Table 3.5.2**).

The most popular spare-time physical activity in Pahang was walking [84.2% (95% CI: 81.62, 86.49)] (**Table 3.5.3**). About 18.5% (95% CI: 14.05, 23.86)] of adolescents reported they do not attend/very rarely participated in Physical Exercise (PE) classes (**Table 3.5.4**). A total of 45.9% (95% CI:39.72, 52.11) of the adolescents watched television, used computers and played video games more than 2 hours per day over the weekend and another 28.4% (95% CI:24.47, 32.65) engaged on these screen activities more than 2 hours during school days (**Table 3.5.5** and **Table 3.5.6**).

3.5.5 Discussion

The prevalence of being physically active among adolescents in Pahang (48.9%) was higher than the national prevalence (44.6%). The highest prevalence of being physically active was among boys and primary students. There was no significant difference in terms of school locality and BMI-for-age status of the respondents. The prevalence of adolescents that engaged in screen activities more than 2 hours was higher during weekends than schooling days.

3.5.6 Conclusion

Based on our findings, 51.1% of children and adolescents in Pahang were physically inactive. The prevalence of being physically inactive among Malaysian adolescents was slightly decreased as compared to the Malaysian School-Based Nutrition Survey (2012), but it still remains high. Therefore, more programmes and strategies to increase physical activity should be implemented among children and adolescents in Malaysia.

3.5.7 Recommendations

Adolescents should be encouraged to be more active in their daily life. Policies and campaigns to promote physical activity among children and adolescents should be enhanced and health promotion activities to increase physical activity should be promoted. A comprehensive surveillance system for monitoring physical activity should be developed to ensure compliance with the physical activity recommendation among children and adolescents.

Parents should be encouraged to be good role models; be active, limit the amount of sedentary and screen time behaviour, and monitor physical activity, sedentary behaviour as well as screen time of their children. Interviewing technique for physical activity assessment should be applied in future studies. Formulating specific programmes and intensifying health campaigns are essential to promote physical activity among children and adolescents. Developing surveillance systems for physical activity enables compliance based on the standard recommendations. Parents should instil active lifestyle, limit the amount of sedentary and screen time behaviour as for their children. Improving technique for physical activity assessment is necessary.

References

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Table 3.5.1: Mean total scores in PAQ-C among adolescents within last 7 days by socio-demographic characteristics and BMI - for - age status

Characteristic	Mean total scores in PAQ-C		
	Mean	95% CI	
		Lower	Upper
PAHANG	2.38	2.28	2.49
Locality of school			
Urban	2.36	2.18	2.54
Rural	2.40	2.27	2.52
Sex			
Boys	2.53	2.42	2.65
Girls	2.23	2.11	2.34
Class			
Standard 4	2.57	2.49	2.64
Standard 5	2.60	2.49	2.71
Standard 6	2.64	2.49	2.79
Form 1	2.30	2.10	2.50
Form 2	2.35	2.22	2.47
Form 3	2.27	2.12	2.41
Form 4	2.16	2.05	2.28
Form 5	2.12	1.97	2.27
Ethnicity			
Malay	2.42	2.32	2.51
Chinese	1.94	1.84	2.03
Indian	2.40	2.23	2.57
Bumiputera Sabah	2.75	2.36	3.13
Bumiputera Sarawak	2.60	2.52	2.67
Others	2.42	2.10	2.74
School Category			
Primary	2.60	2.55	2.65
Secondary	2.24	2.15	2.33
BMI-for-age status (BAZ)			
Thinness (<-2sd)	2.36	2.19	2.52
Normal (≥-2sd - ≤+1sd)	2.41	2.29	2.54
Overweight (>+1sd - ≤+2sd)	2.35	2.24	2.46
Obese (>+2sd)	2.31	2.22	2.40
Height-for-age status (HAZ)			
Stunting (<-2sd)	2.34	2.17	2.51
Normal (≥-2sd)	2.38	2.28	2.49

Note:

Mean Score	Physical Activity Level (PAL)
1.00 - 2.33	Low
2.34 - 3.66	Moderate
3.67 - 5.00	High

(Kowalski et. al., 2004)

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.5.2: Distribution of adolescents according to physical activity level within last 7 days by socio-demographic characteristics and BMI - for - age status

Characteristic	Physical activity level									
	Active					Not active				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
PAHANG	1131	79822	48.9	42.46	55.36	1292	83445	51.1	44.64	57.54
Locality of School										
Urban	526	36412	48.6	38.24	59.17	606	38433	51.4	40.83	61.76
Rural	605	43410	49.1	41.28	56.96	686	45012	50.9	43.04	58.72
Sex										
Boys	695	48248	59.4	51.75	66.61	500	32985	40.6	33.39	48.25
Girls	436	31574	38.5	31.62	45.84	792	50461	61.5	54.16	68.38
Class										
Standard 4	164	12863	60.1	57.46	62.70	104	8535	39.9	37.30	42.54
Standard 5	110	13139	64.4	57.11	71.13	62	7255	35.6	28.87	42.89
Standard 6	166	13890	63.7	54.19	72.30	96	7904	36.3	27.70	45.81
Form 1	115	8227	40.6	28.10	54.55	172	12012	59.4	45.45	71.90
Form 2	135	8530	42.1	34.20	50.34	189	11753	57.9	49.66	65.80
Form 3	155	8324	41.6	32.94	50.85	210	11676	58.4	49.15	67.06
Form 4	136	7356	38.4	32.75	44.39	203	11795	61.6	55.61	67.25
Form 5	150	7493	37.5	29.83	45.75	256	12515	62.5	54.25	70.17
Ethnicity										
Malay	1018	72382	51.0	45.06	57.00	1067	69420	49.0	43.00	54.94
Chinese	48	2979	23.0	16.76	30.63	166	9989	77.0	69.37	83.24
Indian	33	1957	50.7	36.61	64.61	28	1906	49.3	35.39	63.39
Bumiputera Sabah	4	378	70.5	44.76	87.58	2	158	29.5	12.42	55.24
Bumiputera Sarawak	10	815	61.7	52.64	70.04	6	506	38.3	29.96	47.36
Others	18	1311	47.2	27.14	68.21	23	1466	52.8	31.79	72.86
School Category										
Primary	440	39892	62.7	58.98	66.35	262	23694	37.3	33.65	41.02
Secondary	691	39930	40.1	35.34	44.97	1030	59751	59.9	55.03	64.66
BMI-for-age status (BAZ)										
Thinness (<-2sd)	75	5522	50.6	39.34	61.74	83	5397	49.4	38.26	60.66
Normal (≥-2sd - ≤+1sd)	706	49601	50.3	42.76	57.79	780	49046	49.7	42.21	57.24
Overweight (>+1sd - ≤+2sd)	177	12339	46.9	39.62	54.33	216	13967	53.1	45.67	60.38
Obese (>+2sd)	170	12102	45.0	37.91	52.31	209	14790	55.0	47.69	62.09
Height-for-age status (HAZ)										
Stunting (<-2sd)	101	7677	50.3	38.07	62.50	123	7584	49.7	37.50	61.93
Normal (≥-2sd)	1028	72029	48.8	42.49	55.10	1165	75651	51.2	44.90	57.51

Notes:

Low PAL is classified as not active

Table 3.5.3: The five most preferred physical activities during spare time within the last 7 days based on the proportion of adolescents participated in it

The five most preferred physical activities	Count	Prevalence (%)	95% CI	
			Lower	Upper
Walking for exercise	2154	84.2	81.62	86.49
Jogging/Running	1994	78.7	74.67	82.21
Tagging	1787	72.2	64.66	78.62
Badminton	1632	67.3	60.54	73.43
Cycling	1371	59.1	49.37	68.18

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.5.4: Level of participation in physical education (PE) classes among adolescents within last 7 days by socio demographic characteristics and BMI - for-age status (Cont.)

Characteristic	I do not attend the PE class / Very Rare					Occasionally/ Quite Often				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	501	32149	18.5	14.05	23.86	1472	99856	57.3	52.65	61.89
Locality of school										
Urban	236	14520	18.4	11.33	28.45	652	42912	54.4	47.55	61.01
Rural	265	17630	18.5	13.63	24.65	820	56944	59.8	53.98	65.36
Sex										
Boys	253	16620	19.0	13.96	25.34	688	47278	54.1	47.89	60.12
Girls	248	15529	17.9	13.33	23.63	784	52578	60.6	56.48	64.65
Class										
Standard 4	50	3777	16.0	12.29	20.51	156	12565	53.2	46.39	59.82
Standard 5	33	3781	16.2	10.10	25.05	105	12595	54.1	42.98	64.80
Standard 6	44	3448	14.4	7.33	26.46	164	13807	57.8	52.83	62.59
Form 1	55	3919	18.3	11.56	27.81	180	12660	59.2	48.01	69.53
Form 2	53	3094	14.8	10.23	20.87	209	13142	62.8	56.12	68.94
Form 3	45	2461	11.8	7.53	18.11	237	12892	62.0	55.30	68.29
Form 4	91	5278	26.8	17.77	38.30	198	11115	56.5	46.34	66.07
Form 5	130	6393	31.1	14.12	55.40	223	11081	53.9	36.85	70.17
Ethnicity										
Malay	430	27516	18.1	13.32	24.16	1276	87603	57.7	52.81	62.40
Chinese	55	3378	25.6	20.29	31.79	116	6772	51.4	37.98	64.54
Indian	6	462	10.9	4.54	23.90	35	2270	53.5	38.71	67.62
Bumiputera Sabah	1	46	7.1	0.54	52.14	5	493	76.2	21.50	97.39
Bumiputera Sarawak	4	354	26.8	21.61	32.74	8	631	47.8	37.17	58.56
Others	5	393	13.7	7.19	24.46	32	2088	72.7	51.99	86.75
School level										
Primary	127	11006	15.5	10.95	21.60	425	38967	55.0	50.33	59.64
Secondary	374	21144	20.5	14.21	28.54	1047	60889	58.9	51.93	65.57
BMI-for-age status (BAZ)										
Thinness (<-2sd)	34	2187	19.0	11.17	30.30	88	6105	52.9	42.25	63.32
Normal (≥-2sd - ≤+1sd)	302	18878	18.0	13.24	23.98	899	59991	57.2	52.50	61.74
Overweight (>+1sd - ≤+2sd)	80	5123	18.0	12.43	25.45	229	15671	55.2	46.95	63.13
Obese (>+2sd)	82	5823	20.2	16.07	25.12	252	17726	61.5	53.43	69.06
Height-for-age status (HAZ)										
Stunting (<-2sd)	57	3849	23.2	17.40	30.12	137	9317	56.1	47.92	63.87
Normal (≥-2sd)	441	28162	17.9	13.48	23.41	1332	90352	57.5	52.79	62.03

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.5.4: Level of participation in physical education (PE) classes among adolescents within last 7 days by socio demographic characteristics and BMI - for-age status

Characteristic	Count	Estimated population	Always Prevalence (%)	95% CI	
				Lower	Upper
PAHANG	582	42148	24.2	20.06	28.89
Locality of school					
Urban	295	21504	27.2	19.93	36.03
Rural	287	20644	21.7	18.53	25.20
Sex					
Boys	329	23550	26.9	22.54	31.82
Girls	253	18598	21.5	16.03	28.09
Class					
Standard 4	89	7293	30.9	23.19	39.74
Standard 5	57	6912	29.7	18.13	44.59
Standard 6	78	6638	27.8	21.08	35.65
Form 1	67	4802	22.5	17.30	28.62
Form 2	72	4706	22.5	17.09	28.95
Form 3	97	5437	26.2	20.54	32.66
Form 4	59	3294	16.7	13.49	20.57
Form 5	63	3065	14.9	9.61	22.44
Ethnicity					
Malay	501	36763	24.2	19.74	29.32
Chinese	47	3036	23.0	15.43	32.91
Indian	24	1514	35.7	22.66	51.18
Bumiputera Sabah	1	108	16.7	1.29	75.44
Bumiputera Sarawak	4	336	25.4	20.50	31.06
Others	5	391	13.6	5.87	28.55
School level					
Primary	224	20843	29.4	22.08	38.04
Secondary	358	21305	20.6	17.58	24.03
BMI-for-age status (BAZ)					
Thinness (<-2sd)	43	3246	28.1	21.17	36.34
Normal (≥-2sd - ≤+1sd)	364	26043	24.8	20.57	29.63
Overweight (>+1sd - ≤+2sd)	106	7605	26.8	20.75	33.81
Obese (>+2sd)	69	5254	18.2	12.65	25.58
Height-for-age status (HAZ)					
Stunting (<-2sd)	47	3456	20.8	15.82	26.82
Normal (≥-2sd)	535	38692	24.6	20.38	29.40

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.5.5: Length of time spent per day on watching television, using computer and playing video games at weekends among adolescents by socio-demographic characteristics and BMI-for-age status

Characteristic	Less than 2 hour					More than 2 hours				
	Unweighted count	Estimated population	Prevalence (%)	95% CI		Unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	1323	94308	54.1	47.89	60.28	1233	79864	45.9	39.72	52.11
Locality of school										
Urban	539	38390	48.6	38.43	58.80	647	40681	51.4	41.20	61.57
Rural	784	55918	58.8	52.14	65.15	586	39183	41.2	34.85	47.86
Sex										
Boys	653	46249	53.0	47.41	58.55	615	40986	47.0	41.45	52.59
Girls	670	48059	55.3	47.26	63.03	618	38878	44.7	36.97	52.74
Class										
Standard 4	196	15925	67.9	60.83	74.18	97	7539	32.1	25.82	39.17
Standard 5	135	16042	68.6	54.37	79.96	61	7358	31.4	20.04	45.63
Standard 6	159	13306	56.1	52.77	59.31	125	10426	43.9	40.69	47.23
Form 1	163	11480	53.5	42.13	64.50	140	9981	46.5	35.50	57.87
Form 2	185	11865	56.5	47.75	64.93	150	9121	43.5	35.07	52.25
Form 3	163	9110	43.8	31.28	57.23	216	11672	56.2	42.77	68.72
Form 4	134	7392	37.4	29.22	46.38	215	12370	62.6	53.62	70.78
Form 5	188	9188	44.6	36.20	53.39	229	11398	55.4	46.61	63.80
Ethnicity										
Malay	1168	83996	55.4	49.44	61.12	1038	67749	44.6	38.88	50.56
Chinese	58	3538	26.7	24.41	29.08	161	9723	73.3	70.92	75.59
Indian	48	3087	72.7	59.46	82.87	17	1159	27.3	17.13	40.54
Bumiputera Sabah	6	601	92.9	47.86	99.46	1	46	7.1	0.54	52.14
Bumiputera Sarawak	11	926	70.1	64.84	74.91	5	395	29.9	25.09	35.16
Others	32	2160	73.2	52.06	87.24	11	792	26.8	12.76	47.94
School level										
Primary	490	45273	64.1	60.87	67.27	283	25322	35.9	32.73	39.13
Secondary	833	49035	47.3	40.12	54.68	950	54542	52.7	45.32	59.88
BMI-for-age status (BAZ)										
Thinness (<-2sd)	80	5972	51.6	40.09	62.97	86	5599	48.4	37.03	59.91
Normal (≥-2sd - ≤+1sd)	826	57711	55.0	48.13	61.61	740	47301	45.0	38.39	51.87
Overweight (>+1sd - ≤+2sd)	208	14543	51.4	45.42	57.37	206	13741	48.6	42.63	54.58
Obese (>+2sd)	208	15939	55.3	47.65	62.78	195	12863	44.7	37.22	52.35
Height-for-age status (HAZ)										
Stunting (<-2sd)	123	8732	52.8	44.40	61.02	117	7810	47.2	38.98	55.60
Normal (≥-2sd)	1200	85576	54.4	47.86	60.80	1110	71729	45.6	39.20	52.14

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.5.6: Length of time spent per day on watching television, using computer and playing video games on schooling days among adolescents by socio-demographic characteristics and BMI-for-age status

Characteristic	Less than 2 hour					More than 2 hours				
	Unweighted count	Estimated population	Prevalence (%)	95% CI		Unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	1807	124202	71.6	67.35	75.53	738	49222	28.4	24.47	32.65
Locality of school										
Urban	808	54628	69.5	63.98	74.43	372	24027	30.5	25.57	36.02
Rural	999	69574	73.4	67.12	78.88	366	25196	26.6	21.12	32.88
Sex										
Boys	863	59451	68.4	64.32	72.18	401	27493	31.6	27.82	35.68
Girls	944	64751	74.9	69.02	79.95	337	21729	25.1	20.05	30.98
Class										
Standard 4	223	18054	76.6	69.11	82.80	71	5501	23.4	17.20	30.89
Standard 5	144	17120	73.9	66.74	79.91	50	6059	26.1	20.09	33.26
Standard 6	208	17407	74.0	69.48	78.09	74	6111	26.0	21.91	30.52
Form 1	227	15887	74.5	68.55	79.64	74	5441	25.5	20.36	31.45
Form 2	246	15414	73.4	63.43	81.52	89	5572	26.6	18.48	36.57
Form 3	247	13521	65.5	55.51	74.23	129	7133	34.5	25.77	44.49
Form 4	230	13030	66.1	58.46	72.96	118	6688	33.9	27.04	41.54
Form 5	282	13769	67.2	57.49	75.65	133	6718	32.8	24.35	42.51
Ethnicity										
Malay	1574	108938	72.1	67.96	75.98	621	42060	27.9	24.02	32.04
Chinese	119	7441	56.1	47.95	63.95	100	5821	43.9	36.05	52.05
Indian	57	3574	84.2	67.63	93.12	8	672	15.8	6.88	32.37
Bumiputera Sabah	7	647	100.0	0.00	100.00	-	-	-	-	-
Bumiputera Sarawak	11	934	70.7	65.44	75.49	5	647	29.3	24.51	34.56
Others	39	2669	90.4	72.23	97.15	4	283	9.6	2.85	27.77
School level										
Primary	575	52582	74.8	70.72	78.57	195	17670	25.2	21.43	29.28
Secondary	1232	71621	69.4	63.21	74.99	543	31552	30.6	25.01	36.79
BMI-for-age status (BAZ)										
Thinness (<-2sd)	120	8460	73.8	64.43	81.48	45	2997	26.2	18.52	35.57
Normal (≥-2sd - ≤+1sd)	1108	74906	71.6	66.86	75.90	452	29722	28.4	24.10	33.14
Overweight (>+1sd - ≤+2sd)	299	20236	71.7	66.80	76.05	114	8005	28.3	23.95	33.20
Obese (>+2sd)	277	20342	71.1	64.79	76.75	123	8254	28.9	23.25	35.21
Height-for-age status (HAZ)										
Stunting (<-2sd)	172	11891	72.1	60.38	81.41	67	4603	27.9	18.59	39.62
Normal (≥-2sd)	1633	112195	71.6	67.42	75.52	667	44410	28.4	24.48	32.58

3.6. Supplements intake among adolescents (Primary 4 to Secondary 5) in Pahang

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3.6.1 Introduction

Dietary supplements are defined as “a product (other than tobacco) intended to supplement the diet that bears or contains one or more of the following dietary ingredients: a vitamin, a mineral, an herb or other botanical, an amino acid, or a dietary substance for use by man to supplement the diet by increasing the total dietary intake, or a concentrate, metabolite, constituent, extract, or combination of the above ingredients” (DV Porter, 2001). The use of supplements becomes common behavior among people due to general health concerns. In 2014, approximately 54.1% and 40.2% of Malaysian adolescents consumed vitamin/mineral and food supplements respectively (Sien, Shahril, Mutalip, 2014). This prevalence was found to be higher than that in other countries (Picciano, Dwyer, Radimer, 2007; Yoon, Park, Kang, 2009; Sichert-Hellert and Kersting, 2004).

High dietary supplement intake suggests a wide use of dietary supplements among adolescents despite the unclear guideline or recommendation on dietary supplements. The long-term potentially dangerous effects related to unrestrained consumption of dietary supplements are still unknown and are becoming a matter of public health concern. Reports on dietary supplements intake pattern among Malaysian adolescents are limited. Therefore, the aims of the current study were to assess the frequency, reasons and types of vitamin/mineral and food supplement use among Malaysian adolescents.

3.6.2 Objectives

General objective

To determine the pattern of use of vitamin/mineral and food supplements among Malaysian adolescents.

Specific objective

- To determine the most commonly taken vitamin/mineral supplements.
- To determine the most commonly taken food supplements.
- To identify the reason(s) of taking vitamin/mineral supplements.
- To identify the reason(s) of taking food supplements.
- To determine the frequency of vitamin/mineral supplements intake.
- To determine the frequency of food supplements intake.

3.6.3 Findings

The prevalence of vitamin/minerals and food supplement intake among adolescents in Pahang was 43.8% (95% CI: 35.45, 52.45) (**Table 3.6.1**) and 29.9% (95% CI: 24.19, 36.30) respectively (**Table 3.6.5**). There was no significant difference in vitamin/mineral and food supplement intake between boys and girls, ethnicity, school classes and localities (**Table 3.6.1** and **Table 3.6.5**). In average, the vitamins/minerals and food supplements were consumed everyday by 14.5% (95% CI 11.14, 18.71) and 11.0% (95% CI 8.00, 14.88) of adolescents respectively (**Table 3.6.4** and **Table 3.6.8**). The most commonly consumed vitamin/mineral and food supplements were Vitamin C, 36.3% (95% CI: 29.51, 43.72] (**Table 3.6.2**) and bee's products, 19.0% (95% CI: 14.73, 24.05) (**Table 3.6.6**). The main reason for taking vitamins/minerals and food supplements was due to parents advise, 43.9% (95% CI: 40.2, 47.7) (**Table 3.6.3**) and 29.0%, respectively (95% CI: 27.8, 30.3) (**Table 3.6.7**).

3.6.4 Discussions

The prevalence of taking vitamins/minerals and food supplements among adolescents in Pahang was slightly lower than the national prevalence, which was 44.7% (95% CI: 42.49, 46.91) and 30.6% (95% CI: 28.90, 32.43), respectively. The consumption of Vitamin C and Bee's Products were significantly higher compared to the other types of vitamins/minerals and food supplements and this result was consistent with the national findings. Finding from the survey in Pahang also showed that parent's instruction was the main and significant reason for taking vitamins/minerals and food supplements among adolescents. It suggests the parents as strong decision makers for food supplement and vitamin intake in children.

3.6.5 Conclusions

Overall, findings from this survey showed that four and three of ten adolescents in Pahang took vitamins/minerals and food supplements, respectively. Almost every four and three of ten parents influenced their children's intake of vitamin/mineral and food supplement intake. Vitamin C and Bee's products remain as the main type of vitamin and food supplement consumed by adolescents in Pahang.

3.6.6 Recommendation

Advocating adolescents to eat balanced and healthy meals is the main priority in designing health policies. However, the Ministry of Health should also establish guidelines, regulations, and policies on food supplements and vitamins/minerals intake as its consumption has become common among Malaysian adolescents. There is a need for further scientific research involving adolescents with the purpose of assessing the beneficial effects and safety of its long-term use. The guidelines and regulations should be made clear to parents and guardians for appropriate use of food supplements.

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NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.1: Prevalence of adolescents taking vitamin/ mineral supplements by socio-demographic characteristics

Characteristics	Taking vitamin / mineral supplement					Not taking vitamin / mineral supplement				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	1018	76291	43.8	35.45	52.45	1540	98016	56.2	47.55	64.55
Locality of School										
Urban	453	33965	43.0	28.12	59.20	733	45077	57.0	40.80	71.88
Rural	565	42326	44.4	36.31	52.86	807	52939	55.6	47.14	63.69
Sex										
Boys	547	40604	46.5	38.04	55.22	722	46670	53.5	44.78	61.96
Girls	471	35688	41.0	31.49	51.24	471	51346	41.0	31.49	51.24
Class										
Standard 4	197	15640	65.9	60.65	70.81	99	8088	34.1	29.19	39.35
Standard 5	119	14251	61.5	50.52	71.38	75	8932	38.5	28.62	49.48
Standard 6	159	13414	56.1	47.03	64.86	127	10479	43.9	35.14	52.97
Remove class										
Form 1	124	8957	41.9	30.39	54.33	178	12429	58.1	45.67	69.61
Form 2	115	7622	36.3	27.66	45.97	220	13364	63.7	54.03	72.34
Form 3	116	6478	31.1	24.97	37.95	264	14361	68.9	62.05	75.03
Form 4	82	4505	22.9	17.39	29.45	266	15201	77.1	70.55	82.61
Form 5	106	5423	26.3	19.48	34.59	311	15162	73.7	65.41	80.52
Ethnicity										
Malay	912	68943	45.4	36.60	54.49	1296	82937	54.6	45.51	63.40
Chinese	54	3386	25.5	18.39	34.28	165	9876	74.5	65.72	81.61
Indian	27	1819	42.8	30.66	55.95	38	2427	57.2	44.05	69.34
Bumiputera Sabah	5	519	80.2	60.92	91.29	2	128	19.8	8.71	39.08
Bumiputera Sarawak	7	608	46.0	36.70	55.62	9	713	54.0	44.38	63.30
Others	13	1017	34.5	28.40	41.08	30	1935	65.5	58.92	71.60
BMI-for age status (BAZ)										
Thinness (<-2sd)	82	6120	52.5	43.58	61.22	85	5543	47.5	38.78	56.42
Normal (≥-2sd - ≤+1sd)	643	47028	44.7	36.00	53.80	925	58105	55.3	46.20	64.00
Overweight (>+1sd - ≤+2sd)	146	11600	40.8	30.67	51.74	270	16846	59.2	48.26	69.33
Obese (>+2sd)	145	11297	39.5	30.71	49.13	255	17268	60.5	50.87	69.29
Height-for-age status (HAZ)										
Stunting (<-2sd)	110	8063	48.7	39.40	58.03	130	8504	51.3	41.97	60.60
Normal (≥-2sd)	907	68157	43.3	34.61	52.42	1405	89258	56.7	47.58	65.39

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.2: Types of vitamin/ mineral usually consumed among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Multivitamin					Vitamin C				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	117	8522	4.9	3.69	6.49	832	63083	36.3	29.51	43.72
Locality of School										
Urban	59	4071	5.2	3.22	8.17	358	27217	34.5	22.61	48.73
Rural	58	4451	4.7	3.36	6.52	474	35866	37.8	31.09	45.03
Sex										
Boys	72	5358	6.2	4.71	8.04	435	32193	37.1	31.04	43.51
Girls	45	3164	3.6	2.39	5.51	397	30890	35.6	26.94	45.24
Class										
Standard 4	22	1676	7.1	5.16	9.78	165	13435	57.2	50.74	63.39
Standard 5	14	1736	7.5	4.33	12.65	101	11945	51.5	45.38	57.62
Standard 6	12	1076	4.5	2.26	8.84	117	9811	41.2	33.53	49.42
Remove class										
Form 1	18	1283	6.0	3.62	9.72	107	7891	36.8	26.54	48.35
Form 2	10	701	30.4	22.11	40.26	96	6386	30.4	22.11	40.26
Form 3	15	765	23.6	17.13	31.55	87	4915	23.6	17.13	31.55
Form 4	12	583	23.3	18.97	28.29	80	4561	23.3	18.97	28.29
Form 5	14	703	20.3	14.85	27.09	79	4139	20.3	14.85	27.09
Ethnicity										
Malay	92	7064	4.7	3.28	6.60	752	57276	37.9	30.97	45.27
Chinese	14	745	5.6	2.11	14.14	35	2337	17.6	10.37	28.34
Indian	7	430	10.1	5.20	18.83	19	1275	30.0	20.99	40.95
Bumiputera Sabah						5	519	80.2	60.92	91.29
Bumiputera Sarawak	2	139	10.5	8.50	12.88	4	389	29.4	23.69	35.89
Others	2	144	4.9	2.16	10.63	17	1286.848	43.6	28.14	60.40
BMI-for age status (BAZ)										
Thinness (<-2sd)	11	775	6.7	4.02	10.96	66	5021	43.4	34.00	53.30
Normal ($\geq -2sd - \leq +1sd$)	65	4683	4.5	3.15	6.33	537	39730	38.0	30.58	45.99
Overweight ($> +1sd - \leq +2sd$)	21	1600	5.6	3.99	7.90	117	9186	32.3	24.16	41.78
Obese ($> +2sd$)	20	1464	5.1	2.93	8.78	112	9146	31.9	25.50	39.14
Height-for - age status (HAZ)										
Stunting (<-2sd)	10	803	4.9	2.67	8.72	90	6751	40.9	29.52	53.39
Normal ($\geq -2sd$)	107	7719	4.9	3.74	6.45	742	56332	35.9	28.90	43.56

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.2: Types of vitamin/ mineral usually consumed among adolescents by socio-demographic characteristics

Characteristics	Iron					Others				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	110	8446	4.9	3.49	6.74	147	10496	6.0	4.47	8.12
Locality of School										
Urban	35	2636	3.3	1.84	5.99	61	4187	5.3	2.75	10.00
Rural	75	5811	6.1	4.35	8.56	86	6309	6.7	5.21	8.45
Sex										
Boys	82	6552	7.5	5.10	11.01	89	6160	7.1	5.13	9.72
Girls	28	1895	35.6	26.94	45.24	58	4336	5.0	3.41	7.26
Class										
Standard 4	23	1712	7.3	4.62	11.32	27	1935	8.2	3.33	18.93
Standard 5	13	1594	6.9	4.40	10.59	13	1508	6.5	3.92	10.62
Standard 6	19	1645	6.9	4.01	11.68	27	2280	9.6	6.88	13.21
Remove class										
Form 1	15	1102	5.1	2.27	11.23	16	1162	5.4	3.17	9.11
Form 2	13	843	4.0	2.38	6.70	8	523	2.5	1.24	4.94
Form 3	13	769	3.7	2.03	6.61	26	1523	7.3	4.82	10.93
Form 4	5	283	1.4	0.47	4.33	11	602	3.1	1.38	6.73
Form 5	9	498	2.4	1.09	5.37	19	963	4.7	3.12	7.08
Ethnicity										
Malay	105	8048	5.3	3.87	7.27	131	9526	6.3	4.59	8.58
Chinese	2	146	1.1	0.83	1.46	10	567	4.3	2.26	7.93
Indian	1	124	2.9	0.40	18.44	4	255	6.0	2.27	14.89
Bumiputera Sabah										
Bumiputera Sarawak	1	69	5.2	4.26	6.45	1	81	6.1	4.95	7.50
Others	1	59	2.0	0.71	5.40	1	68	2.3	0.22	20.27
BMI-for age status (BAZ)										
Thinness (<-2sd)	7	496	4.3	1.65	10.65	13	907	7.8	4.68	12.84
Normal ($\geq -2sd - \leq +1sd$)	72	5337	5.1	3.80	6.81	79	5556	5.3	3.70	7.57
Overweight (> +1sd - $\leq +2sd$)	14	1156	4.1	2.12	7.68	20	1515	5.3	3.04	9.21
Obese (> +2sd)	16	1315	4.6	2.69	7.75	34	2413	8.4	5.02	13.81
Height-for - age status (HAZ)										
Stunting (<-2sd)	14	1058	6.4	3.92	10.32	12	781	4.7	2.66	8.29
Normal ($\geq -2sd$)	96	7389	4.7	3.27	6.74	135	9715	6.2	4.53	8.42

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.3: Reasons for taking vitamin/ mineral among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Doctor's instruction					Parents' advice				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	205	15951	21.0	17.50	24.93	444	33401	43.9	40.19	47.73
Locality of School										
Urban	79	6367	18.7	15.05	23.10	212	15969	47.0	42.21	51.88
Rural	126	9584	22.8	17.74	28.75	232	17432	41.4	36.52	46.52
Sex										
Boys	112	8481	21.0	16.63	26.09	223	17020	42.1	37.04	47.29
Girls	93	7470	21.0	16.82	25.86	221	16381	46.0	39.90	52.26
Class										
Standard 4	59	4732	30.4	17.33	47.74	80	6409	41.2	30.26	53.14
Standard 5	32	3742	26.3	18.75	35.46	49	5778	40.5	34.54	46.85
Standard 6	25	2024	15.1	9.61	22.89	84	7225	53.9	43.26	64.12
Remove class										
Form 1	21	1519	17.1	11.07	25.43	55	3987	44.9	37.68	52.26
Form 2	21	1359	18.0	11.48	27.19	48	3168	42.1	37.36	46.90
Form 3	19	1077	16.6	10.19	25.96	53	2926	45.2	37.18	53.43
Form 4	11	592	13.1	6.32	25.34	34	1866	41.4	26.67	57.88
Form 5	17	906	16.7	10.53	25.47	41	2041	37.6	29.91	46.03
Ethnicity										
Malay	183	14365	20.9	17.05	25.38	393	29723	43.3	39.06	47.58
Chinese	10	650	19.2	9.82	34.10	26	1654	48.9	31.33	66.66
Indian	5	386	21.2	9.40	41.12	12	802	44.1	24.57	65.61
Bumiputera Sabah			0.0	0.00	0.00	4	439	84.6	26.23	98.84
Bumiputera Sarawak	2	162	26.6	26.61	26.61	3	296	48.7	48.73	48.73
Others	5	389	38.2	29.20	48.19	6	487	47.8	35.10	60.84
BMI-for age status (BAZ)										
Thinness (<-2sd)	237	19945	17.1	14.33	20.26	574	50164	43.0	39.53	46.51
Normal (≥ - 2sd - ≤+ 1sd)	1963	174456	17.7	16.50	18.90	4822	429345	43.5	41.94	45.04
Overweight (> +1sd - ≤+ 2sd)	429	36163	16.1	14.42	18.02	1118	95652	42.7	40.21	45.20
Obese (> + 2sd)	477	40459	18.9	16.33	21.67	967	87031	40.6	38.31	42.87
Height-for - age status (HAZ)										
Stunting (<-2sd)	314	26496	20.3	17.70	23.09	639	56149	42.9	39.34	46.62
Normal (≥-2sd)	2797	244971	17.3	16.28	18.42	6848	606851	42.9	41.62	44.24

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.3: Reasons for taking vitamin/ mineral among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Self awareness					Influences by friends				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	243	18066	23.8	21.35	26.34	21	1409	1.9	1.22	2.80
Locality of School										
Urban	107	7774	22.9	20.95	24.95	12	821	2.4	1.65	3.52
Rural	136	10291	24.5	20.59	28.79	9	589	1.4	0.68	2.86
Sex										
Boys	138	9998	24.7	20.47	29.53	16	1090	2.7	1.57	4.59
Girls	105	8068	22.7	19.72	25.91	5	320	0.9	0.35	2.30
Class										
Standard 4	39	3051	19.6	13.39	27.83	4	299	1.9	0.63	5.75
Standard 5	28	3475	24.4	16.88	33.87	1	108	0.8	0.14	3.90
Standard 6	35	2948	22.0	15.34	30.45	2	164	1.2	0.33	4.38
Remove class										
Form 1	30	2238	25.2	18.67	33.03	4	261	2.9	1.36	6.20
Form 2	32	2081	27.6	20.29	36.41	3	218	2.9	0.61	12.67
Form 3	25	1411	21.8	15.48	29.76	1	61	0.9	0.11	7.47
Form 4	23	1264	28.1	19.41	38.71	5	253	5.6	2.01	14.75
Form 5	31	1597	29.4	20.75	39.94	1	44	0.8	0.12	5.59
Ethnicity										
Malay	222	16734	24.4	21.55	27.41	19	1263	1.8	1.19	2.84
Chinese	9	523	15.5	11.14	21.06	2	146	4.3	2.77	6.67
Indian	8	506	27.8	14.71	46.30					
Bumiputera Sabah	1	80	15.4	1.16	73.77					
Bumiputera Sarawak	1	81	13.3	13.26	13.26					
Others	2	142	13.9	4.73	34.51					
BMI-for age status (BAZ)										
Thinness (<-2sd)	363	32467	27.8	24.63	31.25	33	2722	2.3	1.54	3.53
Normal (≥ -2sd - ≤+1sd)	3157	278618	28.2	26.85	29.63	238	22409	2.3	1.92	2.68
Overweight (>+1sd - ≤+2sd)	733	64223	28.7	26.67	30.74	71	6093	2.7	2.05	3.59
Obese (>+2sd)	687	61972	28.9	26.43	31.48	57	5684	2.6	1.87	3.75
Height-for - age status (HAZ)										
Stunting (<-2sd)	378	33507	25.6	22.16	29.43	33	3404	2.6	1.69	3.99
Normal (≥-2sd)	4564	404115	28.6	27.50	29.69	367	33517	2.4	2.09	2.69

Table 3.6.3: Reasons for taking vitamin/ mineral among adolescents by socio-demographic characteristics

Characteristics	Others				
	Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
Pahang	67	4541	6.0	4.31	8.22
Locality of School					
Urban	27	1737	5.1	3.22	8.02
Rural	40	2804	6.7	4.35	10.08
Sex					
Boys	39	2498	6.2	3.89	9.68
Girls	28	2043	5.7	3.50	9.26
Class					
Standard 4	7	521	3.4	1.93	5.76
Standard 5	4	548	3.8	0.99	13.84
Standard 6	8	646	4.8	2.51	9.06
Remove class					
Form 1	10	677	7.6	4.28	13.18
Form 2	4	271	3.6	1.34	9.35
Form 3	16	888	13.7	8.95	20.44
Form 4	6	354	7.9	2.77	20.33
Form 5	12	636	11.7	6.85	19.38
Ethnicity					
Malay	60	4153	6.0	4.34	8.37
Chinese	6	352	10.4	3.52	26.98
Indian	1	36	2.0	0.20	16.30
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
BMI-for age status (BAZ)					
Thinness (<-2sd)	75	7553	6.5	5.00	8.34
Normal ($\geq -2sd - \leq +1sd$)	690	58783	6.0	5.30	6.68
Overweight ($> +1sd - \leq +2sd$)	169	15019	6.7	5.56	8.05
Obese ($> +2sd$)	157	13539	6.3	5.15	7.72
Height-for - age status (HAZ)					
Stunting (<-2sd)	90	7814	6.0	4.60	7.72
Normal ($\geq -2sd$)	1003	87279	6.2	5.60	6.80

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.4: Frequency of taking vitamin/ mineral among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Everyday					5 to 6 times per week				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	335	25217	14.5	11.14	18.71	177	13445	7.7	6.05	9.86
Locality of School										
Urban	156	11612	14.7	10.05	21.14	67	4933	6.3	3.68	10.46
Rural	179	13605	14.3	9.90	20.32	110	8512	9.0	7.27	11.02
Sex										
Boys	180	13555	15.6	11.56	20.67	118	8778	10.1	8.06	12.56
Girls	155	11662	13.5	10.10	17.72	59	4667	5.4	3.59	8.00
Class										
Standard 4	74	5818	24.6	20.32	29.49	37	2854	12.1	8.84	16.28
Standard 5	42	4848	21.3	13.02	32.77	17	2044	9.0	6.95	11.49
Standard 6	55	4818	20.2	13.61	28.82	30	2547	10.7	8.81	12.84
Remove class										
Form 1	44	3105	14.5	10.27	20.11	26	1985	9.3	4.59	17.85
Form 2	23	1536	7.4	4.35	12.17	19	1341	6.4	3.13	12.70
Form 3	35	1929	9.3	5.82	14.41	19	1087	6.3	4.09	9.62
Form 4	26	1362	6.9	4.29	10.97	12	714	3.6	2.27	5.75
Form 5	36	1801	8.8	5.34	14.13	17	874	4.3	2.50	7.21
Ethnicity										
Malay	297	22515	14.9	11.38	19.22	154	11869	7.8	6.08	10.06
Chinese	22	1406	10.6	6.71	16.36	10	603	4.5	2.50	8.14
Indian	6	346	8.1	3.24	18.99	7	484	11.4	4.28	27.00
Bumiputera Sabah	3	327	61.1	29.49	85.55	-	-	-	-	-
Bumiputera Sarawak	4	377	28.6	23.01	34.86	2	150	11.3	9.19	13.93
Others	3	244	8.3	3.53	18.20	4	339	11.479634	7.21	17.80
BMI-for age status (BAZ)										
Thinness (<-2sd)	29	2157	18.9	13.51	25.79	12	908	8.0	4.38	14.03
Normal (≥ - 2sd - ≤+ 1sd)	209	15921	15.2	10.86	20.84	116	8644	8.2	6.11	11.05
Overweight (> +1sd - ≤+ 2sd)	39	2742	9.7	7.37	12.61	27	2217	7.8	5.17	11.67
Obese (> + 2sd)	58	4397	15.4	11.46	20.37	22	1676	5.9	3.60	9.43
Height-for - age status (HAZ)										
Stunting (<-2sd)	37	2914	17.8	10.65	28.20	20	1455	8.9	5.54	13.95
Normal (≥-2sd)	298	22302	14.2	10.99	18.18	157	11990	7.6	5.97	9.73

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.4: Frequency of taking vitamin/ mineral among adolescents by socio-demographic characteristics

Characteristics	3 to 4 times per week					1 to 2 times per week				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	218	16460	9.5	7.71	11.60	428	31807	18.3	15.05	22.11
Locality of School										
Urban	91	6874	8.7	5.87	12.79	182	13470	17.1	11.57	24.56
Rural	127	9586	10.1	8.14	12.47	246	18337	19.3	15.98	23.18
Sex										
Boys	130	9820	11.3	8.90	14.22	225	16332	18.8	15.62	22.40
Girls	88	6640	7.7	5.51	10.57	203	15475	17.9	13.77	22.84
Class										
Standard 4	36	2742	11.6	7.56	17.41	82	6725	28.5	23.78	33.64
Standard 5	26	3151	13.8	10.35	18.22	49	5883	25.8	21.79	30.27
Standard 6	35	2854	11.9	9.01	15.67	55	4606	19.3	16.32	22.62
Remove class										
Form 1	26	3442	9.0	5.04	15.66	47	3442	16.1	10.91	23.09
Form 2	34	2327	11.1	8.02	15.26	48	3051	14.6	11.00	19.13
Form 3	23	1316	6.3	4.09	9.62	59	3363	16.1	12.02	21.33
Form 4	20	1169	5.9	3.80	9.16	42	2295	11.7	6.84	19.16
Form 5	18	968	4.7	3.06	7.23	46	2441	11.9	8.23	16.94
Ethnicity										
Malay	197	15061	10.0	8.19	12.05	388	29200	19.3	15.80	23.35
Chinese	9	517	3.9	2.41	6.24	20	1254	9.5	8.13	10.97
Indian	8	593	14.0	7.12	25.56	10	669	15.8	10.05	23.83
Bumiputera Sabah	-	-	-	-	-	1	80	14.9	1.24	70.88
Bumiputera Sarawak	1	81	6.1	4.95	7.50	-	-	-	-	-
Others	3	209	7.1	3.62274	13.3748	9	605	20.5	15.57	26.46
BMI-for age status (BAZ)										
Thinness (<-2sd)	13	931	8.2	4.14	15.45	36	2573	22.5	14.86	32.67
Normal ($\geq -2sd - \leq +1sd$)	139	10008	9.5	7.72	11.75	265	19134	18.3	15.04	21.98
Overweight ($> +1sd - \leq +2sd$)	36	2783	9.8	7.21	13.24	59	4883	17.2	11.38	25.25
Obese ($> +2sd$)	28	2490	8.7	5.60	13.33	68	5217	18.3	13.57	24.12
Height-for - age status (HAZ)										
Stunting (<-2sd)	20	1412	8.6	4.70	15.28	42	3030	18.5	13.21	25.29
Normal ($\geq -2sd$)	198	15047	9.6	7.65	11.95	385	28705	18.3	14.90	22.25

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.5: Prevalence of adolescents taking food supplements by socio-demographic characteristics

Characteristics	Taking food supplement					Not taking food supplement				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	697	51898	29.9	24.19	36.30	1852	121690	70.1	63.70	75.81
Locality of School										
Urban	331	24609	31.2	21.00	43.61	852	54268	68.8	56.39	79.00
Rural	366	27289	28.8	23.66	34.58	1000	67421	71.2	65.42	76.34
Sex										
Boys	370	27606	31.8	25.38	39.06	892	59128	68.2	60.94	74.62
Girls	327	24292	28.0	21.78	35.13	960	62561	72.0	64.87	78.22
Class										
Standard 4	130	10288	43.6	30.71	57.38	164	13320	56.4	42.62	69.29
Standard 5	78	9290	40.3	36.40	44.26	115	13782	59.7	55.74	63.60
Standard 6	118	9993	42.3	33.44	51.69	165	13631	57.7	48.31	66.56
Remove class										
Form 1	88	6142	28.6	22.96	35.04	215	15319	71.4	64.96	77.04
Form 2	85	5476	26.3	20.25	33.44	248	15332	73.7	66.56	79.75
Form 3	82	4616	22.2	16.28	29.55	297	16161	77.8	70.45	83.72
Form 4	49	2769	14.0	10.88	17.86	300	16993	86.0	82.14	89.12
Form 5	67	3325	16.2	11.41	22.58	348	17153	83.8	77.42	88.59
Ethnicity										
Malay	615	46281	30.6	24.72	37.15	1586	105052	69.4	62.85	75.28
Chinese	42	2615	19.7	16.00	24.06	177	10646	80.3	75.94	84.00
Indian	23	1710	40.9	24.32	59.76	41	2474	59.1	40.24	75.68
Bumiputera Sabah	1	108	16.7	1.29	75.44	6	539	83.3	24.56	98.71
Bumiputera Sarawak	3	195	16.1	10.94	23.03	12	1015	83.9	76.97	89.06
Others	13	989	33.5	19.32	51.48	30	1963	66.5	48.52	80.68
BMI-for age status (BAZ)										
Thinness (<-2sd)	49	3670	32.1	23.87	41.51	115	7781	67.9	58.49	76.13
Normal ($\geq -2sd - \leq +1sd$)	417	30783	29.3	23.79	35.51	1149	74244	70.7	64.49	76.21
Overweight ($> +1sd - \leq +2sd$)	110	8107	28.8	22.12	36.63	302	20007	71.2	63.37	77.88
Obese ($> +2sd$)	-	-	-	-	-	-	-	-	-	-
Height-for - age status (HAZ)										
Stunting (<-2sd)	57	4264	25.7	19.83	32.50	184	12358	74.3	67.50	80.17
Normal ($\geq -2sd$)	640	47634	30.4	24.53	37.00	1662	109006	69.6	63.00	75.47

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.6: Types of food supplement usually consumed among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Spirulina					Fish oil				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	85	6559	3.8	2.74	5.19	143	9866	5.7	4.56	7.07
Locality of School										
Urban	38	3093	3.9	2.18	6.97	66	4263	5.4	4.27	6.82
Rural	47	3465	3.7	2.72	4.91	77	5604	5.9	4.20	8.29
Sex										
Boys	60	4848	5.6	3.96	7.78	94	6827	7.8	6.03	10.13
Girls	25	1711	2.0	1.25	3.13	49	3039	3.5	2.37	5.19
Class										
Standard 4	15	1071	4.6	2.65	7.77	22	1659	7.1	4.63	10.65
Standard 5	14	1686	7.3	3.56	14.53	10	1107	4.8	2.44	9.29
Standard 6	11	923	3.9	3.31	4.57	15	1235	5.2	2.58	10.25
Remove class										
Form 1	19	1446	6.8	3.53	12.55	22	1749	8.2	4.41	14.67
Form 2	6	306	1.5	0.33	6.21	16	1062	5.1	2.29	10.81
Form 3	26	636	3.1	1.47	6.25	23	1296	6.2	3.86	9.93
Form 4	19	222	1.1	0.30	4.16	17	893	4.6	2.95	6.95
Form 5	28	268	1.3	0.36	4.64	18	865	4.2	2.86	6.15
Ethnicity										
Malay	77	5988	4.0	2.81	5.57	114	8118	5.4	4.29	6.70
Chinese	5	353	2.7	1.15	6.16	14	777	5.9	4.44	7.84
Indian	1	66	1.5	0.20	10.80	10	598	14.1	6.28	28.65
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	69	5.2	4.26	6.45	1	69	5.2	4.26	6.45
Others	1	82	2.8	1.00	7.56	4	304	10.3	3.56	26.27
BMI-for age status (BAZ)										
Thinness (<-2sd)	10	644	5.5	2.98	10.02	11	867	7.4	3.79	14.07
Normal (≥ - 2sd - ≤+ 1sd)	50	3931	3.8	2.41	5.86	96	6398	6.1	4.78	7.86
Overweight (> +1sd - ≤+ 2sd)	15	993	3.5	1.83	6.58	17	1287	4.5	2.51	8.07
Obese (> + 2sd)	-	-	-	-	-	-	-	-	-	-
Height-for - age status (HAZ)										
Stunting (<-2sd)	10	814	4.9	2.83	8.39	13	1016	6.1	3.22	11.35
Normal (≥-2sd)	75	5745	3.7	2.61	5.13	129	8779	5.6	4.50	6.96

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.6: Types of food supplement usually consumed among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Bee Product					Chicken essence				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	431	32872	18.949977	14.73	24.05	96	7240	4.2	3.15	5.51
Locality of School										
Urban	167	12777	16.2	10.49	24.20	46	3442	4.4	2.72	6.93
Rural	264	20095	21.2	15.80	27.91	50	3799	4.0	2.92	5.50
Sex										
Boys	223	16647	19.1	14.47	24.83	63	4643	5.3	3.99	7.09
Girls	208	16225	18.8	14.17	24.46	33	2598	3.0	1.89	4.75
Class										
Standard 4	82	6681	28.5	22.70	35.09	22	1706	7.3	4.77	10.94
Standard 5	49	6089	26.5	17.98	37.27	13	1527	6.7	4.91	8.95
Standard 6	74	6368	26.9	20.08	34.90	10	818	3.4	2.00	5.89
Remove class										
Form 1	58	3955	18.5	12.88	25.81	12	794	3.7	1.82	7.41
Form 2	50	3271	15.6	11.17	21.33	13	917	4.4	2.66	7.11
Form 3	56	3124	15.0	10.27	21.47	9	594	2.9	1.07	7.41
Form 4	27	1635	8.3	5.34	12.77	9	505	2.6	1.15	5.67
Form 5	35	1747	8.5	4.99	14.12	8	378	1.8	0.90	3.71
Ethnicity										
Malay	399	30509	20.2	16.01	25.12	85	6579	4.4	3.26	5.78
Chinese	14	892	6.8	4.42	10.29	7	402	3.1	1.21	7.52
Indian	8	717	16.9	5.54	41.29	2	118	2.8	0.86	8.65
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	33	2.5	0.13	32.88	-	-	-	-	-
Others	9	141	24.417704	12.48	42.27	2	141	4.8	1.88	11.66
BMI-for age status (BAZ)										
Thinness (<-2sd)	29	2218	19.0	14.01	25.28	7	485	4.2	2.01	8.40
Normal (≥ - 2sd - ≤+ 1sd)	252	18890	18.1	14.24	22.79	61	4444	4.3	3.14	5.76
Overweight (> +1sd - ≤+ 2sd)	68	5217	18.4	12.19	26.76	13	1084	3.8	1.99	7.20
Obese (> + 2sd)	-	-	-	-	-	-	-	-	-	-
Height-for - age status (HAZ)										
Stunting (<-2sd)	36	2705	16.3	11.15	23.23	5	384	2.3	0.75	6.93
Normal (≥-2sd)	395	30166	19.3	14.95	24.47	91	6856	4.4	3.38	5.66

Table 3.6.6: Types of food supplement usually consumed among adolescents by socio-demographic characteristics

Characteristics	Others				
	Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
Pahang	222	16302	9.4	6.80	12.84
Locality of School					
Urban	105	7728	9.8	5.21	17.69
Rural	117	8574	9.1	7.15	11.42
Sex					
Boys	117	8303	9.5	7.12	12.67
Girls	105	7999	9.3	6.07	13.87
Class					
Standard 4	47	3671	15.7	8.24	27.73
Standard 5	24	2804	12.2	6.99	20.46
Standard 6	41	3390	14.3	11.72	17.33
Remove class					
Form 1	16	1168	5.5	2.57	11.22
Form 2	21	1313	6.3	3.48	10.99
Form 3	26	1501	7.2	4.66	11.03
Form 4	19	1001	5.1	2.72	9.36
Form 5	28	1454	7.1	4.51	10.93
Ethnicity					
Malay	191	14201	9.4	6.64	13.13
Chinese	16	950	7.2	3.85	13.16
Indian	6	448	10.5	5.46	19.38
Bumiputera Sabah	1	112	17.3	6.51	38.45
Bumiputera Sarawak	3	285	21.6	17.41	26.38
Others	5	307	10.4	4.00	24.49
BMI-for age status (BAZ)					
Thinness (<-2sd)	11	883	7.6	3.21	16.82
Normal ($\geq -2sd - \leq +1sd$)	139	10210	9.8	6.83	13.87
Overweight ($> +1sd - \leq +2sd$)	33	2339	8.2	5.45	12.28
Obese ($> +2sd$)	-	-	-	-	-
Height-for - age status (HAZ)					
Stunting (<-2sd)	22	1618	9.8	5.96	15.58
Normal ($\geq -2sd$)	200	14684	9.4	6.74	12.91

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.7: Reasons for taking food supplements among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Doctor's Instruction					Parents' advice				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	2018	176793	11.5	10.5	12.5	4839	447478	29.0	27.8	30.3
Locality of School										
Urban	1164	95593	10.9	9.5	12.4	2960	261650	29.8	28.2	31.4
Rural	854	81199	12.3	11.1	13.6	1879	185828	28.0	26.0	30.2
Sex										
Boys	1194	107457	13.0	11.7	14.5	2439	223511	27.0	25.7	28.4
Girls	824	69335	9.7	8.7	10.7	2400	223967	31.3	29.6	33.1
Class										
Standard 4	607	52619	18.4	16.1	21.0	1000	96201	33.6	31.3	36.1
Standard 5	397	38449	14.7	12.9	16.6	846	84218	32.1	30.1	34.2
Standard 6	171	18842	7.8	5.7	10.6	686	83748	34.7	32.2	37.3
Remove class										
Form 1	287	24107	12.2	10.2	14.5	665	51233	25.9	23.1	28.8
Form 2	187	13797	8.8	6.7	11.4	526	41322	26.3	23.9	28.9
Form 3	155	10954	7.6	6.2	9.4	450	33394	23.2	20.6	26.1
Form 4	149	11617	9.3	7.5	11.6	366	30198	24.3	21.7	27.1
Form 5	65	6407	5.0	3.6	6.8	300	27164	21.0	18.2	24.1
Ethnicity										
Malay	1499	124976	12.2	11.1	13.4	3383	294312	28.8	27.3	30.4
Chinese	143	13621	5.7	4.4	7.2	705	75207	31.4	29.2	33.7
Indian	122	13861	17.3	14.0	21.2	201	21934	27.4	23.5	31.7
Bumiputera Sabah	97	8801	9.9	6.9	14.0	268	23497	26.4	22.7	30.5
Bumiputera Sarawak	78	10288	13.7	11.0	17.0	149	20739	27.7	22.8	33.2
Others	79	5246	13.9	10.1	18.7	133	11789	31.2	25.0	38.0
BMI-for age status (BAZ)										
Thinness (<-2sd)	175	15014	12.9	10.7	15.6	360	33686	29.0	26.2	32.1
Normal (≥ - 2sd - ≤+ 1sd)	1245	109703	11.1	10.1	12.3	3093	285822	29.0	27.5	30.5
Overweight (> +1sd - ≤+ 2sd)	269	23526	10.5	8.9	12.4	701	63271	28.3	25.6	31.1
Obese (> + 2sd)	326	28280	13.2	10.9	15.9	675	63334	29.6	27.4	31.9
Height-for - age status (HAZ)										
Stunting (<-2sd)	219	17735	13.6	11.3	16.3	398	37131	28.5	24.9	32.2
Normal (≥-2sd)	1799	159058	11.3	10.3	12.3	4440	410154	29.1	27.8	30.3

Table 3.6.7: Reasons for taking food supplements among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Self awareness					Influences by friends				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	3350	300212	19.5	18.6	20.4	444	40080	2.6	2.2	3.0
Locality of School										
Urban	1941	165687	18.8	17.6	20.1	250	22324	2.5	2.0	3.2
Rural	1409	134525	20.3	19.0	21.6	194	17756	2.7	2.2	3.2
Sex										
Boys	1985	180541	21.8	20.6	23.1	321	27659	3.3	2.9	3.9
Girls	1365	119671	16.7	15.7	17.8	123	12422	1.7	1.3	2.3
Class										
Standard 4	571	51803	18.1	16.5	19.8	109	11231	3.9	3.0	5.1
Standard 5	512	52525	20.0	18.1	22.1	71	6945	2.6	2.0	3.5
Standard 6	445	51911	21.5	19.0	24.3	49	5934	2.5	1.4	4.4
Remove class										
Form 1	462	37109	18.8	16.8	20.9	64	4808	2.4	1.8	3.3
Form 2	381	29310	18.7	16.6	20.9	50	3836	2.4	1.7	3.5
Form 3	397	29279	20.4	17.8	23.2	48	3074	2.1	1.4	3.3
Form 4	295	21797	17.5	15.2	20.1	32	2035	1.6	1.1	2.5
Form 5	287	26477	20.5	17.7	23.6	21	2217	1.7	1.0	3.1
Ethnicity										
Malay	2441	207742	20.4	19.3	21.5	304	25651	2.5	2.1	3.1
Chinese	419	44195	18.5	16.8	20.2	51	5105	2.1	1.5	3.0
Indian	125	13880	17.3	14.5	20.7	26	2565	3.2	2.1	4.9
Bumiputera Sabah	157	14016	15.8	12.7	19.3	26	2578	2.9	2.0	4.3
Bumiputera Sarawak	106	12522	16.7	13.3	20.8	26	3778	5.0	3.8	6.6
Others	102	7856	20.8	16.8	25.4	11	404	1.1	0.3	3.2
BMI-for age status (BAZ)										
Thinness (< -2sd)	244	22310	19.2	16.3	22.5	28	2407	2.1	1.3	3.3
Normal (≥ - 2sd - ≤+ 1sd)	2117	189535	19.2	18.3	20.2	283	24854	2.5	2.1	3.0
Overweight (> +1sd - ≤+ 2sd)	505	45524	20.3	18.4	22.4	65	6181	2.8	2.0	3.7
Obese (> + 2sd)	482	42807	20.0	18.0	22.1	66	6567	3.1	2.3	4.0
Height-for - age status (HAZ)										
Stunting (< -2sd)	279	22879	17.5	15.2	20.2	47	4264	3.3	2.4	4.4
Normal (≥-2sd)	3067	277176	19.6	18.7	20.6	397	35816	2.5	2.2	3.0

Table 3.6.7: Reasons for taking food supplements among adolescents by socio-demographic characteristics

Characteristics	Others				
	Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
Pahang	979	90758	5.9	5.4	6.4
Locality of School					
Urban	532	47869	5.4	4.8	6.2
Rural	447	42889	6.5	5.9	7.1
Sex					
Boys	574	51717	6.3	5.6	6.9
Girls	405	39041	5.5	4.7	6.3
Class					
Standard 4	156	18535	6.5	5.4	7.7
Standard 5	148	14938	5.7	4.6	7.0
Standard 6	137	14736	6.1	4.5	8.3
Remove class					
Form 1	131	10606	5.4	4.2	6.8
Form 2	117	8242	5.2	4.2	6.5
Form 3	111	8890	6.2	4.8	8.0
Form 4	83	6362	5.1	3.9	6.6
Form 5	96	8449	6.5	5.0	8.6
Ethnicity					
Malay	666	55978	5.5	5.0	6.1
Chinese	137	16896	7.1	5.6	8.8
Indian	38	3676	4.6	3.2	6.5
Bumiputera Sabah	58	5728	6.4	4.9	8.4
Bumiputera Sarawak	38	4742	6.3	4.8	8.2
Others	42	3737	9.9	6.6	14.4
BMI-for age status (BAZ)					
Thinness (<-2sd)	77	6901	6.0	4.5	7.8
Normal ($\geq -2sd - \leq +1sd$)	597	56247	5.7	5.1	6.4
Overweight ($> +1sd - \leq +2sd$)	156	14995	6.7	5.7	7.8
Obese ($> +2sd$)	147	12491	5.8	4.6	7.4
Height-for - age status (HAZ)					
Stunting (<-2sd)	88	8937	6.8	5.4	8.7
Normal ($\geq -2sd$)	890	81803	5.8	5.3	6.3

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.8: Frequency of taking food supplements among adolescents by socio-demographic characteristics (Cont.)

Characteristics	Everyday					5 to 6 times per week				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	242	19076	11.0	8.00	14.88	134	9884	5.7	4.41	7.31
Locality of School										
Urban	113	9091	11.5	6.41	19.90	49	3531	4.5	2.48	7.96
Rural	129	9985	10.5	7.91	13.85	85	6353	6.7	5.51	8.09
Sex										
Boys	135	10470	12.0	8.81	16.23	81	6052	7.0	5.26	9.15
Girls	107	8606	9.9	6.49	14.84	53	3832	4.4	3.13	6.19
Class										
Standard 4	62	5048	21.3	16.72	26.84	23	1763	7.5	4.24	12.78
Standard 5	37	4318	18.6	12.87	26.19	12	1450	6.3	5.22	7.48
Standard 6	36	3062	12.9	9.56	17.08	20	1622	6.8	5.10	9.03
Remove class										
Form 1	29	2147	10.1	7.18	13.95	21	1632	7.7	3.89	14.52
Form 2	17	1090	5.2	3.40	7.87	19	1266	6.0	3.17	11.18
Form 3	30	1751	8.4	4.65	14.79	17	955	4.6	2.66	7.83
Form 4	14	791	4.0	2.07	7.74	9	552	2.8	1.85	4.28
Form 5	17	867	4.2	2.14	8.19	13	644	3.1	1.71	5.71
Ethnicity										
Malay	209	16667	11.0	7.82	15.27	121	8955	5.9	4.57	7.61
Chinese	20	1337	10.2	6.47	15.60	5	276	2.1	0.94	4.61
Indian	6	517	12.2	4.21	30.42	1	48	1.1	0.13	9.44
Bumiputera Sabah	-	-	-	-	-	1	112	17.3	6.51	38.45
Bumiputera Sarawak	3	231	17.5	14.15	21.43	1	81	6.1	4.95	7.50
Others	4	325	11.0	6.73	17.47	5	413	14.0	9.22	20.63
BMI-for age status (BAZ)										
Thinness (<-2sd)	16	1191	10.2	6.92	14.83	9	685	5.9	2.36	13.90
Normal (≥ - 2sd - ≤+ 1sd)	148	12090	11.5	7.82	16.72	88	6370	6.1	4.39	8.37
Overweight (> +1sd - ≤+ 2sd)	38	2620	9.2	5.94	14.07	19	1476	5.2	3.26	8.21
Obese (> + 2sd)	40	3175	11.1	8.14	15.06	18	1352	4.7	2.73	8.12
Height-for - age status (HAZ)										
Stunting (<-2sd)	21	1659	10.0	6.39	15.32	13	1045	6.3	3.01	12.70
Normal (≥-2sd)	220	17346	11.1	7.90	15.27	121	8838	5.6	4.34	7.28

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.6.8: Frequency of taking food supplements among adolescents by socio-demographic characteristics

Characteristics	3 to 4 times per week					1 to 2 times per week				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Pahang	181	13830	8.0	6.07	10.37	385	27947	16.1	13.12	19.56
Locality of School										
Urban	79	5962	7.6	4.99	11.31	169	12140	15.4	10.55	21.94
Rural	102	7868	8.3	5.78	11.74	216	15806	16.6	13.38	20.51
Sex										
Boys	101	7835	9.0	6.56	12.24	206	14549	16.7	13.25	20.90
Girls	80	5995	6.9	5.01	9.44	179	13397	15.4	12.66	18.67
Class										
Standard 4	27	6590	8.6	6.35	11.51	83	6590	27.9	20.88	36.12
Standard 5	27	3211	14.4	9.99	20.23	27	3211	13.9	10.42	18.19
Standard 6	31	2708	11.4	6.96	18.03	66	2992	11.4	6.96	18.03
Remove class										
Form 1	26	1802	8.5	5.22	13.41	43	2992	14.0	10.47	18.55
Form 2	19	1277	6.1	3.56	10.22	50	3170	15.1	10.40	21.44
Form 3	26	1465	7.1	4.57	10.74	45	2571	12.4	8.58	17.52
Form 4	7	329	1.7	0.57	4.85	34	1929	9.9	7.98	12.10
Form 5	18	889	4.3	2.33	7.92	37	1925	9.4	6.17	14.04
Ethnicity										
Malay	167	13029	8.6	6.62	11.11	339	24947	16.5	13.31	20.21
Chinese	8	397	3.0	1.15	7.65	20	1258	9.6	8.39	10.88
Indian	3	242	5.7	1.69	17.51	15	969	22.8	13.59	35.74
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	33	2.5	0.13	32.88	1	81	6.1	4.95	7.50
Others	2	129	4.4	1.56	11.69	10	692	23.4	14.21	36.11
BMI-for age status (BAZ)										
Thinness (<-2sd)	9	766	6.6	3.10	13.38	29	1998	17.1	11.50	24.76
Normal ($\geq -2sd - \leq +1sd$)	118	8560	8.2	6.65	10.01	230	16433	15.7	12.95	18.88
Overweight ($> +1sd - \leq +2sd$)	26	1975	7.0	4.40	10.84	59	4547	16.0	11.35	22.13
Obese ($> +2sd$)	27	2423	8.5	4.36	15.90	67	4968	17.4	12.58	23.62
Height-for - age status (HAZ)										
Stunting (<-2sd)	13	986	5.9	2.98	11.49	40	2959	17.8	12.52	24.78
Normal ($\geq -2sd$)	168	12844	8.2	6.15	10.83	345	24988	15.9	13.00	19.36

3.7 Food and nutrition labeling among adolescents (Secondary 1 to Secondary 5) in Pahang

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3.7.1 Introduction

Recognizing the need for more effective regulation on nutrition labels and claims on food packages, the Ministry of Health Malaysia (MOH) gazetted amendments to the Food Regulations 1985 in 2003 (MOH, 1985). MOH has also gazetted and enforced Regulations on Nutrition Labelling and Claims. Regulations were introduced requiring manufacturers to describe the nutritional qualities of a food product factually and informatively.

Nutrition information on food labels assist food choices. Implementation of Front-of-Pack (FOP) labelling are listed as current nutrition programs and activities in the National Plan of Action for Nutrition of Malaysia III, 2016-2025. Food and nutrition labelling are designed to provide consumers various information when choosing food. Food and nutrition labelling in this survey include food labelling, FOP labelling, nutrition information panel (NIP) and nutrition labelling. Food labelling includes any written, printed or graphic matter that is presented on the label, accompanies the food, or is displayed near the food, including that for the purpose of promoting its sale or disposal. NIP declares the nutrients as a table in one section of a food label. In addition, nutrition labelling describes the nutrient content of a food product and this may assist the consumers in making better food choices when planning their daily meals. Thus, food and nutrition labelling has been recognized as one of the strategies to encourage people to adopt healthy eating practices. There is little national data in Malaysia on the prevalence of food label reading among Malaysian children and teenagers. Therefore, this survey was conducted to determine the prevalence of reading and their understanding of food and nutritional labelling among adolescents in Malaysia.

3.7.2 Objective

General objective

To determine the prevalence of reading food and nutrition labeling among adolescents (Secondary 1 to Secondary 5).

Specific objective:

1. To determine the prevalence of reading food label when buying or receiving food/drink.

2. To determine the reason(s) for not reading food labels.
3. To determine the types of nutrition fact information (energy, carbohydrate/ sugar, fat, protein, sodium, vitamin, mineral and fiber content) that is read from the food label.
4. To determine the types of information (expiry date, nutritional claim, nutrition facts, halal logo, food ingredients and storage instruction) read from the food label.
5. To determine the understanding of nutrition labelling (nutrition facts and front of pack).
6. To determine the knowledge of the most and least amount of ingredients contained based on the food ingredients list.

3.7.3 Variable definitions

There were three classifications used in this study.

- a. Always: reads food labels every time when buying or receiving food/drinks
- b. Sometimes: occasionally or once in a while reads food labels when buying or receiving food/drink
- c. Never: does not read food labels at all.

Food label

- A food label includes any tag, brand, mark, pictorial or other descriptive matter, written, printed, stenciled, marked, painted, embossed or impressed on, or attached to or included in, belonging to, or accompanying any food. (Malaysia Food Regulations 1985).

Front of Pack (FOP) labels

- Simplified nutrition information on the front of the package, in varied forms.

Nutrition information panel/ Nutrition facts

- The nutrition information panel or NIP is a table found in one section of a food label declaring the amount of nutrients contained in the food.

Nutrition labelling

- A nutrition label is a listing of the level of nutrient(s) as displayed on the food label. It is meant to provide factual information about the nutritional content of the product.

3.7.4 Findings

3.7.4.1 Prevalence of practise reading food labels when buying or receiving food/drink among adolescents in Pahang

The results in **Table 3.7.1** showed that 32.1% (95% CI: 29.67, 34.66) of adolescents in Pahang always read food labels. Another 56.4% (95% CI: 52.76, 59.92) of adolescents read them sometimes, while only 11.5% (95% CI: 8.69, 15.10) never read food labels when buying or receiving food. The prevalence of never reading food labels was slightly higher among boys [13.7% (95% CI: 11.95, 15.73)] than girls [9.3% (95% CI: 5.45, 15.46)].

3.7.4.2 Reasons for not reading food and nutrition labelling among adolescents in Pahang

Among those who do not read food labels, the findings showed that the main reasons for not reading food labels were food labels were not interesting [37.1% (95% CI: 26.75, 48.86)], followed by do not understand food labels [21.9% (95% CI: 15.59, 29.79)], 18.1% (95% CI: 11.19, 28.04) of adolescents were already aware of the food label information, 17.1% (95% CI: 12.63, 22.68) of adolescents did not know the importance of food labels, 13.3% (95% CI: 8.32, 20.49) of adolescents thought that the size of the printing on food labels was too small and time constraint [11.3% (95% CI: 5.86, 20.69)] (**Table 3.7.2**).

3.7.4.3 Types of nutrition fact information (energy, carbohydrate/ sugar, fat, protein, sodium, vitamin, mineral and fiber content) that read from the food labels.

Among those who read the nutrition fact information, the three most common types of nutritional information read were fat content [40.7% (95% CI: 33.44,48.44)], energy content [39.5% (95% CI: 35.95, 43.11)], carbohydrate content (including sugar) [36.6% (95% CI: 29.95, 43.91) and protein content [21.0% (95% CI: 18.20, 23.99). It was followed by vitamin content [21.2% (95% CI: 18.08, 24.79)], fibre content [9.8% (95% CI: 8.00, 12.04)], sodium content [9.1% (95% CI: 7.19, 11.42)] and the least was mineral content [8.8% (95% CI: 6.65, 11.49)]. (**Table 3.7.3a** and **Table 3.7.3b**)

3.7.4.4 Types of information (expiry date, nutrition claim, nutrition facts, halal logo, food ingredients and storage instruction) read from the food labels.

Based on the types of information (expiry date, nutrition claim, nutrition facts, halal logo, food ingredients, storage instruction) read from the food labels, most of the adolescents read expiry date [78.1% (95% CI : 70.40,84.24)], followed by halal logo [48.4% (95% CI: 37.26,59.78)], food ingredients [27.8% (95% CI: 21.49,35.08)], nutrition facts [23.8% (95% CI: 18.72,29.83)], storage instructions [18.5% (95% CI: 13.39,25.04)] and nutrition claims [15.1% (95% CI: 11.31,19.80)] (**Table 3.7.4**).

3.7.4.5 Understanding of nutrition facts among adolescents in Pahang

Overall, approximately half of the adolescents had given a correct response to the question assessing interpretation of the energy content [59.2% (95% CI: 48.86, 68.77)] and sugar content [55.8% (95% CI: 46.73, 64.48)] based on the nutrition facts given. While 44.2% (95% CI: 33.14, 55.90) of adolescents had given correct responses for both questions assessing interpretation of energy and sugar content (**Table 3.7.5**).

3.7.4.6 Understanding of front of pack labelling among adolescents in Pahang

Overall, [36.8% (95% CI: 28.15,46.40)] of the adolescents had given the correct response to the question assessing interpretation of the energy content based on the front of pack labelling given and [45.2% (95% CI: 38.62,51.99)] of adolescents had given correct response to the question assessing interpretation of the percentage of energy content based on the front of pack labelling given. However, the results showed only 23.6% (95% CI: 17.01,31.78) of adolescents had given correct responses to questions assessing interpretations of both energy content and the percentage of energy content based on the front of pack labelling given (**Table 3.7.6**).

3.7.4.7 Understanding of the mostly and the least used ingredients based on the food ingredient list among adolescents in Pahang

Overall, more than half of the adolescents [54.8% (95% CI: 48.04, 61.35)] had given a correct response to the question assessing interpretation of the mostly used ingredient in the food based on the list of ingredients given. While, 14.9% (95% CI: 12.26,17.98) of adolescents had given a correct response to the question assessing interpretation of the least used ingredient in the food based on the list of ingredients given. The results showed a low level of correct response [6.9% (95% CI: 5.65, 8.46)] to questions assessing interpretations of both the most and the least used ingredients based on the ingredient list given (**Table 3.7.7**).

3.7.5 Discussion/Conclusion

This study provides useful information about the prevalence of reading food and nutrition labelling among adolescents in Pahang. Adolescents reported a lower prevalence of not reading food label. Continuous education regarding understanding of the food and nutrition labelling, not limited to the expiry date, but also the nutritional content and the benefits of front of pack labelling and nutrition information panel is necessary. Boys had a higher prevalence of not reading food and nutrition labelling. Thus, we need to be creative in education and promotion to ensure that adolescents know how to interpret the overall information that is stated on the food and nutrition labelling before choosing packaged food and drinks. In this survey, majority of the adolescents still lack knowledge to determine the highest and lowest ingredients content based on the label. Awareness and continuous effort to better understand the food and nutrition labelling should be inculcated within all nutrition intervention programmes.

References

1. Institute for Public Health. National health and Morbidity Survey 2014. Malaysian Adult Nutrition Survey. Vol II.
2. Malaysia Food Regulations (1985). Ministry of Health Malaysia.
3. National Coordinating Committee on Food and Nutrition. 2010. Malaysian Dietary Guidelines. Ministry of Health.

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.1: Prevalence of reading food and nutritional labelling when buying or receiving food/drink among adolescents (Cont.)

Characteristic	Yes, always					Yes, sometimes				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	555	33184	32.1	29.67	34.66	1022	58253	56.4	52.76	59.92
Locality of School										
Urban	225	13112	29.6	26.54	32.86	445	24651	55.7	48.01	63.05
Rural	330	20072	34.0	31.14	36.98	577	33603	56.9	54.31	59.48
Sex										
Boys	252	15959	31.0	27.24	35.13	481	28386	55.2	51.10	59.28
Girls	303	17226	33.2	30.01	36.50	541	29867	57.5	53.59	61.35
Class										
Form 1	124	8897	41.8	34.58	49.38	138	9564	44.9	37.76	52.32
Form 2	128	8166	39.0	34.70	43.55	178	10976	52.5	47.38	57.50
Form 3	108	5782	27.7	22.55	33.62	224	12317	59.1	55.40	62.71
Form 4	91	5165	26.2	22.84	29.90	216	12278	62.3	54.70	69.39
Form 5	104	5175	25.1	18.58	33.07	266	13118	63.7	59.39	67.85
Ethnicity										
Malay	459	27151	32.2	28.99	35.50	873	49494	58.6	55.94	61.25
Chinese	55	3461	26.5	22.93	30.36	104	6049	46.3	37.47	55.33
Indian	26	1581	47.1	33.87	60.76	27	1612	48.0	38.41	57.82
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	2	102	100.0	100.00	100.00	-	-	-	-	-
Others	13	889	38.2	29.01	48.42	18	1098	47.3	38.53	56.17
BMI-for-age status (BAZ)										
Thinness (<-2sd)	23	1430	22.5	12.90	36.15	73	4212	66.1	49.58	79.48
Normal (≥-2sd - ≤+1sd)	359	21414	32.6	30.43	34.87	643	36427	55.5	51.52	59.37
Overweight (>+1sd - ≤+2sd)	89	5193	31.2	24.79	38.45	166	9576	57.6	51.17	63.70
Obese (>+2sd)	83	5101	35.2	28.90	42.13	140	8038	55.5	47.08	63.66
Height-for-age status (HAZ)										
Stunting (<-2sd)	63	3844	37.4	32.33	42.67	96	5558	54.0	47.14	60.74
Normal (≥-2sd)	491	29294	31.6	29.14	34.11	925	52624	56.7	52.66	60.68

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.1: Prevalence of reading food and nutritional labelling when buying or receiving food/drink among adolescents

Characteristic	Never				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PAHANG	203	11893	11.5	8.69	15.10
Locality of School					
Urban	114	6526	14.7	9.59	21.96
Rural	89	5366	9.1	7.80	10.57
Sex					
Boys	119	7056	13.7	11.95	15.73
Girls	84	4837	9.3	5.45	15.46
Class					
Form 1	39	2826	13.3	7.21	23.16
Form 2	28	1777	8.5	6.57	10.92
Form 3	48	2740	13.2	9.19	18.48
Form 4	41	2256	11.5	7.56	16.98
Form 5	47	2293	11.1	7.26	16.70
Ethnicity					
Malay	136	7787	9.2	8.12	10.45
Chinese	58	3560	27.2	21.73	33.55
Indian	3	163	4.9	0.88	22.75
Bumiputera Sabah	1	46	100.0	100.00	100.00
Bumiputera Sarawak	-	-	-	-	-
Others	5	337	14.5	7.08	27.38
BMI-for-age status (BAZ)					
Thinness (<-2sd)	13	728	11.4	6.34	19.74
Normal (≥-2sd - ≤+1sd)	133	7819	11.9	8.22	16.94
Overweight (>+1sd - ≤+2sd)	33	1869	11.2	8.10	15.37
Obese (>+2sd)	21	1339	9.2	5.08	16.26
Height-for-age status (HAZ)					
Stunting (<-2sd)	16	888	8.6	5.80	12.66
Normal (≥-2sd)	184	10866	11.7	8.73	15.54

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.2: Reasons for not reading food label among adolescents (Cont.)

Characteristic	Size of the print too small					Do not understand				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	27	1578	13.3	8.32	20.49	47	2601	21.9	15.59	29.79
Locality of School										
Urban	12	606	9.3	4.70	17.54	34	1948	29.9	25.29	34.86
Rural	15	972	18.1	11.36	27.61	13	653	12.2	5.86	23.56
Sex										
Boys	17	1002	14.2	8.25	23.37	24	1328	18.8	12.23	27.85
Girls	10	575	11.9	4.43	28.21	23	1273	26.3	15.86	40.35
Class										
Form 1	6	431	15.3	3.96	44.00	5	358	12.7	6.56	23.00
Form 2	5	313	17.6	7.13	37.36	5	340	19.1	8.13	38.66
Form 3	7	369	13.5	6.57	25.64	12	626	22.8	13.73	35.48
Form 4	1	60	2.6	0.28	20.67	12	686	30.4	14.12	53.66
Form 5	8	404	17.6	8.48	33.08	13	593	25.8	13.94	42.87
Ethnicity										
Malay	19	1150	14.8	9.04	23.20	30	1569	20.1	12.29	31.23
Chinese	6	320	9.0	3.26	22.41	16	967	27.2	20.10	35.57
Indian	1	62	37.9	16.70	65.01	1	66	40.3	17.49	68.24
Bumiputera Sabah	1	46	100.0	100.00	100.00	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-
BMI-for-age status (BAZ)										
Thinness (<-2sd)	1	62	8.5	0.81	51.39	1	52	7.2	0.67	46.79
Normal (≥-2sd - ≤+1sd)	18	1047	13.4	7.47	22.85	30	1625	20.8	12.77	31.97
Overweight (>+1sd - ≤+2sd)	7	402	21.5	9.64	41.28	11	610	32.6	20.35	47.84
Obese (>+2sd)	1	67	5.0	0.46	37.45	5	315	23.5	8.33	50.97
Height-for-age status (HAZ)										
Stunting (<-2sd)	3	194	21.9	3.97	65.43	3	170	19.2	4.07	56.98
Normal (≥-2sd)	24	1383	12.7	7.27	21.35	44	2431	22.4	15.87	30.56

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.2: Reasons for not reading food label among adolescents (Cont.)

Characteristic	Not interesting					Do not know the importance of food label				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	76	4416	37.1	26.75	48.86	36	2031	17.1	12.63	22.68
Locality of School										
Urban	53	3097	47.5	37.27	57.85	22	1213	18.6	14.03	24.18
Rural	23	1319	24.6	16.52	34.93	14	818	15.2	8.09	26.87
Sex										
Boys	39	2251	31.9	23.37	41.84	18	994	14.1	8.57	22.32
Girls	37	2165	44.8	28.57	62.15	18	1036	21.4	13.26	32.72
Class										
Form 1	17	1248	44.2	23.98	66.47	4	290	10.3	4.51	21.70
Form 2	8	468	26.3	11.61	49.26	8	465	26.2	10.16	52.60
Form 3	16	899	32.8	15.39	56.75	13	703	25.7	14.69	40.88
Form 4	15	867	38.4	26.54	51.88	6	339	15.0	7.53	27.72
Form 5	20	934	40.7	30.33	52.06	5	234	10.2	3.95	23.82
Ethnicity										
Malay	43	2394	30.7	23.18	39.51	24	1309	16.8	10.62	25.58
Chinese	32	1986	55.8	52.98	58.57	11	660	18.5	14.95	22.77
Indian	1	36	21.8	1.16	86.91	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	1	62	18.3	18.27	18.27
BMI-for-age status (BAZ)										
Thinness (<-2sd)	7	382	52.5	21.75	81.42	5	245	33.7	9.97	69.93
Normal (≥-2sd - ≤+1sd)	49	2988	38.2	28.09	49.49	23	1339	17.1	12.02	23.82
Overweight (>+1sd - ≤+2sd)	14	721	38.6	22.02	58.34	6	351	18.8	7.47	39.86
Obese (>+2sd)	3	186	13.9	3.66	40.49	2	95	7.1	1.25	31.74
Height-for-age status (HAZ)										
Stunting (<-2sd)	3	138	15.5	4.02	44.57	3	162	18.3	3.72	56.42
Normal (≥-2sd)	70	4140	38.1	26.81	50.84	33	1868	17.2	12.29	23.52

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.2: Reasons for not reading food label among adolescents

Characteristic	Time constraint					Already aware of the food label information				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	24	1345	11.3	5.86	20.69	34	2157	18.1	11.19	28.04
Locality of School										
Urban	11	594	9.1	2.94	24.91	12	741	11.4	7.45	16.93
Rural	13	750	14.0	7.15	25.54	22	1416	26.4	14.71	42.68
Sex										
Boys	17	981	13.9	6.90	26.03	24	1595	22.6	13.08	36.20
Girls	7	364	7.5	2.90	18.13	10	562	11.6	5.18	24.00
Class										
Form 1	1	73	2.6	0.28	19.99	10	724	25.6	13.03	44.22
Form 2	5	299	16.8	6.74	36.18	5	352	19.8	5.94	49.09
Form 3	6	346	12.6	4.95	28.61	8	496	18.1	7.05	39.11
Form 4	7	366	16.2	8.02	30.01	5	267	11.8	4.64	27.05
Form 5	5	261	11.4	3.70	29.97	6	318	13.9	5.42	31.18
Ethnicity										
Malay	21	1182	15.2	8.68	25.21	26	1589	20.4	11.53	33.53
Chinese	2	103	2.9	0.89	8.94	5	352	9.9	6.75	14.23
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	59	17.6	17.61	17.61	3	216	64.1	64.13	64.13
BMI-for-age status (BAZ)										
Thinness (<-2sd)	1	47	6.5	0.61	44.19	2	138	18.9	5.91	46.34
Normal (≥-2sd - ≤+1sd)	16	908	11.6	5.99	21.33	19	1159	14.8	8.13	25.51
Overweight (>+1sd - ≤+2sd)	4	212	11.4	4.62	25.34	5	298	16.0	5.21	39.60
Obese (>+2sd)	3	177	13.2	3.56	38.56	7	516	38.5	19.37	62.04
Height-for-age status (HAZ)										
Stunting (<-2sd)	2	121	13.6	2.87	45.55	5	264	29.7	12.10	56.41
Normal (≥-2sd)	22	1224	11.3	5.59	21.39	28	1847	17.0	9.64	28.21

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.3a: Prevalence of reading nutrition information (macronutrient) among those who read food label (Yes, always/ Yes, sometimes) (Cont)

Characteristic	Yes, always/ Yes, sometimes									
	Total energy					Carbohydrate				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	627	36093	39.5	35.95	43.11	603	33512	36.6	29.95	43.91
Locality of School										
Urban	254	14364	38.0	34.70	41.49	286	16076	42.6	32.47	53.33
Rural	373	21729	40.5	35.06	46.15	317	17435	32.5	25.68	40.11
Sex										
Boys	340	20437	46.1	41.46	50.78	227	13026	29.4	23.09	36.55
Girls	287	15657	33.2	27.78	39.21	376	20486	43.5	36.45	50.82
Class										
Form 1	96	6715	36.4	27.70	46.03	81	5445	29.5	19.05	42.66
Form 2	115	7261	37.9	29.51	47.16	108	6513	34.0	28.62	39.88
Form 3	139	7615	42.1	36.92	47.42	136	7145	39.5	29.48	50.43
Form 4	121	6850	39.3	32.06	46.98	115	6516	37.4	27.98	47.80
Form 5	156	7652	41.8	34.10	49.99	163	7892	43.1	36.69	49.84
Ethnicity										
Malay	540	30885	40.3	36.46	44.25	528	29071	37.9	30.71	45.72
Chinese	58	3376	35.5	32.12	39.04	47	2742	28.8	20.97	38.21
Indian	20	1240	38.8	29.78	48.73	19	1132	35.5	21.23	52.85
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	2	102	100.0	100.00	100.00
Others	9	593	29.8	16.42	47.87	7	465	23.4	15.43	33.77
BMI-for-age status (BAZ)										
Thinness (<-2sd)	40	2258	40.0	31.05	49.71	32	1722	30.5	18.23	46.36
Normal (\geq -2sd - \leq +1sd)	408	23332	40.3	35.71	45.15	384	21446	37.1	30.24	44.48
Overweight (>+1sd - \leq +2sd)	96	5561	37.7	30.00	45.97	96	5249	35.5	27.23	44.83
Obese (>+2sd)	83	4943	37.6	31.35	44.33	91	5095	38.8	28.11	50.64
Height-for-age status (HAZ)										
Stunting (<-2sd)	63	3663	39.0	30.05	48.67	60	3312	35.2	23.41	49.17
Normal (\geq -2sd)	563	32359	39.5	35.58	43.57	543	30200	36.9	30.43	43.81

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.3a: Prevalence of reading nutrition information (macronutrient) among those who read food label (Yes, always/ Yes, sometimes)

Characteristic	Yes, always/ Yes, sometimes									
	Fat					Protein				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	671	37238	40.7	33.44	48.44	336	19156	21.0	18.20	23.99
Locality of School										
Urban	316	17833	47.2	39.41	55.18	162	9260	24.5	22.29	26.90
Rural	355	19406	36.2	27.09	46.32	174	9896	18.4	15.14	22.26
Sex										
Boys	231	13375	30.2	25.10	35.76	163	9400	21.2	16.83	26.34
Girls	440	23863	50.7	42.26	59.05	173	9756	20.7	17.73	24.05
Class										
Form 1	96	6378	34.5	23.16	48.03	62	4243	23.0	16.86	30.52
Form 2	111	6510	34.0	26.61	42.28	54	3265	17.1	11.49	24.58
Form 3	139	7370	40.7	29.77	52.68	65	3527	19.5	12.57	28.96
Form 4	140	8011	45.9	34.00	58.34	67	3787	21.7	16.13	28.56
Form 5	185	8970	49.0	41.57	56.55	88	4334	23.7	19.17	28.89
Ethnicity										
Malay	564	30754	40.1	32.14	48.67	284	15962	20.8	17.76	24.27
Chinese	73	4393	46.2	42.32	50.12	36	2198	23.1	19.09	27.70
Indian	21	1349	42.3	22.27	65.15	11	675	21.1	13.09	32.28
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	33	32.0	1.94	91.82	-	-	-	-	-
Others	12	710	35.7	28.67	43.42	5	321	16.2	11.57	22.10
BMI-for-age status (BAZ)										
Thinness (<-2sd)	26	1496	26.5	16.44	39.81	31	1746	30.9	21.66	42.07
Normal (≥-2sd - ≤+1sd)	411	22785	39.4	32.49	46.75	202	11522	19.9	16.54	23.80
Overweight (>+1sd - ≤+2sd)	127	6889	46.6	33.41	60.36	56	3141	21.3	16.35	27.18
Obese (>+2sd)	107	6069	46.2	34.04	58.81	46	2701	20.6	13.88	29.36
Height-for-age status (HAZ)										
Stunting (<-2sd)	64	3710	39.5	26.80	53.71	26	1497	15.9	10.59	23.24
Normal (≥-2sd)	607	33529	40.9	34.16	48.06	309	17613	21.5	18.78	24.50

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.3b: Prevalence of reading nutrition information (micronutrient/fiber) among those who read food label (Yes, always/ Yes, sometimes) (Cont.)

Characteristic	Yes, always/ Yes, sometimes									
	Sodium					Vitamin				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
PAHANG	151	8307	9.1	7.19	11.42	339	19422	21.2	18.08	24.79
Locality of School										
Urban	254	14364	38.0	34.70	41.49	286	16076	42.6	32.47	53.33
Rural	373	21729	40.5	35.06	46.15	317	17435	32.5	25.68	40.11
Sex										
Boys	340	20437	46.1	41.46	50.78	227	13026	29.4	23.09	36.55
Girls	287	15657	33.2	27.78	39.21	376	20486	43.5	36.45	50.82
Class										
Form 1	96	6715	36.4	27.70	46.03	81	5445	29.5	19.05	42.66
Form 2	115	7261	37.9	29.51	47.16	108	6513	34.0	28.62	39.88
Form 3	139	7615	42.1	36.92	47.42	136	7145	39.5	29.48	50.43
Form 4	121	6850	39.3	32.06	46.98	115	6516	37.4	27.98	47.80
Form 5	156	7652	41.8	34.10	49.99	163	7892	43.1	36.69	49.84
Ethnicity										
Malay	540	30885	40.3	36.46	44.25	528	29071	37.9	30.71	45.72
Chinese	58	3376	35.5	32.12	39.04	47	2742	28.8	20.97	38.21
Indian	20	1240	38.8	29.78	48.73	19	1132	35.5	21.23	52.85
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	2	102	100.0	100.00	100.00
Others	9	593	29.8	16.42	47.87	7	465	23.4	15.43	33.77
BMI-for-age status (BAZ)										
Thinness (<-2sd)	40	2258	40.0	31.05	49.71	32	1722	30.5	18.23	46.36
Normal (\geq -2sd - \leq +1sd)	408	23332	40.3	35.71	45.15	384	21446	37.1	30.24	44.48
Overweight ($>$ +1sd - \leq +2sd)	96	5561	37.7	30.00	45.97	96	5249	35.5	27.23	44.83
Obese ($>$ +2sd)	83	4943	37.6	31.35	44.33	91	5095	38.8	28.11	50.64
Height-for-age status (HAZ)										
Stunting (<-2sd)	63	3663	39.0	30.05	48.67	60	3312	35.2	23.41	49.17
Normal (\geq -2sd)	563	32359	39.5	35.58	43.57	543	30200	36.9	30.43	43.81

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.3b: Prevalence of reading nutrition information (micronutrient/fiber) among those who read food label (Yes, always/ Yes, sometimes)

Characteristic	Yes, always/ Yes, sometimes									
	Mineral					Fiber				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	143	8021	8.8	6.65	11.49	158	8997	9.8	8.00	12.04
Locality of School										
Urban	316	17833	47.2	39.41	55.18	162	9260	24.5	22.29	26.90
Rural	355	19406	36.2	27.09	46.32	174	9896	18.4	15.14	22.26
Sex										
Boys	231	13375	30.2	25.10	35.76	163	9400	21.2	16.83	26.34
Girls	440	23863	50.7	42.26	59.05	173	9756	20.7	17.73	24.05
Class										
Form 1	96	6378	34.5	23.16	48.03	62	4243	23.0	16.86	30.52
Form 2	111	6510	34.0	26.61	42.28	54	3265	17.1	11.49	24.58
Form 3	139	7370	40.7	29.77	52.68	65	3527	19.5	12.57	28.96
Form 4	140	8011	45.9	34.00	58.34	67	3787	21.7	16.13	28.56
Form 5	185	8970	49.0	41.57	56.55	88	4334	23.7	19.17	28.89
Ethnicity										
Malay	564	30754	40.1	32.14	48.67	284	15962	20.8	17.76	24.27
Chinese	73	4393	46.2	42.32	50.12	36	2198	23.1	19.09	27.70
Indian	21	1349	42.3	22.27	65.15	11	675	21.1	13.09	32.28
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	33	32.0	1.94	91.82	-	-	-	-	-
Others	12	710	35.7	28.67	43.42	5	321	16.2	11.57	22.10
BMI-for-age status (BAZ)										
Thinness (<-2sd)	26	1496	26.5	16.44	39.81	31	1746	30.9	21.66	42.07
Normal (≥-2sd - ≤+1sd)	411	22785	39.4	32.49	46.75	202	11522	19.9	16.54	23.80
Overweight (>+1sd - ≤+2sd)	127	6889	46.6	33.41	60.36	56	3141	21.3	16.35	27.18
Obese (>+2sd)	107	6069	46.2	34.04	58.81	46	2701	20.6	13.88	29.36
Height-for-age status (HAZ)										
Stunting (<-2sd)	64	3710	39.5	26.80	53.71	26	1497	15.9	10.59	23.24
Normal (≥-2sd)	607	33529	40.9	34.16	48.06	309	17613	21.5	18.78	24.50

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.4: Prevalence of reading food label among those who read food label (Yes, always/ Yes, sometimes) (Cont.)

Characteristic	Expiry date					Nutritional claim				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	1258	71413	78.1	70.40	84.24	241	13781	15.1	11.31	19.80
Locality of School										
Urban	576	32579	86.3	82.29	89.47	119	7030	18.6	12.57	26.68
Rural	682	38834	72.4	62.77	80.24	122	6751	12.6	9.09	17.15
Sex										
Boys	538	31719	71.5	61.56	79.76	96	5977	13.5	9.88	18.12
Girls	720	39695	84.3	79.05	88.41	145	7804	16.6	11.51	23.27
Class										
Form 1	204	14130	76.5	64.45	85.44	43	2991	16.2	9.95	25.26
Form 2	224	13497	70.5	60.14	79.12	37	2239	11.7	7.82	17.14
Form 3	262	14038	77.6	66.15	85.95	71	3853	21.3	13.71	31.52
Form 4	252	14257	81.7	73.87	87.63	30	1775	10.2	4.90	19.97
Form 5	316	15491	84.7	79.09	88.99	60	2923	16.0	10.49	23.59
Ethnicity										
Malay	1050	59024	77.0	68.98	83.46	181	10193	13.3	9.98	17.51
Chinese	143	8517	89.6	81.46	94.37	46	2730	28.7	24.83	32.92
Indian	41	2426	76.0	50.69	90.69	10	646	20.2	11.37	33.38
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	2	102	100.0	100.00	100.00	1	33	32.0	1.94	91.82
Others	22	1344	67.6	39.00	87.20	3	179	9.0	5.19	15.25
BMI-for-age status (BAZ)										
Thinness (<-2sd)	77	4414	78.2	62.42	88.59	11	628	11.1	6.59	18.16
Normal (≥-2sd - ≤+1sd)	807	45719	79.0	71.90	84.75	156	8777	15.2	10.83	20.85
Overweight (>+1sd - ≤+2sd)	207	11692	79.2	65.57	88.35	41	2424	16.4	11.30	23.23
Obese (>+2sd)	166	9542	72.6	62.07	81.14	33	1952	14.9	9.51	22.45
Height-for-age status (HAZ)										
Stunting (<-2sd)	115	6546	69.6	52.24	82.77	23	1381	14.7	9.17	22.71
Normal (≥-2sd)	1141	64750	79.0	71.90	84.75	218	12399	15.1	11.20	20.14

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.4: Prevalence of reading food label among those who read food label (Yes, always/ Yes, sometimes) (Cont.)

Characteristic	Nutrition fact					Halal logo				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	387	21792	23.8	18.72	29.83	793	44291	48.4	37.26	59.78
Locality of School										
Urban	186	10785	28.6	23.46	34.27	337	18968	50.2	29.13	71.25
Rural	201	11007	20.5	14.11	28.82	456	25323	47.2	36.37	58.26
Sex										
Boys	178	10453	23.6	19.26	28.50	323	18739	42.3	33.20	51.87
Girls	209	11339	24.1	17.60	32.01	470	25551	54.3	41.49	66.49
Class										
Form 1	56	3793	20.5	14.39	28.47	115	7642	41.4	26.50	58.06
Form 2	65	4170	21.8	16.17	28.69	134	8171	42.7	30.93	55.33
Form 3	84	4371	24.2	17.21	32.79	145	7508	41.5	26.35	58.41
Form 4	78	4365	25.0	16.71	35.70	175	9951	57.0	38.15	74.09
Form 5	104	5093	27.8	19.83	37.56	224	11019	60.2	52.64	67.37
Ethnicity										
Malay	309	16967	22.1	16.73	28.68	768	42722	55.7	45.23	65.76
Chinese	48	2920	30.7	23.36	39.19	13	813	8.5	4.42	15.89
Indian	21	1309	41.0	23.98	60.46	7	507	15.9	4.83	41.26
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	33	32.0	1.94	91.82	1	33	32.0	1.94	91.82
Others	8	564	28.4	19.57	39.19	4	215	10.8	3.84	26.94
BMI-for-age status (BAZ)										
Thinness (<-2sd)	20	1171	20.8	15.00	28.00	53	3059	54.2	40.79	67.05
Normal (≥-2sd - ≤+1sd)	245	13707	23.7	18.41	29.95	494	27687	47.9	36.32	59.65
Overweight (>+1sd - ≤+2sd)	60	3247	22.0	14.23	32.36	136	7419	50.2	35.97	64.45
Obese (>+2sd)	62	3667	27.9	17.20	41.90	109	6079	46.3	32.97	60.13
Height-for-age status (HAZ)										
Stunting (<-2sd)	28	1580	16.8	11.30	24.25	88	5127	54.5	40.55	67.83
Normal (≥-2sd)	359	20212	24.7	19.43	30.79	704	39117	47.8	36.23	59.52

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.4: Prevalence of reading food label among those who read food label (Yes, always/ Yes, sometimes)

Characteristic	Food ingredients					Storage instruction				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	458	25401	27.8	21.49	35.08	302	16930	18.5	13.39	25.04
Locality of School										
Urban	213	12147	32.2	23.51	42.25	168	9839	26.1	20.67	32.28
Rural	245	13254	24.7	17.33	33.89	134	7091	13.2	8.56	19.84
Sex										
Boys	181	10245	23.1	17.61	29.69	118	6774	15.3	10.66	21.40
Girls	277	15156	32.2	24.01	41.62	184	10156	21.6	15.46	29.25
Class										
Form 1	62	4002	21.7	13.08	33.74	56	3666	19.9	11.37	32.37
Form 2	75	4544	23.7	15.47	34.62	49	2811	14.7	10.81	19.64
Form 3	95	4981	27.5	20.79	35.46	68	3619	20.0	13.10	29.31
Form 4	90	5052	29.0	19.02	41.46	52	3068	17.6	10.42	28.13
Form 5	136	6822	37.3	28.54	46.96	77	3766	20.6	15.04	27.52
Ethnicity										
Malay	389	21335	27.8	20.94	35.97	238	13136	17.1	12.21	23.53
Chinese	38	2251	23.7	20.28	27.43	47	2738	28.8	23.38	34.88
Indian	21	1270	39.8	32.77	47.25	15	943	29.5	11.09	58.50
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	33	32.0	1.94	91.82	1	33	32.0	1.94	91.82
Others	9	511	25.7	18.22	35.01	1	80	4.0	1.79	8.82
BMI-for-age status (BAZ)										
Thinness (<-2sd)	33	1790	31.7	20.33	45.81	17	983	17.4	10.52	27.47
Normal (≥-2sd - ≤+1sd)	285	15645	27.0	19.87	35.67	203	11323	19.6	13.84	26.95
Overweight (>+1sd - ≤+2sd)	75	4199	28.4	21.27	36.88	43	2450	16.6	11.22	23.83
Obese (>+2sd)	65	3767	28.7	23.22	34.82	39	2173	16.5	10.00	26.12
Height-for-age status (HAZ)										
Stunting (<-2sd)	52	2938	31.3	18.36	47.88	31	1728	18.4	9.93	31.51
Normal (≥-2sd)	406	22463	27.4	21.71	33.98	271	15201	18.6	13.73	24.60

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.5: Prevalence of understanding on the interpretation calorie and sugar content on the nutrition labelling among adolescents (Cont.)

Characteristic	Both Correct					Interpretation calorie correct				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	830	45824	44.2	33.14	55.90	1090	61342	59.2	48.86	68.77
Locality of School										
Urban	452	25516	57.5	45.77	68.49	551	31051	70.0	57.42	80.16
Rural	378	20308	34.3	22.53	48.29	539	30291	51.1	39.97	62.12
Sex										
Boys	361	20784	40.3	30.60	50.86	506	29762	57.7	48.99	66.02
Girls	469	25040	48.1	35.68	60.71	584	31579	60.6	48.10	71.91
Class										
Form 1	129	8641	40.3	29.40	52.18	181	12448	58.0	47.57	67.77
Form 2	144	8597	41.0	28.15	55.14	197	12027	57.3	44.09	69.56
Form 3	189	9829	47.2	33.01	61.80	240	12728	61.1	49.09	71.86
Form 4	156	8732	44.2	29.31	60.19	206	11427	57.8	40.72	73.24
Form 5	212	10024	48.7	39.29	58.19	266	12711	61.7	52.15	70.51
Ethnicity										
Malay	693	37699	44.5	32.04	57.67	912	50673	59.8	48.07	70.51
Chinese	98	5885	45.0	34.79	55.70	123	7403	56.6	48.67	64.27
Indian	22	1265	37.7	20.23	59.07	32	1890	56.3	33.42	76.82
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	2	102	100.0	100.00	100.00	2	102	100.0	100.00	100.00
Others	15	873	37.6	19.12	60.47	21	1273	54.8	36.92	71.50
BMI-for-age status (BAZ)										
Thinness (<-2sd)	48	2639	40.9	24.68	59.31	62	3491	54.1	40.02	67.48
Normal (≥-2sd - ≤+1sd)	518	28331	43.1	32.51	54.37	693	38768	59.0	49.16	68.15
Overweight (>+1sd - ≤+2sd)	143	7755	46.6	32.51	61.28	178	9806	58.9	44.02	72.38
Obese (>+2sd)	120	7053	48.2	34.62	62.06	156	9230	63.1	52.01	72.93
Height-for-age status (HAZ)										
Stunting (<-2sd)	74	4102	39.9	27.31	53.90	100	5799	56.4	47.18	65.12
Normal (≥-2sd)	755	41676	44.8	33.71	56.38	988	55425	59.5	48.91	69.35

Table 3.7.5: Prevalence of understanding on the interpretation calorie and sugar content on the nutrition labelling among adolescents

Characteristic	Interpretation of sugar correct				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PAHANG	1024	57820	55.8	46.73	64.48
Locality of School					
Urban	510	28856	65.1	53.61	75.01
Rural	514	28964	48.9	39.07	58.74
Sex					
Boys	463	27384	53.1	45.73	60.38
Girls	561	30436	58.4	47.47	68.62
Class					
Form 1	159	10787	50.3	40.05	60.45
Form 2	182	11238	53.6	43.38	63.43
Form 3	239	12763	61.2	49.34	71.94
Form 4	189	10764	54.5	41.64	66.74
Form 5	255	12267	59.6	51.80	66.93
Ethnicity					
Malay	850	47414	56.0	45.72	65.71
Chinese	122	7301	55.9	44.17	66.94
Indian	29	1685	50.2	32.97	67.40
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	2	102	100.0	100.00	100.00
Others	21	1317	56.7	41.22	70.92
BMI-for-age status (BAZ)					
Thinness (<-2sd)	64	3624	56.1	41.76	69.53
Normal (\geq -2sd - \leq +1sd)	644	36024	54.8	45.74	63.58
Overweight ($>$ +1sd - \leq +2sd)	168	9429	56.7	44.50	68.09
Obese ($>$ +2sd)	147	8696	59.4	48.85	69.21
Height-for-age status (HAZ)					
Stunting (<-2sd)	93	5275	51.3	40.89	61.52
Normal (\geq -2sd)	930	52499	56.4	47.34	65.05

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.6: Prevalence of understanding on correct interpretation of front of pack labelling for energy among adolescents (Cont.)

Characteristic	Both correct					Know only the energy content				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	445	24460	23.6	17.01	31.78	679	38141	36.8	28.15	46.40
Locality of School										
Urban	240	13595	30.7	22.38	40.39	372	21242	47.9	37.71	58.25
Rural	205	10865	18.3	11.26	28.41	307	16899	28.5	20.29	38.45
Sex										
Boys	214	12283	23.8	18.46	30.18	324	18995	36.8	30.30	43.92
Girls	231	12177	23.4	15.25	34.10	355	19146	36.8	25.42	49.78
Class										
Form 1	63	4136	19.3	11.68	30.12	102	6961	32.4	22.38	44.42
Form 2	82	5034	24.0	15.39	35.38	115	7163	34.1	24.09	45.84
Form 3	106	5567	26.7	18.88	36.34	164	8834	42.4	31.77	53.77
Form 4	94	5185	26.2	18.27	36.13	151	8407	42.5	31.14	54.80
Form 5	100	4539	22.0	14.20	32.59	147	6775	32.9	23.38	44.09
Ethnicity										
Malay	371	19969	23.6	16.36	32.71	546	29940	35.3	26.21	45.67
Chinese	51	3114	23.8	15.64	34.54	96	5946	45.5	29.81	62.12
Indian	16	923	27.5	14.36	46.19	25	1472	43.9	22.50	67.76
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	1	33	32.0	1.94	91.82	2	102	100.0	100.00	100.00
Others	6	421	18.1	6.64	40.80	10	681	29.3	18.94	42.42
BMI-for-age status (BAZ)										
Thinness (<-2sd)	29	1538	23.8	12.60	40.44	42	2311	35.8	22.86	51.18
Normal (≥-2sd - ≤+1sd)	279	15447	23.5	17.50	30.80	429	24087	36.7	27.94	46.33
Overweight (>+1sd - ≤+2sd)	81	4304	25.9	16.14	38.75	123	6736	40.5	28.70	53.49
Obese (>+2sd)	56	3172	21.7	15.11	30.08	84	4961	33.9	26.12	42.66
Height-for-age status (HAZ)										
Stunting (<-2sd)	41	2288	22.2	14.18	33.11	59	3354	32.6	21.36	46.26
Normal (≥-2sd)	404	22172	23.8	17.23	31.95	619	34741	37.3	28.66	46.88

Table 3.7.6: Prevalence of understanding on correct interpretation of front of pack labelling for energy among adolescents

Characteristic	Know only the percentage of contribution by serving of foods				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PAHANG	822	46860	45.2	38.62	51.99
Locality of School					
Urban	375	21298	48.0	36.69	59.56
Rural	447	25562	43.1	36.03	50.50
Sex					
Boys	392	23471	45.5	39.26	51.94
Girls	430	23389	44.9	37.45	52.60
Class					
Form 1	136	9321	43.4	33.36	54.07
Form 2	160	10116	48.2	38.13	58.42
Form 3	169	8987	43.1	36.88	49.59
Form 4	161	9005	45.6	35.68	55.82
Form 5	196	9432	45.8	36.01	55.97
Ethnicity					
Malay	715	40457	47.7	40.82	54.75
Chinese	68	4117	31.5	26.52	36.94
Indian	21	1211	36.1	21.26	54.17
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	1	33	32.0	1.94	91.82
Others	17	1042	44.8	25.78	65.55
BMI-for-age status (BAZ)					
Thinness (<-2sd)	51	2854	44.2	30.57	58.78
Normal ($\geq-2sd$ - $\leq+1sd$)	528	30068	45.8	39.74	51.89
Overweight ($>+1sd$ - $\leq+2sd$)	130	7263	43.7	33.74	54.10
Obese ($>+2sd$)	113	6675	45.6	37.56	53.92
Height-for-age status (HAZ)					
Stunting (<-2sd)	80	4640	45.1	36.42	54.08
Normal ($\geq-2sd$)	741	42148	45.3	38.41	52.33

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

Table 3.7.7: Prevalence on the understanding of food ingredients among adolescents (Cont.)

Characteristic	Both Correct					Know only the highest ingredient				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PAHANG	105	6333	6.9	5.65	8.46	880	50090	54.8	48.04	61.35
Locality of School										
Urban	42	2427	6.4	4.87	8.43	412	23421	62.0	57.40	66.44
Rural	63	3907	7.3	5.52	9.53	468	26668	49.7	41.25	58.14
Sex										
Boys	42	2592	5.8	4.65	7.32	368	21960	49.5	43.12	55.93
Girls	63	3741	7.9	5.88	10.66	512	28130	59.7	52.13	66.89
Class										
Form 1	25	1790	9.7	6.77	13.70	136	9314	50.5	39.99	60.87
Form 2	22	1289	6.7	4.58	9.81	168	10323	53.9	44.93	62.67
Form 3	16	873	4.8	2.90	7.93	180	9606	53.1	45.98	60.04
Form 4	25	1503	8.6	5.80	12.62	175	10114	58.0	50.94	64.72
Form 5	17	878	4.8	2.26	9.90	221	10733	58.7	51.01	65.94
Ethnicity										
Malay	84	5026	6.6	5.18	8.27	725	40915	53.4	46.11	60.52
Chinese	18	1086	11.4	7.25	17.51	107	6295	66.2	58.16	73.39
Indian	3	221	6.9	1.68	24.47	31	1839	57.6	36.30	76.41
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	1	33	32.0	1.94	91.82
Others	-	-	-	-	-	16	1007	50.7	35.06	66.20
BMI-for-age status (BAZ)										
Thinness (<-2sd)	5	337	6.0	2.34	14.45	52	3021	53.5	41.59	65.09
Normal (≥-2sd - ≤+1sd)	76	4622	8.0	5.87	10.80	564	31849	55.1	47.70	62.21
Overweight (>+1sd - ≤+2sd)	13	700	4.7	2.95	7.53	150	8633	58.5	50.74	65.77
Obese (>+2sd)	11	674	5.1	2.95	8.76	113	6540	49.8	39.44	60.13
Height-for-age status (HAZ)										
Stunting (<-2sd)	8	457	4.9	2.66	8.74	82	4796	51.0	39.92	62.01
Normal (≥-2sd)	97	5876	7.2	5.68	9.01	797	45247	55.2	48.35	61.92

Table 3.7.7: Prevalence on the understanding of food ingredients among adolescents

Characteristic	Know only the lowest ingredient				
	Unweighted	Estimated	Prevalence	95% CI	
	Count	Population	(%)	Lower	Upper
PAHANG	228	13617	14.9	12.26	17.98
Locality of School					
Urban	83	4623	12.2	9.54	15.58
Rural	145	8995	16.8	13.43	20.71
Sex					
Boys	98	6094	13.7	10.61	17.62
Girls	130	7523	16.0	12.05	20.87
Class					
Form 1	49	3496	18.9	14.12	24.93
Form 2	42	2511	13.1	9.43	17.96
Form 3	45	2503	13.8	8.32	22.11
Form 4	48	2847	16.3	11.77	22.20
Form 5	44	2259	12.3	8.27	18.04
Ethnicity					
Malay	195	11573	15.1	12.43	18.23
Chinese	23	1378	14.5	8.25	24.21
Indian	7	466	14.6	4.44	38.55
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-
Others	3	201	10.1	4.41	21.49
BMI-for-age status (BAZ)					
Thinness (<-2sd)	12	711	12.6	8.31	18.66
Normal (\geq -2sd - \leq +1sd)	144	8670	15.0	11.97	18.61
Overweight (>+1sd - \leq +2sd)	41	2359	16.0	11.50	21.75
Obese (>+2sd)	31	1878	14.3	10.58	19.02
Height-for-age status (HAZ)					
Stunting (<-2sd)	20	1105	11.8	7.72	17.50
Normal (\geq -2sd)	208	12512	15.3	12.41	18.65

Appendices

Appendix 1: Members of Steering Committee NHMS 2015-2018

1. Director General of Health
2. Deputy Director General of Health (Public Health)
3. Deputy Director General of Health (Medical)
4. Deputy Director General of Health (Research & Tech Support)
5. Director, Oral Health Division
6. Director, Pharmaceutical Services Division
7. Director, Food Safety and Quality Programmed Division
8. Director, Medical Development Division
9. Director, Planning Division
10. Director, Health Education Division
11. Director, Disease Control Division
12. Director, Family Health Development Division
13. Director, Nutrition Division
14. Representative of State Directors
15. Director, Institute for Public Health
16. Dean Faculty of Medicine, University of Malaya
17. Dean Faculty of Medicine, National University of Malaysia
18. Principle Investigator, NHMS

Appendix 2: Term of Reference for NHMS 2015-2018 Steering Committee

1. To approve the objectives and scopes of NHMS 2015-2018.
2. To facilitate inter and intra sectorial collaboration.
3. To monitor the implementation of the NHMS 2015-2018.
4. To facilitate the utilisation of the NHMS 2015-2018 findings.

Appendix 3: List of members of Central Coordinating Committee, NHMS 2017

1. Dr Hj Tahir bin Aris, Director of Institute for Public Health
2. Dr Muhammad Fadhli bin Mohd Yusoff, Coordinator of NHMS 2015-2018
3. Dr. S Maria binti Awaluddin, Principal Investigator of Adolescent Health Survey
4. Pn. Ruhaya binti Salleh, Principal Investigator of Adolescent Nutrition Survey
5. En. Mohamad Aznuddin bin Abd Razak, Principal Investigator of Healthy Mind Screening using DASS
6. Dr Mohd Azahadi bin Omar, Head Data Processing and Data Management
7. Dr Noor Ani binti Ahmad, Central Field Supervisor of Perlis & Kedah
8. Dr. Nor Asiah binti Mohamad, Central Field Supervisor of Johor, Melaka & Negeri Sembilan
9. Dr. Rajini a/p Sooryanarayana, Data Processing & Quality
- 10.Pn. Tee Guat Hiong, Central Field Supervisor of Sarawak
- 11.Dr. Nur Liana binti Ab. Majid, Central Field Supervisor of WP Kuala Lumpur, WP Putrajaya & Selangor
- 12.Cik Hasimah binti Ismail, Central Field Supervisor of Pahang, Kelantan & Terengganu
- 13.Pn. Norzawati binti Yeop, Central Field Supervisor of Perak & Kedah
- 14.Pn. Norazizah binti Ibrahim Wong, Data Processing & Quality
- 15.En. Mohd Hazrin bin Hasim @ Hashim, Central Field Supervisor of WP Labuan & Sabah
- 16.Pn. Lalitha a/p Palaniveloo, Person in charge for Dietary Intake
- 17.Pn. Siti Nor'Ain binti Hashim, Head of ICT Support
- 18.En. Lim Kuang Kuay, Logistic Support
- 19.Pn. Hamizatul Akmal binti Abd. Hamid, Project Manager
- 20.Pn Wan Shakira binti Rodzlan Hasani, Project Manager
- 21.Pn. Cheong Siew Man, Person in-charge for Habitual Food Intake
- 22.Pn. Nazirah Bt Alias, Data Processing & Quality
- 23.Dr. Fazila Haryati Ahmad, Data Processing & Quality

Appendix 4: Terms of Reference for NHMS 2017 Central Coordinating Team

No	Team	Duties	Officers
1	Project Management and Finance	<p>Work closely with recruitment group for employment of RA</p> <p>Prepare Questionnaires manual, Data collection manual</p> <p>Meeting with Liason Officers</p> <p>Planning for data collection training</p> <p>Prepare security cards/name tags for research team</p> <p>Arrangement for advanced payment for team managers, nurses and drivers</p> <p>Process claims of MOH staff</p> <p>Prepare tickets for travelling</p> <p>Monitor the expenditure/budget</p>	<p>Dr. Muhammad Fadhli bin Mohd Yusoff</p> <p>Dr. S. Maria binti Awaluddin Pn. Ruhaya binti Salleh</p> <p>Pn. Hamizatul Akmal binti Abd Hamid Pn. Wan Shakira binti Rodzlan Hasani</p> <p>Cik Nur Hazwani binti Mohd Hasri</p>
2	Survey Research Centre	<p>Calculate the sample size</p> <p>Determine the sample distribution by state</p>	<p>Dr. Muhammad Fadhli bin Mohd Yusoff</p> <p>Pn. Norazizah binti Ibrahim Wong</p> <p>Pn. Wan Shakira binti Rodzlan Hasani</p>
3	ICT Unit	<p>Maintenance of the scanning machine</p> <p>Daily back up for databases</p>	<p>Pn. Siti Nor'ain Binti Hashim</p> <p>En. Sulaiman Bin Harun</p> <p>En. Yusmirol Bin Yusop</p> <p>En. Andy Bin Mustaming</p>
4	Central Field Supervisors	<p><u>Before Data Collection</u></p> <p>Central Field Supervisors are expected to prepare for the initiation of data collection. The preparation tasks include:</p>	<p>Dr Nor Asiah Binti Muhamad</p> <p>Dr Nur Liana Binti Ab Majid</p> <p>Pn. Norzawati Binti Yeop</p> <p>Dr. Noor Ani Binti Ahmad</p>

		<p>Conduct meeting with State Education Office, School Principals, Teacher in-charged for the selected schools.</p> <p>To ensure adequate logistic support for the data collection and liaise with the District Education Office, District Health Office and other relevant departments to ensure that:</p> <ul style="list-style-type: none"> • Human resources are available: Field Supervisors, Team leaders, Research Assistants and drivers. • Manage transport: Vehicles • Manage survey instruments and relevant form • Manage lodging for data collectors <p><u>During Data Collection</u></p> <p>Gather feedback from the field on the data collection status and problems related to logistics.</p> <p>Visit the field to help data collectors solve the problem if necessary.</p> <p>To ensure all data collection monitoring forms have been received on time.</p> <p>To ensure bundle from field received by the Operation Centre by hand and bypost(Sabah, Sarawak, WP Labuan)</p> <p>Updating the monitoring board for state achievement and attending CCT meeting.</p>	<p>Pn. Hasimah Binti Ismail</p> <p>Pn. Helen Tee Guat Hiong</p> <p>En. Mohd Hazrin Bin Hasim @ Hashim</p>
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5	Data Processing and management	<p>Setting up data processing facility Development of directory of variables database</p> <p>Development of QC manual for data processing Specify data structure for data processing and data output requirement</p> <p>Responsible for data entry and data Cleaning</p> <p>Monitoring and evaluation of QC performance for data processing</p>	<p>Dr. Mohd Azahadi bin Omar</p> <p>Dr. Rajini a/p sooryanarayana</p> <p>Dr. Fazila Haryati Binti Ahmad</p> <p>Pn. Nazirah Binti Alias</p>
6	Operation Centre	<p>Arrange date and place of meeting</p> <p>Prepare and circulate briefing materials</p> <p>Prepare and circulate minutes of CCT meeting</p> <p>Prepare letters of appointment to state liaison officers, nurses, scouts and data collectors</p> <p>Prepare advertisement material for recruitment of data collectors, team leaders, and interviewers,</p> <p>Prepare letters of notifications for data collections</p> <p>Prepare manuals for scouts, field supervisors, data collectors and nurses</p> <p>Develop a system/format and monitor the distribution of materials/equipment for field work</p> <p>Arrange transport/drivers for distribution and collection of materials/equipment/SAQ</p>	<p>Pn. Hamizatul Akmal binti Abd Hamid</p> <p>En. Azli bin Baharudin</p> <p>Cik Nur Hazwani binti Mohd Hasri</p> <p>Pn. Siti Noafika Binti Anwar</p> <p>En. Muhammad Suhaimi Bin Mohamad Idrus</p> <p>Cik Shahibul Bariah binti Mat Ghani</p> <p>Pn. Nur Fadzilla binti Mohd Radzi</p> <p>En. Muhammad Zuhdi Bin Khiruddin</p> <p>Cik Nurbaiti Binti Asmawi</p>

Appendix 5: List of Research Team Members, NHMS 2017

- | | |
|------------------------------------|--|
| 1. Ms. Ainan Nasrina Ismail | 20. Ms. Norlida Zulkafly |
| 2. Mr. Azli Baharudin | 21. Ms. Nur Ili Mohamad Tarmizi |
| 3. Ms. Chin Kim Ling | 22. Ms. Nur Shahida Abdul Aziz |
| 4. Ms. Chong Siew Man | 23. Prof. Dr. Poh Bee Koon |
| 5. Ms. Fatimah Othman | 24. Ms. Rashidah Ambak |
| 6. Assc. Prof. Dr. Hazizi Abu Saad | 25. Ms. Rohana Ya'akob |
| 7. Ms. Jamilah Ahmad | 26. Ms. Ruby Zainureen Zahedi |
| 8. Ms. Junaidah Raib | 27. Ms. Ruhaya Salleh |
| 9. Mr. Lai Wai Kent | 28. Ms. Rusidah Selamat |
| 10. Ms. Lalitha a/p Palanivello | 29. Prof. Dr. Ruzita Abd Talib |
| 11. Ms. Ling Swee Nian | 30. Prof. Madya Datin Dr. Safiah Md
Yusof |
| 12. Dr. Mahenderan a/l Appukutty | 31. Ms. Sam Azura Ahmad |
| 13. Mr. Mohamad Hasnan Ahmad | 32. Mr. Shahrulnaz Norhazli Nazri |
| 14. Mr. Mohamad Ihsan Tahir | 33. Dr. Subash Shander a/l Ganapathy |
| 15. Dr. Mohd Azahadi Omar | 34. Mr. Suhaidi Sudin |
| 16. Ms. Noor Hasnani Ismail | 35. Ms. Syafinaz Sallehuddin |
| 17. Ms. Noor Ul-Aziha Muhammad | 36. Mr. Tan Beng Chin |
| 18. Ms. Nor Azian Mohd Zaki | |
| 19. Ms. Nor Azizah Ibrahim Wong | |

Appendix 6: List of Data Collection Teams

PAHANG

Liaison Officer

Ms. Suriati binti Zakaria

Field Supervisor

1. Ms. Muslimah binti Yusof
2. Mr. Mohamad Hasnan bin Ahmad

Nutritionist

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Ms. Nur Shazwani binti Ahmad Nazri 2. Ms. Shalina binti Ramli 3. Mr. Lai Wai Kent 4. Ms. Fazrina binti Jamharee 5. Mr. Mohd Faez bin Bachok 6. Ms. Nurul Hidayah binti Whakiddin 7. Ms. Norafifah binti Ahmad Shabri | <ol style="list-style-type: none"> 8. Ms. Tiew Kee Fong 9. Ms. Nur Nadia binti Zamri |
|---|--|

Drivers

1. Mr. Wan Mohd Aharunizam bin Wan Abd Aziz
2. Mr. Muhammad Syamil bin Abdul Rahim
3. Mr. Hasmizan bin Mukhtar
4. Mr. Muhammad Shairul Azizie bin Abdul Razak
5. Mr. Muhammad Yusof bin Fadzil
6. Mr. Mohd Zorani bin Siwok
7. Mr. Abdullah bin Ishak

Research Assistants

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Najihah binti Mohd Shahril 2. Noraini binti Abdullah@Ab Ghani 3. Nursahila binti Abdul Hamid 4. Khairul Hazmi bin Haslan | <ol style="list-style-type: none"> 5. Maisarah binti Norhizat 6. Nurul Nadia binti Mohd Ghazali 7. Norhayati binti Kamurudin 8. Muhammad Fateh bin Mustafa |
|--|--|

Appendix 7: Nutrition Questionnaires



TINJAUAN PEMAKANAN REMAJA 2017
மலேசிய பள்ளி மாணவர் உணவு முறை ஆய்வறிக்கை 2017

BORANG SOAL SELIDIK
அளவறிக்கை

Pengenalan

Tinjauan ini dijalankan untuk mengetahui status pemakanan, amalan pemakanan, pengambilan makanan, tahap aktiviti Fizikal, dan penggunaan label makanan dan pemakanan anda. Pelajar lain yang terpilih seperti anda di seluruh negara juga menjawab borang soal selidik ini.

Maklumat yang anda berikan akan digunakan untuk membangunkan program-program kesihatan yang lebih baik untuk generasi muda seperti anda.

அறிமுகம்

பந்த ஆய்வு உங்கள் உணவு பழக்கமுறைமற்றும் சுகாதாரத்தின் அளவை கணக்கீட பயன்படும். நம் நாட்டில் உள்ள அனைத்து மாணவர்களும் பந்த ஆய்வறிக்கையில் பங்குபெறுகின்றனர்.

நீங்கள் கொடுக்கும் தகவல்கள் நம் நாட்டில் உள்ளவர்களுக்கிடையே நிலையைப் பேச மிகவும் உதவும்.

Panduan mengisi borang soal-selidik

ஆய்வறிக்கையை நிரப்ப வழிகாட்டிகள்

1. Jawapan yang anda berikan akan **DIRAHSIAKAN**. Jawab soalan-soalan berdasarkan apa yang tahu dan apa yang anda lakukan. Tidak ada jawapan yang betul atau salah.
நீங்கள் கொடுக்கும் தகவல்கள் சம்மந்தப்பட்டோர் மட்டுமே பயன்படுத்துவர். உங்களுக்கு தெரிந்த விடையடி அளிக்கவும். சரி அல்லது பிழை என்ற மட்டுமே விடையளிக்கக் கூடாது.
2. Baca soalan dengan teliti. Hitamkan jawapan anda pada kertas jawapan yang disediakan dengan pensil 2B yang dibekalkan.
கொடுக்கப்பட்டுள்ள கேள்விகளை தெளிவாக படித்தப்பின் 2B எழுதுக்கோலால் விடைத்தாளில் பதிலளிக்கவும்.
3. Cara menghitamkan jawapan:
பதிலளிக்கும் முறை:
Hitamkan jawapan anda seperti ini  bukan seperti ini  atau 
பவ்வாறு கருமயாக்கவும் பவ்வாறல்ல அல்லது
4. Hanya satu jawapan bagi setiap soalan **KECUALI** ada arahan lain yang dinyatakan.
கொடுக்கப்பட்டுள்ள கேள்விகளுக்கு குறிப்பிடப்பட்ட அளவு விடையளிக்க வேண்டும்.
5. Sekiranya anda tidak faham, sila angkat tangan untuk bertanyakan soalan semasa sesi menjawab soalan.
புரியாவிடில் உங்கள் கரத்தை உயர்த்தி அங்கிருக்கும் ஆசிரியரிடம் கேள்வி கேட்கலாம்.
6. Apabila anda selesai menjawab, tunggu arahan daripada Fasilitator yang menjaga kelas anda.
விடையளித்து முடித்தப்பின் ஆசிரியர் உங்கள் தால்களை வாங்கும் வரை பொருத்திருங்கள்.

Terima kasih di atas kesudian anda menjawab soal selidik ini.
பவ்வாய்வறிக்கையை விடையளித்தமைக்கு நன்றி

Tinjauan Persekitaran Keluarga

MODUL A : MAKLUMAT PERIBADI					
தொகுதி A : மாணவர் தகவல்					
Arahan : Isikan ID pelajar, tarikh lahir dan hitamkan jawapan pada kertas jawapan yang disediakan. கட்டளை: மாணவர் பெயர், பிறந்த திகதி, மற்றும் சரியான விடையை கொடுக்கப்பட்டுள்ள விடைத்தாளில் எழுதவும்.					
A1	ID Pelajar மாணவர் ஐடி	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Negeri மாநில	Strata நிலை	Kategori Sekolah பள்ளி பிரிவு	Kod Sekolah பள்ளி குறியீடு
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
A2	Tarikh lahir பிறந்த திகதி	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Hari நாள்	Bulan மாதம்	Tahun ஆண்டு	
A3	Jantina பால்	A. Lelaki -ன் B. Perempuan பெண்			
A4	Bangsa மனம்	A. Melayu மலாய் B. Cina சீனர் C. India மத்தியர் D. Bumiputra Sabah சபா பூர்வீகம் E. Bumiputra Sarawak சரவாக்பூர்வீகம் F. Lain-Lain மற்றது			
		Sekolah Rendah ஆரம்பப்பள்ளி		Sekolah Menengah மடைநிலைப்பள்ளி	
A5	Kelas Àìòò	A. Tahun 4 ஆண்டு 4 B. Tahun 5 ஆண்டு 5 C. Tahun 6 ஆண்டு 6		D. Kelas Peralihan குறைநீக்கல்வகுப்பு E. Tingkatan 1 படிவம் 1 F. Tingkatan 2 படிவம் 2 G. Tingkatan 3 படிவம் 3 H. Tingkatan 4 படிவம் 4 I. Tingkatan 5 படிவம் 5	
A6	Umur ÀÁÀ	A. 10 tahun 10 வயது B. 11 tahun 11 வயது C. 12 tahun 12 வயது		D. 13 tahun 13 வயது E. 14 tahun 14 வயது F. 15 tahun 15 வயது G. 16 tahun 16 வயது H. 17 tahun 17 வயது I. 18 tahun 18 வயது	

MODUL B : CORAK PEMAKANAN
தொகுதி B : உணவு பழக்கம்

Arahan : Pilih jawapan dan hitamkan pada kertas jawapan yang disediakan.

கட்டளை : சரியான விடையைத் தெர்வு செய்து கொடுக்கப்படுள்ள விடைத்தாளில் கருமையாக்குக .

- B1** Apakah sesi persekolahan anda?
 உங்கள்பள்ளி எச்சமயத்தில் நடைபெறும் ?
 A Sesi pagi sahaja / காஸலயில் மட்டும்
 B Sesi petang sahaja / மதியத்தில் மட்டும்
 C Sesi pagi sampai petang / காஸல முதல் மாஸல வஸர
- B2** Kebiasaannya, dalam seminggu berapa hari anda mengambil sarapan (dari pukul 6.00 pagi hingga 8.00 pagi)?
 ஒரு வாரத்தில் எத்தனை முறை காஸல சிற்றுண்டி உட்கொள்வீர்கள்? (காஸல மணி 6.00-
 விருந்துகாஸல மணி 8.00 வஸர)?
 A 1 hari / 1 நாள்
 B 2 hari / 2 நாள்
 C 3 hari / 3 நாள்
 D 4 hari / 4 நாள்
 E 5 hari / 5 நாள்
 F 6 hari / 6 நாள்
 G 7 hari / 7 நாள்
 H Tidak berkaitan / Tidak ambil sarapan
 தொடர்பு டல்லை /காஸல உணவு உட்கொள்வதில்லை
- B3** Kebiasaannya, dari mana anda dapat makanan itu?
 வழக்கமாக எங்கு காஸல உணவை உட்கொள்வீர்கள்?
 A Disediakan di rumah / வீடு
 B Beli di kantin sekolah / பள்ளி சிற்றுண்டிச்சாஸல
 C Beli di restoran atau warung / கஸல
 D Disediakan di asrama / பள்ளி விடுதி
 E Lain-lain / மற்றது
 F Tidak ambil sarapan / காஸல உணவு உட்கொள்வதில்லை
- B4** Sekiranya anda tidak mengambil sarapan, apakah sebabnya?
 ஏன் காஸல உணவை உட்கொள்வதில்லை?
 A Tiada makanan / உணவு டல்லை
 B Tiada selera / உண்ண விருப்பமில்லை
 C Tiada masa / நேரம்டல்லை
 D Berdiet/kawal berat badan / உணவு கட்டுப்பாட்டிலிருத்தல்
 E Tiada duit / பணம் பற்றாகுறை
 F Lain-lain / மற்றது
 G Tidak berkaitan/kerana saya mengambil sarapan setiap hari
 தொடர்பு டல்லை/ தினமும் காஸல சிற்றுண்டி உட்கொள்வேன்.

Tamil and English

- B5** Kebiasaannya, dalam seminggu berapa hari anda makan dan/atau minum pada waktu rehat sekolah?
வழக்கமாக ஒரு வாரத்தில் எத்தனை முறை பள்ளி ஓய்வு நேரத்தில் உணவு உட்கொள்வீர்கள்?
- A 0 hari / 0 நாள்
B 1 hari / 1 நாள்
C 2 hari / 2 நாள்
D 3 hari / 3 நாள்
E 4 hari / 4 நாள்
F 5 hari / 5 நாள்
- B6** Kebiasaannya, dari mana anda dapat makanan itu?
வழக்கமாக அவ்வணவை எங்கிருந்து பெருவீர்கள்?
- A Bekal dari rumah / வீடு
B Beli di kantin sekolah / பள்ளி சிற்றுண்டிச்சாலை
C Beli di restoran atau warung / கடை
D Disediakan di asrama / பள்ளி விடுதி
E Lain-lain / மற்றது
F Tidak berkaitan/tidak mengambil makan dan/atau minum pada waktu rehat
தொடர்பு இல்லை/ ஓய்வு நேரத்தில் உணவு உட்கொள்வதில்லை
- B7** Kebiasaannya, dalam seminggu berapa hari anda makan tengah hari (11.00 pagi hingga 3.00 petang)?
வழக்கமாக ஒரு வாரத்தில் எத்தனை முறை மதிய உணவு உண்பீர்கள் (காலை மணி 11.00-
லிருந்துமாலை மணி 3.00 வரை)?
- A 1 hari / 1 நாள்
B 2 hari / 2 நாள்
C 3 hari / 3 நாள்
D 4 hari / 4 நாள்
E 5 hari / 5 நாள்
F 6 hari / 6 நாள்
G 7 hari / 7 நாள்
H Tidak mengambil makanan tengah hari / மதிய உணவு உட்கொள்வதில்லை
- B8** Kebiasaannya, dari mana anda dapat makanan itu?
வழக்கமாக அவ்வணவை எங்கிருந்து பெருவீர்கள்?
- A Disediakan di rumah / வீடு
B Beli di kantin sekolah / பள்ளி சிற்றுண்டிச்சாலை
C Beli di restoran atau warung / கடை
D Disediakan di asrama / பள்ளி விடுதி
E Lain-lain / மற்றது
F Tidak berkaitan/tidak ambil makanan tengahari /
தொடர்பு இல்லை/ ஓய்வு நேரத்தில் உணவு உட்கொள்வதில்லை

- B9** Sekiranya anda tidak mengambil makan tengahari, apakah sebabnya?
ஏன் மதிய உணவை உட்கொள்வதில்லை?
- A Tiada makanan / உணவு இல்லை
 - B Tiada selera / உண்ண விருப்பமில்லை
 - C Tiada masa / நேரம் இல்லை
 - D Berdiet /kawal berat badan / உணவு கட்டுப்பாட்டிலிருத்தல்
 - E Tiada duit / பணம் பற்றாக்குறை
 - F Lain-lain / மற்றது
 - G Tidak berkaitan/ambil makan tengahari / தொடர்பு இல்லை/ மதிய உணவை உட்கொள்வேன்
- B10** Kebiasaannya, dalam seminggu berapa hari anda mengambil minum petang (3.00 petang hingga 6.00 petang)?
வழக்கமாக ஒரு வாரத்தில் எத்தனை முறை மாலை சிற்றுண்டி உட்கொள்வீர்கள் (மாலை மணி 3.00-லிருந்து மாலை மணி 6.00 வரை)?
- A 1 hari / 1 நாள்
 - B 2 hari / 2 நாள்
 - C 3 hari / 3 நாள்
 - D 4 hari / 4 நாள்
 - E 5 hari / 5 நாள்
 - F 6 hari / 6 நாள்
 - G 7 hari / 7 நாள்
 - H Tidak minum petang / மாலை சிற்றுண்டி உட்கொள்வதில்லை
- B11** Kebiasaannya, dari mana anda dapat makanan itu?
வழக்கமாக அவ்வணவை எங்கிருந்து பெருவீர்கள்?
- A Disediakan di rumah / வீடு
 - B Beli di kantin sekolah / பள்ளி சிற்றுண்டிச்சாலை
 - C Beli di restoran atau warung / கடை
 - D Disediakan di asrama / பள்ளி விடுதி
 - E Lain-lain / மற்றது
 - F Tidak ambil minum petang / மாலை சிற்றுண்டி உட்கொள்வதில்லை
- B12** Kebiasaannya, dalam seminggu berapa hari anda makan malam(6.00 petang hingga 10.00 malam)?
வழக்கமாக ஒரு வாரத்தில் எத்தனை முறை யரவு உணவு உட்கொள்வீர்கள் (மதிய மணி 6.00-லிருந்து யரவு மணி 10.00 வரை)?
- A 1 hari / 1 நாள்
 - B 2 hari / 2 நாள்
 - C 3 hari / 3 நாள்
 - D 4 hari / 4 நாள்
 - E 5 hari / 5 நாள்
 - F 6 hari / 6 நாள்
 - G 7 hari / 7 நாள்
 - H Tidak makan malam / யரவு உணவு உட்கொள்வதில்லை

Tinjauan Persekitaran Keluarga

- B13** Kebiasaannya, dari mana anda dapat makanan itu?
எங்கிருந்து அவ்வணவை பெருவீர்கள்?
- A Disediakan di rumah / வீடு
B Beli di restoran atau warung / கடை
C Disediakan di asrama / பள்ளி விடுதி
D Lain-lain / மற்றது
E Tidak berkaitan/tidak ambil makan malam / தொடர்பு யல்லை/பரவு உணவு உண்பதில்லை
- B14** Sekiranya anda tidak mengambil makan malam, apakah sebabnya?
ஏதனால் பரவு உணவு உட்கொள்வதில்லை?
- A Tiada makanan / உணவு யல்லை
B Tiada selera / உண்ண விருப்பமில்லை
C Tiada masa / நேரம்யல்லை
D Berdiet / உணவு கட்டுப்பாடு
E Tiada duit / பணம் பற்றாக்குறை
F Lain-lain / மற்றது
G Tidak berkaitan/ambil makan malam / தொடர்பு யல்லை/பரவு உணவு உட்கொள்வேன்.
- B15** Dalam seminggu yang lepas, berapa kerap anda ambil makanan berat selepas makan malam? (Contoh: nasi lemak, roti canal, mee goreng, burger, ayam goreng, mee segera dan sebagainya. Ini tidak termasuk snek ringan contohnya 2 keping biskut dan/atau satu gelas susu)
கடந்த வாரத்தில், பரவில் ஏத்தனை முறை அதிகமான அளவில் உணவு உட்கொண்டீர்கள்?
(உதாரணமாக: நாசி லெமாக், ரொத்தி சாளாய், மீ பிரத்தல், பர்கர், பொரித்தக் கோழி, துரித மீமற்றும் சில. யதில் பால்மற்றும் பிஸ்கிட் போன்ற உணவு அடங்காது. (உதாரணத்திற்கு 2 துண்டு பிஸ்கிட் மற்றும்/ அல்லது ஒரு குவளைப்பால்)
- A 1 hari / 1 நாள்
B 2 hari / 2 நாள்
C 3 hari / 3 நாள்
D 4 hari / 4 நாள்
E 5 hari / 5 நாள்
F 6 hari / 6 நாள்
G 7 hari / 7 நாள்
H Tidak ambil makanan berat selepas makan malam /
பரவில் நாள் அதிகமான அளவில் உணவு உண்பதில்லை
- B16** Di manakah anda mengambil makanan berat tersebut?
எங்கு யல்வணவை உட்கொள்வீர்கள்?
- A Rumah / வீடு
B Restoran atau warung / கடை
C Asrama / பள்ளி விடுதி
D Lain-lain / மற்றது
E Tidak berkaitan/tidak ambil makanan berat /
தொடர்பு யல்லை/பரவில் நாள் அதிகமான அளவில் உணவு உண்பதில்லை

- B17** Kebiasaannya, dalam seminggu berapa hari anda makan makanan segera yang dibeli dari restoran makanan segera seperti burger, pizza, ayam goreng, kentang goreng, nugget dan sebagainya?
வழக்கமாக ஒரு வாரத்தில் எத்தனை முறை துரித உணவு உட்கொள்வீர்கள். உதாரணத்திற்கு பர்கர், பீசா, பொரித்தச் கோழி, பிராக் பிராஸ், நகெட் மற்றும் சில.
- A. 1 hari / 1 நாள்
B. 2 hari / 2 நாள்
C. 3 hari / 3 நாள்
D. 4 hari / 4 நாள்
E. 5 hari / 5 நாள்
F. 6 hari / 6 நாள்
G. 7 hari / 7 நாள்
H. Tidak ambil makanan segera / நான் துரித உணவு உட்கொள்வதில்லை.
- B18** Berapa kerap anda membawa bekal makanan ke sekolah?
பொதுவாக எத்தனை முறை பள்ளிக்கு வீட்டிலிருந்து உணவு எடுத்துச்செல்வீர்கள்?
- A. Setiap hari / தினமும்
B. Kadang-kadang / சில நேரத்தில்
C. Tidak / பள்ளிக்கு நீர் எடுத்துச் செல்லமாட்டேன்
- B19** Apakah bekal makanan yang biasa dibawa ke sekolah? (Boleh pilih SATU atau DUA jawapan sahaja)
எந்த உணவை வழக்கமாக பள்ளிக்கு எடுத்துச்செல்வீர்கள்? (ஒன்று அல்லதுபரண்டு உணவை தேர்வு செய்யலாம்)
- A. Nasi lemak/nasi goreng /nasi berlauk / நாசி லெமாக்/நாசி கோரேங்/நாசி பெர்லாவுக்
B. Mee / Bihun / Kueh Teow / மீ / மீவுன் / குவே தியாவ்
C. Roti / Ban / Sandwic / ரொத்தி / பன் / சான்விச்
D. Nuget / Sosej / Burger / நகெட் / சொசேஜ் / பர்கர்
E. Biskut / பிஸ்கிட்
F. Buah-buahan / பழம்
G. Lain-lain / மற்றது
H. Tidak bawa bekal / பள்ளிக்கு உணவு எடுத்துச் செல்லமாட்டேன்
- B20** Berapa kerap anda membawa bekal minuman ke sekolah?
பொதுவாக எத்தனை முறை பள்ளிக்கு நீர் எடுத்துச்செல்வீர்கள்?
- A. Setiap hari / தினமும்
B. Kadang-kadang / சில நேரத்தில்
C. Tidak / பள்ளிக்கு நீர் எடுத்துச் செல்லமாட்டேன்

Tinjauan Persekitaran Keluarga

- B21** Apakah bekalan minuman yang biasa dibawa ke sekolah? (Boleh pilih **SATU** atau **DUA** jawapan sahaja)
வழக்கமாக எவ்வகை நீரை பள்ளிக்கு எடுத்துச் செல்வீர்கள்? (ஒன்று அல்லது மரண்டு விடையை மட்டும் தெர்வு செய்ய்க)
- A Air kosong / தண்ணீர்
- B Air berperisa (air kotak/air sirap/ teh / kopi/ milo)
சுவைபானம்(சீராப், தேநீர், மீலோ)
- C Air berkarbonat / கார்போனெட் பானம்
- D Susu / minuman berkultur (air yogurt) / பால்/ மோர்
- E Lain-lain / மற்றது
- F Tidak bawa bekal / பள்ளிக்கு நீர் எடுத்துச் செல்லமாட்டேன்
- B22** Kebiasaannya, bagaimana wang saku/duit poket anda banyak dibelanjakan?
வழக்கமாக பணத்தை எதற்காக செழவு செய்வீர்கள்?
- A Membeli makanan dan/atau minuman / உணவு
- B Membeli alat tulis / எழுத பயன்படுத்தும் பொருட்கள்
- C Simpanan / சேமிப்பு
- D Lain-lain / மற்றது
- E Tidak bawa wang saku/duit poket / பள்ளிக்கு பணம் எடுத்துச் செல்லமாட்டேன்
- B23** Dalam seminggu berapa kali anda makan di luar? Tidak termasuk makan di sekolah dan di asrama.
வாரத்தில் எத்தனை முறை வெளியே உணவு உட்கொள்வீர்கள்? பள்ளி மற்றும் பள்ளி விடுதியில் உண்பது மதில் உட்படவில்லை.
- A 1 kali / 1 முறை
- B 2 kali / 2 முறை
- C 3 kali / 3 முறை
- D 4 kali / 4 முறை
- E 5 kali / 5 முறை
- F 6 kali / 6 முறை
- G 7 kali atau lebih / 7 முறைக்கு மேல்
- H Tidak pernah / வெளியே உணவு உட்கொள்வதில்லை
- B24** Apakah jenis makanan ringan yang selalu anda makan? (Boleh pilih **SATU** atau **DUA** jawapan sahaja)
எவ்வித துரித உணவை உட்கொள்வீர்கள் (ஒன்று அல்லது மரண்டு விடையை மட்டும் தெர்வு செய்ய்க)
- A Roti / Bun / Sandwic / ரொட்டி / பன் / சான்விச்
- B Kentang goreng / பிரஞ் பிரைஸ்
- C Biskut / பிஸ்கிட்
- D Buah-buahan / பழம்
- E Kekacang / தானியம்
- F Keropok / கிழங்கு சிப்ஸ்
- G Aiskrim / பனிக்கூல்
- H Tidak ambil makanan ringan / துரித உணவு உட்கொள்வதில்லை

- B25** Berapa kerap anda mengambil makanan ringan tersebut dalam seminggu?
ஒரு வாரத்தில் எத்தனை முறை துரித உணவு உட்கொள்வீர்கள்?
- A 1 kali / 1 முறை
B 2 kali / 2 முறை
C 3 kali / 3 முறை
D 4 kali / 4 முறை
E 5 kali / 5 முறை
F 6 kali / 6 முறை
G 7 kali atau lebih / 7 முறைக்கு மேல்
H Tidak pernah makanan ringan atau snek / துரித உணவு உட்கொள்வதில்லை
- B26** Apakah jenis makanan dan/atau minuman yang selalu anda beli dari luar pagar sekolah?(Boleh pilih **SATU** atau **DUA** jawapan sahaja)
எத்தகைய உணவை பள்ளி வலாகத்தின் வெளியே பெறுவீர்கள்? (ஒன்று அல்லது யரண்டு விடையை மட்டும் தெர்வு செய்க)
- A Gula-gula/coklat / சாக்டெட்
B Kentang goreng / nuget / sosej / பிரஞ் பிரைஸ்/ நாகெட்/ சொசெஜ்
C Air berperisa/air berkarbonat / குளிர்்பானம்/ காற்போனெட்பானம்
D Makanan jeruk / ஊருகாய்
E Makanan ringan/rapu / துரித உணவு
F Keropok / சிப்ஸ்
G Aiskrim / பனிக்கூல்
H Tidak ambil makanan ringan di luar pagar sekolah / பள்ளி வலாகத்தின் வெளியே உணவு வாங்கமாட்டேன்
- B27** Dalam seminggu, adakah andamembeli makanan dan/atau minuman di luar pagar sekolah?
ஒரு வாரத்தில் எத்தனை முறை பள்ளி வலாகத்தின் வெளியே உணவு வாங்குவீர்கள்?
- A 1 kali / 1 முறை
B 2 kali / 2 முறை
C 3 kali / 3 முறை
D 4 kali / 4 முறை
E 5 kali / 5 முறை
F 6 kali / 6 முறை
G 7 kali atau lebih / 7 முறைக்கு மேல்
H Tidak pernah / பள்ளி வலாகத்தின் வெளியே உணவு வாங்கமாட்டேன்

Tinjauan Persekitaran Keluarga

B28 Sumber media manakah yang paling mempengaruhi pengambilan makanan anda?(Boleh pilih **SATU** atau **DUA** jawapan sahaja)

உங்கள் உணவு பழக்கமுறையை தூண்டிய தொடர்புத்துறை ஊடகம் எது? (ஒன்று அல்லது பரண்டு விடையை மட்டும் தெர்வு செய்க)

- A Media sosial (contoh : Internet, YouTube, Facebook, Instagram, Twitter) / சமூக வளைத்தலம்.(உதாரணம் : யூதுப், முகப்புத்தகம், துவித்தர்)
- B Televisyen / தொலைக்காட்சி
- C Radio / வானொலி
- D Media cetak (contoh: majalah, surat khabar, papan iklan, risalah, katalog) / அச்ச ஊடகங்கள் (உதாரணம்: பத்திரிகை, செய்தித்தாள், விளம்பரம், ஆய்வுகட்டுரைகள், அட்டவணை)
- E Tidak terpengaruh / பாதிக்கப்படவில்லை

MODUL C : AKTIVITI FIZIKAL

தொகுதி C : உடல் செயல்பாடு நடவடிக்கை

C1 Aktiviti Fizikal di waktu lapang: Adakah anda melakukan aktiviti-aktiviti yang disenaraikan di bawah sepanjang 7 hari yang lepas (minggu lepas). Jika **YA**, berapa kali?

ஒவ்வொரு நேரத்தில் உடல் செயல்பாடு நடவடிக்கைகள்: கடந்த 7 நாட்களில் கீழ்க்கண்டவற்றை நடவடிக்கையை மேற்கொண்டீர்களா? (கடந்த வாரம்). ஆம் என்றால் எத்துனை முறை?

Aktiviti நடவடிக்கை		Tiada	1-2 kali முறை	3-4 kali முறை	5-6 kali முறை	7 kali atau lebih முறை
a	Lompat tali சிகிப்பிங்	A	B	C	D	E
b	Mendayung / Berkenu படகு ஓட்டல்	A	B	C	D	E
c	Silat / Karate / Taekwondo சிலாட் / கராட்டே / தைக்கொண்டோ	A	B	C	D	E
d	Bermain kejar-kejar ஓடி பிடித்து விளையாடல்	A	B	C	D	E
e	Bersenam dengan berjalan நடத்தல்	A	B	C	D	E
f	Berbasikal மிதிவண்டி ஓட்டல்	A	B	C	D	E
g	Joging / Berlari மெதுவோட்டம்	A	B	C	D	E
h	Senamrobik ஏரோபிக்ஸ்	A	B	C	D	E
i	Berenang நீச்சல் அடித்தல்	A	B	C	D	E
j	Bola lisut / Besbol பேல்பாஷ்	A	B	C	D	E
k	Menari நடனம்	A	B	C	D	E
l	Ragbi ரக்பி	A	B	C	D	E
m	Badminton பூப்பந்து	A	B	C	D	E
n	Hoki ஹகி	A	B	C	D	E
o	Bola tampar கைப்பந்து	A	B	C	D	E
p	Bola keranjang / Bola jarring நெட்பால்	A	B	C	D	E
q	Sepak takraw செபாக் டாக்ரா	A	B	C	D	E
r	Bola sepak / Futsal காற்பந்து	A	B	C	D	E
s	Pingpong பிங்பொங்	A	B	C	D	E

Tinjauan Persekitaran Fizikal

- C2** Dalam 7 hari yang lepas semasa aktiviti kelas pendidikan jasmani, berapa kerap anda berada dalam keadaan sangat aktif (bermain, berlari, melontar, melompat).
கடந்த 7 நாட்களில் உடற்கல்வி பாடத்தின் பொழுது, எத்துனை முறை நீங்கள் முழுமையாகச் செயல்பட்டீர்கள்? (விளையாடுதல், ஓடுதல், குதித்தல்).
- A Saya tidak mengikuti kelas pendidikan jasmani
நான் உடற்கல்வி வகுப்பில் பங்குப்பெறவில்லை
- B Sangat jarang / மிகவும் குறைவு
- C Kadang-kadang / சில சமயத்தில்
- D Agak kerap / சற்று அதிகமாக
- E Selalu / எப்பொழுதும்
- C3** Dalam 7 hari yang lepas, apakah perkara yang anda biasa lakukan semasa waktu rehat di sekolah?
கடந்த 7 நாட்களில், ஓய்வு நேரத்தின் பொழுது நீங்கள் என்ன செய்தீர்கள்?
- A Duduk (berbual, membaca, membuat kerja sekolah)
உட்கார்ந்திருந்தேன் (பேசிக்கொண்டு, படித்துக்கொண்டு, பாடம் செய்துக்கொண்டு)
- B Berdiri atau berjalan-jalan
நின்றன்கொண்டு அல்லது நடந்துக்கொண்டிருந்தேன்
- C Berlari atau bermain sedikit
ஓடிக்கொண்டு அல்லது விளையாடிக்கொண்டிருந்தேன்
- D Berlari dan bermain sedikit
ஓடிக்கொண்டுமற்றும் விளையாடிக்கொண்டிருந்தேன்
- E Berlari dan bermain hampir sepanjang masa
ஓய்வு நேரம்முழுவதும் விளையாடிக்கொண்டிருந்தேன்
- C4** Dalam 7 hari yang lepas, apakah perkara yang biasa anda lakukan semasa waktu makan tengahari (selain daripada makan)?
கடந்த 7 நாட்களில், ஓய்வு நேரத்தின் பொழுது நீங்கள் என்ன செய்தீர்கள்?
- A Duduk (berbual, membaca, membuat kerja sekolah)
உட்கார்ந்திருந்தேன் (பேசிக்கொண்டு, படித்துக்கொண்டு, பாடம் செய்துக்கொண்டு)
- B Berdiri atau berjalan-jalan
நின்றன்கொண்டு அல்லது நடந்துக்கொண்டிருந்தேன்
- C Berlari atau bermain sedikit
ஓடிக்கொண்டு அல்லது விளையாடிக்கொண்டிருந்தேன்
- D Berlari dan bermain sedikit
ஓடிக்கொண்டுமற்றும் விளையாடிக்கொண்டிருந்தேன்
- E Berlari dan bermain hampir sepanjang masa
ஓய்வு நேரம்முழுவதும் விளையாடிக்கொண்டிருந்தேன்

- C5** Dalam 7 hari yang lepas, berapa harikah anda bersukan, menari atau bermain dengan **aktif sebaik sahaja tamat waktu persekolahan?**
கடந்த 7 நாட்களில், எத்துனை நாள் பள்ளி நேரத்திற்கு அப்பால் நீங்கள் உடல் செயல்பாடு நடவடிக்கையில் ஈடுபடுவீர்கள்?
- A Tiada / ஈடுபடிவதில்லை
B 1 hari / 1 நாள்
C 2 atau 3 hari / 2 அல்லது 3 நாள்
D 4 hari / 4 நாள்
E 5 hari / 5 நாள்
- C6** Dalam 7 hari yang lepas, berapa harikah anda bersukan, menari atau bermain dengan **aktif pada waktu petang?**
A Tiada / ஈடுபடவில்லை
B 1 hari / 1 நாள்
C 2 atau 3 hari / 2 அல்லது 3 நாள்
D 4 atau 5 hari / 4 அல்லது 5 நாள்
E 6 atau 7 hari / 6 அல்லது 7 நாள்
- C7** Pada hujung minggu yang lepas, berapa kali anda terlibat dengan aktiviti bersukan, menari atau melibatkan diri dengan permainan yang aktif?
கடந்த வாரத்தில் எத்துனை முறை நீங்கள் உடல் செயல்பாடு நடவடிக்கையில் ஈடுபட்டீர்கள்?
- A Tiada / ஈடுப்படமாட்டேன்.
B 1 kali / 1 முறை
C 2 atau 3 kali / 2 அல்லது 3 முறை
D 4 atau 5 kali / 4 அல்லது 5 முறை
E 6 atau lebih kali / 6 முறைக்கு மேல்

Tinjauan Persekitaran Keluarga

C8 Yang manakah antara pernyataan berikut menggambarkan diri anda dalam tempoh 7 hari yang lepas?
கீழ்வருவனவற்றில் எது உண்மை?

A Saya menggunakan semua atau kebanyakan masa lapang saya dengan melakukan aktiviti ringan
என் ஓய்வு நேரத்தில் சாதாரண உடற்பயிற்சியில் ஈடுபட்டேன்

B Saya kadang-kadang (1-2 kali seminggu) melakukan aktiviti fizikal semasa waktu lapang saya (contoh: bersukan, berlari, berenang, berbasikal, aktiviti aerobik)
என் ஓய்வு நேரத்தில் சில சமயம் (1-2 முறை ஒரு வாரத்தில்) உடல் செயல்பாட்டு நடவடிக்கையில் ஈடுபடுவேன். (உதாரணம்: ஓடுதல், நீச்சலடித்தல், மிடிவண்டி ஓட்டுதல், ஓரோபிக்ஸ்)

C Saya selalu (3-4 kali seminggu) melakukan aktiviti fizikal semasa waktu lapang saya (contoh: bersukan, berlari, berenang, berbasikal, aktiviti aerobik)
என் ஓய்வு நேரத்தில் (3-4 முறை ஒரு வாரத்தில்) உடல் செயல்பாட்டு நடவடிக்கையில் ஈடுபடுவேன். (உதாரணம்: ஓடுதல், நீச்சலடித்தல், மிடிவண்டி ஓட்டுதல், ஓரோபிக்ஸ்)

D Saya kerap (5-6 kali seminggu) melakukan aktiviti fizikal semasa waktu lapang saya (contoh: bersukan, berlari, berenang, berbasikal, aktiviti aerobik)
நான் ஓய்வு நேரத்தில் (5-6 முறை ஒரு வாரத்தில்) உடல் செயல்பாட்டு நடவடிக்கையில் ஈடுபடுவேன். (உதாரணம்: ஓடுதல், நீச்சலடித்தல், மிடிவண்டி ஓட்டுதல், ஓரோபிக்ஸ்)

E Saya sangat kerap (7 kali atau lebih seminggu) melakukan aktiviti fizikal semasa waktu lapang saya (contoh: bersukan, berlari, berenang, berbasikal, aktiviti aerobik)
நான் எப்பொழுதும் (7 முறைக்கு மேல் ஒரு வாரத்தில்) உடல் செயல்பாட்டு நடவடிக்கையில் ஈடுபடுவேன். (உதாரணம்: ஓடுதல், நீச்சலடித்தல், மிடிவண்டி ஓட்டுதல், ஓரோபிக்ஸ்)

C9 Tandakan kekerapan anda melakukan aktiviti fizikal (seperti bersukan, bermain, menari atau apa-apa aktiviti fizikal) untuk setiap hari pada minggu lepas.
எத்துனை முறை ஒரு வாரத்தில் உடல் செயல்பாட்டு நடவடிக்கையில் ஈடுபடுவீர்கள்?
(உதாரணம்: ஓடுதல், நீச்சலடித்தல், மிடிவண்டி ஓட்டுதல், ஓரோபிக்ஸ்) ஒரு நாளில் எத்துனை முறை?

Hari நாள்	Tiada Aktiviti நடவடிக்கையில் ஈடுபடுவதில்லை	(1-2 kali) (1-2 முறை)	(3-4 kali) (3-4 முறை)	(5-6 kali) (5-6 முறை)	(7 kali atau lebih) (7 முறைக்கு மேல்)
a Isnin திங்கள்	A	B	C	D	E
b Selasa செவ்வாய்	A	B	C	D	E
c Rabu புதன்	A	B	C	D	E
d Khamis வியாழன்	A	B	C	D	E
e Jumaat வெள்ளி	A	B	C	D	E
f Sabtu சனி	A	B	C	D	E
g Ahad ஞாயிறு	A	B	C	D	E

- C10** Adakah anda sakit pada minggu lepas, atau adakah terdapat sebarang perkara yang menghalang anda daripada melakukan aktiviti fizikal yang biasa dilakukan pada minggu lepas?
கடந்த வாரம் உங்களின் உடல் நிலை பாதிக்கப்பட்டிருந்ததா, அல்லது ஏதாவது எதிர்பாராத சம்பவம் உடற்பயிற்சி நேரத்தை குறிக்கிட்டதா?
- A Ya / ஆம்
B Tidak / இல்லை
- C11** Pada **hujung minggu** adakah anda menonton televisyen dan/atau menggunakan komputer dan/atau bermain permainan video (contoh: *PSP, Playstation, Gameboy dan lain-lain*)?
கடந்த வார பறுதியில் தொலைக்காட்சி, கணினி, அல்லது கணினி விளையாட்டில் ஈடுபட்டீர்களா? (உதாரணம்: *பிஎஸ்பி, பிலே சி தேசன், கேம்போய் மற்றும் சில*)?
- A Ya / ஆம்
B Tidak / இல்லை
- C12** Berapa lamakah anda menonton televisyen dan/atau menggunakan komputer dan/atau bermain permainan video pada **hujung minggu**?
எவ்வளவு நேரம் கடந்த வார பறுதியில் தொலைக்காட்சி, கணினி, அல்லது கணினி விளையாட்டில் ஈடுபட்டீர்களா?
- A kurang dari 1 jam sehari
1 மணி நேரத்திற்கு குறைவாக
- B 1 jam hingga kurang dari 2 jam sehari
ஒரு நாளில் 1 மணியிலிருந்து 2 மணி நேரம்
- C 2 jam hingga kurang dari 3 jam sehari
ஒரு நாளில் 2 மணியிலிருந்து 3 மணி நேரம்
- D 3 jam hingga kurang dari 4 jam sehari
ஒரு நாளில் 3 மணியிலிருந்து 4 மணி நேரம்
- E Lebih dari 4 jam sehari
4 மணி நேரத்திற்கு மேல்
- C13** Pada **hari persekolahan** adakah anda menonton televisyen dan/atau menggunakan komputer dan/atau bermain permainan video (contoh: *PSP, Playstation, Gameboy dan lain-lain*)?
பள்ளி நாட்களில் தொலைக்காட்சி, கணினி, அல்லது கணினி விளையாட்டில் ஈடுபட்டீர்களா?
- A Ya / ஆம்
B Tidak / இல்லை

தமிழ்நாடு புகைப்படக் கருவியை

- C14** Berapa lamakah anda menonton televisyen dan/atau menggunakan komputer dan/atau bermain permainan video pada **hari persekolahan**?
எவ்வளவு நேரம் டிவில் செலவழிப்பீர்கள்?
- A kurang dari 1 jam sehari
1 மணி நேரத்திற்கு குறைவாக
- B 1 jam hingga kurang dari 2 jam sehari
ஒரு நாளில் 1 மணியிலிருந்து 2 மணி நேரம்
- C 2 jam hingga kurang dari 3 jam sehari
ஒரு நாளில் 2 மணியிலிருந்து 3 மணி நேரம்
- D 3 jam hingga kurang dari 4 jam sehari
ஒரு நாளில் 3 மணியிலிருந்து 4 மணி நேரம்
- E Lebih dari 4 jam sehari
4 மணி நேரத்திற்கு மேல்

<p>MODUL D : PERSEPSI PENGURUSAN BERAT BADAN தொகுதி D : உடல் எடை கட்டுப்பாடு</p>	
<p>Arahan : <i>Pilih jawapan dan hitamkan pada kertas jawapan yang disediakan.</i> கட்டளை : <i>சரியான விடையைத் தெர்வு செய்து கொடுக்கப்பட்டுள்ள விடைத்தாளில்</i></p>	
<p>D1</p>	<p>Pada masa sekarang, anda rasa anda : தற்சமயத்தில், என் உடல் எடை:</p> <p>A Kurang berat badan yang ketara மிகவும் குறைவாக உள்ளது</p> <p>B Kurang berat badan குறைவாக உள்ளது</p> <p>C Mempunyai berat badan yang sesuai சரியாக உள்ளது</p> <p>D Berlebihan berat badan சற்று அதிகமாக உள்ளது</p> <p>E Sangat berlebihan berat badan மிகவும் அதிகமாக உள்ளது</p>
<p>D2</p>	<p>Apakah yang anda sedang lakukan terhadap berat badan anda? உங்கள் உடல் எடையை சரிசெய்ய நீங்கள் ஏதாவது முயற்சியில் ஈடுபட்டுள்ளீர்களா?</p> <p>A Saya sedang berusaha untuk menurunkan berat badan saya உடல் எடையை குறைக்க முயற்சிக்கிறேன்</p> <p>B Saya sedang berusaha untuk menambahkan berat badan saya உடல் எடையை அதிகரிக்க முயற்சிக்கிறேன்</p> <p>C Saya tidak membuat apa-apa terhadap berat badan saya ஒரு முயற்சியிலும் ஈடுபடவில்லை</p> <p>D Saya sedang mengekalkan berat badan saya உடல் எடையை கட்டுப்படுத்த முயற்சிக்கிறேன்</p>
<p>D3</p>	<p>Sekiranya anda berhasrat untuk mengurangkan berat badan, apakah faktor utama yang mendorong anda berbuat demikian? எனனால் நீங்கள் உடல் எடையை குறைக்க முயற்சி செய்கிறீர்கள்?</p> <p>A Kesihatan உடல் நிலையைப் பேச</p> <p>B Kecantikan அழகைப் பேச</p> <p>C Meningkatkan keyakinan diri தன்னிக்கையை உயர்த்த</p> <p>D Mendapat ramai kawan நிறைய நண்பர்கள் கிடைக்க</p> <p>E Tidak berhasrat mengurangkan berat badan உடல் எடையைக் குறைக்க விருப்பமில்லை</p>

Tinjauan Persekitaran Keluarga

D4 Sekiranya anda berhasrat untuk **mengurangkan berat badan**, apakah kaedah yang menjadi pilihan utama anda?
 எவ்வாறு உடல் எடையை குறைக்க விருப்பம்?

- A Bersenam
உடற்பயிற்சி
- B Kurangkan pengambilan makanan tinggi lemak (contoh: makanan bergoreng)
கொழுப்பு நிறைந்த உணவை குறைத்தல்
- C Kurangkan pengambilan makanan manis
டீயிப்பு நிறைந்த உணவை குறைத்தல்
- D Meningkatkan pengambilan sayur-sayuran dan buah-buahan
நிறைய பழம் மற்றும் காய்கறிகள் உட்கொள்ளுதல்
- E Tidak mengambil hidangan utama (sarapan/ tengah hari/ makan malam)
உணவை தவிர்த்தல் (காலை சிற்றுண்டி/ மாலை உணவு/ யரவு உணவு)
- F Mengambil pil diet/menggunakan krim pelangsing tubuh
மருந்து பயன்படுத்துதல்
- G Berpuasa
விரதம்
- H Mendapat khidmat professional
அறிவுரை நாடுதல்
- I Tidak berhasrat mengurangkan berat badan
உடல் எடையைக் குறைக்க விருப்பமில்லை

D5 Sekiranya anda berhasrat untuk **menambahkan berat badan**, apakah faktor utama yang mendorong anda berbuat demikian?
 அதனால் நீங்கள் உடல் எடையை அதிகரிக்க முயற்சி செய்கிறீர்கள்?

- A Kesihatan / உடல் நிலையைப் பேண
- B Kecantikan / அழகைப் பேண
- C Meningkatkan keyakinan diri / தன்னிக்கையை உயர்த்த
- D Mendapat ramai kawan / நிறைய நண்பர்கள் கிடைக்க
- E Tidak berhasrat menambah berat badan / உடல் எடையைக் அதிகரிக்க விருப்பமில்லை

D6 Sekiranya anda berhasrat untuk **menambahkan berat badan**, apakah kaedah yang menjadi pilihan utama anda?
 எவ்வாறு உடல் எடையை அதிகரிப்பீர்கள்?

- A Menambah kuantiti makanan yang diambil
உட்கொள்ளும் உணவின் அளவை அதிகரிப்பேன்
- B Mengambil suplemen (Makanan tambahan seperti susu, suplemen vitamin)
மருந்து உட்கொள்ளுவேன்
- C Mengambil makanan yang berkalori tinggi
அதிக புரதச்சத்து உள்ள உணவை உட்கொள்ளுவேன்
- D Lain-lain
மற்றது
- F Tidak berhasrat menambah berat badan
உடல் எடையைக் அதிகரிக்க விருப்பமில்லை

MODUL E :	PENGAMBILAN SUPLEMEN
தொகுதி E :	விடமின் மற்றும் மாற்றுச்சத்துணவு உட்கொள்ளுதல்
Arahan : Pilih jawapan dan hitamkan pada kertas jawapan yang disediakan.	
கட்டளை : சரியான விடையைத் தெர்வு செய்து கொடுக்கப்படுள்ள விடைத்தாளில்	
E1	<p>Adakah anda ada mengambil sebarang suplemen vitamin / mineral? நீங்கள் விடமின் ஏதாவது உட்கொள்கிறீர்களா?</p> <p>A Ya / ஆம்</p> <p>B Tidak / இல்லை</p> <p>(Jika TIDAK, sila jawab TIDAK AMBIL SUPLEMEN di soalan E2, E3, dan E4) (இல்லை என்றால், விடமின் உட்கொள்ளவில்லை என்று E2, E3, மற்றும் E4 கேள்விகளில் விடையளிக்கவும்)</p>
E2	<p>Apakah jenis suplemen vitamin / mineral yang biasa diambil? எவ்வகை விடமின் உட்கொள்வீர்கள்?</p> <p>A Multivitamin / மல்திவிடமின்</p> <p>B Vitamin C / விடமின் C</p> <p>C Zat besi (Ferum) / டிரும்பு சத்து</p> <p>D Lain-lain / மற்றது</p> <p>E Tidak ambil suplemen / விடமின் உட்கொள்ளவில்லை</p>
E3	<p>Apakah sebab anda mengambil suplemen vitamin / mineral tersebut? எதனால் விடமின் உட்கொள்கிறீர்கள்?</p> <p>A Atas arahan doktor / மருத்துவரின் ஆலோசனை</p> <p>B Atas arahan ibubapa / பெற்றோரின் ஆலோசனை</p> <p>C Kesedaran sendiri / சுய முயற்சி</p> <p>D Pengaruh kawan-kawan / நண்பர்களால்</p> <p>E Lain-lain / மற்றது</p> <p>F Tidak ambil suplemen / விடமின் உட்கொள்ளவில்லை</p>
E4	<p>Berapa kerap anda mengambil suplemen vitamin / mineral tersebut? ஒரு வாரத்தில் எத்தனை முறை நீங்கள் விடமின் உட்கொள்வீர்கள்?</p> <p>A Setiap hari / ஒவ்வொரு நாளும்</p> <p>B 5-6 kali seminggu / 5-6 முறை</p> <p>C 3-4 kali seminggu / 3-4 முறை</p> <p>D 1-2 kali seminggu / 1-2 முறை</p> <p>E Tidak ambil suplemen / விடமின் உட்கொள்ளவில்லை</p>

Tinjauan Persekitaran Keluarga

- E5** Adakah anda ada mengambil sebarang suplemen **makanan**?
நீங்கள் மாற்றுச்சத்துணவு உட்கொள்வீர்களா?
- A Ya / ஆம்
B Tidak / பல்லை
- (Jika **TIDAK**, sila jawab **TIDAK AMBIL SUPLEMEN** di soalan E6, E7, dan E8)
(பல்லை என்றால், விடமின் உட்கொள்ளவில்லை என்று E2, E3, மற்றும் E4 கேள்விகளில் விடையளிக்கவும்)
- E6** Apakah jenis suplemen makanan yang biasa diambil?
எவ்விதமான மாற்றுச்சத்துணவை நீங்கள் உட்கொள்கிறீர்கள்?
- A Spirulina / சிபிருலினா
B Minyak ikan / மீன் எண்ணெய்
C Madu atau hasil madu / தேன்
D Pati ayam / கோழி ஸ்தார்ச்
E Lain-lain / மற்றது
F Tidak ambil suplemen / விடமின் உட்கொள்ளவில்லை
- E7** Apakah sebab anda mengambil suplemen makanan tersebut?
எதனால் மாற்றுச்சத்துணவு உட்கொள்கிறீர்கள்?
- A Atas arahan doktor
மருத்துவரின் ஆலோசனை
B Atas arahan ibubapa
பெற்றோரின் ஆலோசனை
C Kesedaran sendiri
சுய முயற்சி
D Pengaruh kawan-kawan
நண்பர்களால்
E Lain-lain
மற்றது
F Tidak ambil suplemen
விடமின் உட்கொள்ளவில்லை
- E8** Berapa kerap anda mengambil suplemen makanan tersebut?
ஒரு வாரத்தில் எத்தனை முறை நீங்கள் மாற்றுச்சத்துணவு உட்கொள்வீர்கள்?
- A Setiap hari / ஒவ்வொரு நாளும்
B 5-6 kali seminggu / 5-6 முறை
C 3-4 kali seminggu / 3-4 முறை
D 1-2 kali seminggu / 1-2 முறை
E Tidak ambil suplemen / விடமின் உட்கொள்ளவில்லை

MODUL F :	LABEL MAKANAN DAN PEMAKANAN (SEKOLAH MENENGAH SAHAJA)																		
தொகுதி F :	உணவு மற்றும் உணவு உல்கொள்ளும்முறையையும்குறிப்பிடுக. (படைநிலைப்பள்ளி மட்டும்)																		
Arahan : Pilih jawapan dan hitamkan pada kertas jawapan yang disediakan.																			
கட்டளை : சரியான விடையைத் தேர்வு செய்து கொடுக்கப்படுள்ள விடைத்தாளில்																			
F1	<p>Adakah anda membaca label makanan ketika membeli atau menerima makanan/minuman? ஒர் உணவுப் பொருளை வாங்குவதற்கு முன் நீங்கள் அதன் அடையாள அட்டையை படிப்பீர்களா?</p> <p>A. Ya, setiap kali (terus ke soalan F3 dan jawab hingga soalan F10) ஆம், ஒவ்வொருமுறையும் (கேள்வி F3- டல்பருந்து F10 வரை பதிலளிக்கவும்)</p> <p>B. Ya, kadang-kadang / ஆம், சில சமயத்தில்</p> <p>C. Tidak (silalah jawab soalan F2 dan terus ke soalan F5 hingga F8) டல்லை (கேள்வி F2 மற்றும் F5 பின் அதிலிருந்து தொடர்ந்து F8 வரை பதிலளிக்கவும்)</p>																		
F2	<p>Jika anda tidak membaca label makanan, nyatakan sebab-sebabnya? Anda boleh memilih lebih daripada satu jawapan. எனால் நீங்கள் அவ்வடையாள அட்டையை படிக்கமாதிர்கள்? ஒரு விடைக்கு மேல் தேர்வு செய்யலாம்.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Sebab-sebab tidak membaca label makanan காரணம்</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Tulisan kecil / சிறிய எழுத்து</td> </tr> <tr> <td>B</td> <td>Tidak faham / புரியவில்லை</td> </tr> <tr> <td>C</td> <td>Tidak menarik / கவனத்தை ஈர்க்கவில்லை</td> </tr> <tr> <td>D</td> <td>Tidak tahu kepentingan / முக்கியத்துவம் தெரியவில்லை</td> </tr> <tr> <td>E</td> <td>Tiada masa / நேரமில்லை</td> </tr> <tr> <td>F</td> <td>Telah mengetahui tentang maklumat அந்த உணவைப் பற்றித் தெரியும்</td> </tr> </tbody> </table>	Sebab-sebab tidak membaca label makanan காரணம்		A	Tulisan kecil / சிறிய எழுத்து	B	Tidak faham / புரியவில்லை	C	Tidak menarik / கவனத்தை ஈர்க்கவில்லை	D	Tidak tahu kepentingan / முக்கியத்துவம் தெரியவில்லை	E	Tiada masa / நேரமில்லை	F	Telah mengetahui tentang maklumat அந்த உணவைப் பற்றித் தெரியும்				
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F3	<p>Apakah jenis maklumat panel maklumat pemakanan yang anda baca? Anda boleh memilih lebih daripada satu jawapan. எந்த வகையான தகவலை நீங்கள் உணவு அடையாள அட்டையில் படித்தீர்கள்? ஒரு விடைக்கு மேல் தேர்வு செய்யலாம்</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Maklumat khasiat makanan</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Jumlah tenaga makanan உணவுச்சத்து</td> </tr> <tr> <td>B</td> <td>Kandungan karbohidrat/gula ஈட்டிச்சத்துமற்றும் சர்க்கரையின்அளவு</td> </tr> <tr> <td>C</td> <td>Kandungan lemak கொழுப்பின் அளவு</td> </tr> <tr> <td>D</td> <td>Kandungan protein புரதச்சத்து</td> </tr> <tr> <td>E</td> <td>Kandungan garam/natrium உப்பின் அளவு</td> </tr> <tr> <td>F</td> <td>Kandungan vitamin விட்டமினின் அளவு</td> </tr> <tr> <td>G</td> <td>Kandungan mineral கனிமத்தின் அளவு</td> </tr> <tr> <td>H</td> <td>Serat (fiber) ஈபபெர்</td> </tr> </tbody> </table>	Maklumat khasiat makanan		A	Jumlah tenaga makanan உணவுச்சத்து	B	Kandungan karbohidrat/gula ஈட்டிச்சத்துமற்றும் சர்க்கரையின்அளவு	C	Kandungan lemak கொழுப்பின் அளவு	D	Kandungan protein புரதச்சத்து	E	Kandungan garam/natrium உப்பின் அளவு	F	Kandungan vitamin விட்டமினின் அளவு	G	Kandungan mineral கனிமத்தின் அளவு	H	Serat (fiber) ஈபபெர்
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Tinjauan Pemakanan Remaja

F4 Mengambil contoh gambar minuman di bawah, apakah jenis maklumat berikut yang anda baca? **Anda boleh memilih lebih daripada satu jawapan.**

கீழ்க்கொடுக்கப்பட்டுள்ள தண்ணீர் பாட்டிலில் எவ்வகையான தகவலை நீங்கள் பெற முடியும்?, (ஒரு விடைக்கு மேல் தேர்வு செய்யலாம்)



Jenis Maklumat தகவல்களின் வகை	
A	Tarikh luput காலாவதியாகும் திகதி
B	Akuan pemakanan ஊட்டச்சத்து கூற்றுகள்
C	Panel maklumat pemakanan ஊட்டச்சத்து தகவல்
D	Logo halal ஹலால் சின்னம்
E	Senarai ramuan/bahan பொருளடக்கம்
F	Arahan penyimpanan வழிமுறை

Berdasarkan kepada panel maklumat pemakanan pada **satu Minuman Kotak XYZ** yang ditunjukkan di bawah. Sila baca dan nyatakan sama ada kenyataan berikut adalah betul atau salah.

கீழ்க்காணும் அட்டவணையில் குளிர்பானம் XYZ-யின் ஊட்டச்சத்து தகவல்கள் கொடுக்கப்பட்டுள்ளது. அதை படித்தப்பின் கொடுக்கப்பட்டுள்ள கூற்றுக்கள் சரி அல்லது பிழை என அடையாளம் காண்க.

Maklumat Pemakanan bagi Minuman XYZ குளிர்பானம் XYZ		
Saiz hidangan : 250ml பானத்தின் அளவு : 250ml Jumlah hidangan bagi setiap kotak: 1 பரிமாறும் அளவு: 1		
	100 ml	250ml
Tenaga (kcal) சத்து	56	140
Karbohidrat (g) ஊட்டச்சத்து	10.9	27.3
Jumlah gula (g) சர்க்கரை	10.6	26.5
Protein (g) புரதச்சத்து	0	0
Lemak (g) கொழுப்பு	0	0

- F5** Jika saya minum 100ml minuman ini, ia membekalkan 56 kcal tenaga.
நான் 100ml குளிர்பானம் குடித்தால், எனக்கு 56 கலோரிச் சத்துகள் கிடைக்கும்.
- A Betul / சரி
B Salah / பிழை
C Tidak tahu / தெரியவில்லை
- F6** Jika saya minum satu kotak minuman ini, bermaksud saya telah mengambil 26.5 gram gula.
ஓர் குளிர்பானத்தை நான் முழுமையாக அருந்தினால், நான் 26.5 கிராம் சர்க்கரை எடுப்பதற்கு ஈடாகும்.
- A Betul / சரி
B Salah / பிழை
C Tidak tahu / தெரியவில்லை

Tinjauan Pemakanan Remaja

Berdasarkan kepada label kandungan tenaga pada pandangan hadapan (*front of pack labelling*) di bawah, sila nyatakan sama ada kenyataan berikut adalah betul atau salah.

கீழ்க்காணும் கலோரி தகவலுக்கேற்ப, கொடுக்கப்பட்டுள்ள கூற்று சரி அல்லது பிழை என்று குறிப்பிடுக.


Satu Hidangan
Mengandungi 250 ml
ஒரு பரிமாறலில் 250 ml உள்ளது



- F7** Nilai tenaga untuk dua hidangan makanan ini adalah 140kcal. 2 பரிமாறலில் சத்தின் அளவு 140kcal.
- A Betul / சரி
B Salah / பிழை
C Tidak tahu / தெரியவில்லை

- F8** Jika saya minum satu hidangan makanan ini, ia membekalkan 7% tenaga daripada 2000 kalori tersebut. நான் டீய்வுண்ணை உட்கொண்டால், எனக்கு 2000 கலோரியிலிருந்து 7% சத்து கிடைக்கும்.
- A Betul / சரி
B Salah / பிழை
C Tidak tahu / தெரியவில்லை

Produk aiskrim A
பனிக்கூல் A



Senarai Ramuan /Bahan:
உள்ளடக்கம்:

Gula, Olein/Minyak Isirung Kelapa Sawit, Pepejal Susu, Sirap Glukosa, Serbuk Koko
சர்க்கரை, பனை எண்ணெய், பால், Sirap குளுகோஸ், கொக்கோ

F9 Apakah ramuan/bahan paling banyak digunakan dalam aiskrim ini?
பப்பனிக்கூலில் அதிகமான அளவில் பயன்படுத்தப்பட்டுள்ள பொருள் எது?

A. Pepejal susu
பால்

B. Sirap glukosa
குளுகோஸ்

C. Gula
சர்க்கரை

D. Olein/Minyak isirung kelapa sawit
பனை எண்ணெய்

E. Serbuk koko
கொக்கோ

F10 Apakah ramuan/bahan yang paling sedikit dalam aiskrim ini?
பப்பனிக்கூலில் குறைவான அளவில் பயன்படுத்தப்பட்டுள்ள பொருள் எது?

A. Sirap glukosa
குளுகோஸ்

B. Gula
சர்க்கரை

C. Olein/Minyak isirung kelapa sawit
பனை எண்ணெய்

D. Pepejal susu
பால்

E. Serbuk koko
கொக்கோ

Tinjauan Pendidikan Kesihatan

MODUL G : PENGUKURAN ANTROPOMETRI தொகுதி G : ஆந்தரோபோமெற்றிக் அளவீடுகள்				
Arahan : Bahagian ini akan diisi oleh pelajar di dalam kertas jawapan yang disediakan. கட்டளை: கீழ்க்காணும் பத்திரத்தை நிரப்புக.				
G1	Tarikh pengukuran Antropometri ஆந்தரோபோமெற்றிக் அளவு எடுக்கப்பட்ட திகதி <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 20%;">Hari நாள்</td> <td style="width: 20%;">Bulan மாதம்</td> <td style="width: 60%;">Tahun ஆண்டு</td> </tr> </table>	Hari நாள்	Bulan மாதம்	Tahun ஆண்டு
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G2	Berat Badan உடல் எடை G2a Berat 1 எடை 1 <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> kg G2b Berat 2 எடை 2 <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> kg Enggan diukur அளக்கவில்லை <input type="checkbox"/>			
G3	Tinggi உயரம் G3a Tinggi 1 உயரம் 1 <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> cm G3b Tinggi 2 உயரம் 2 <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> cm Enggan diukur அளக்கவில்லை <input type="checkbox"/>			

ADOLESCENT NUTRITION SURVEY 2017
马来西亚学生营养调查 2017




Survey form/调查问卷

INTRODUCTION / 简介

The survey was conducted to determine the nutritional status, eating habits, food intake, physical activity level, and the use of food labels and nutrition. Selected student from all over the country will also answer this questionnaire.
 这项调查是为了解你的营养状况，饮食习惯，食物摄取，体能活动质量，和食品标签应用。在全国各地与你一样被选中的学生，也会回答这份问卷。

The information you provide will be used to develop better health programs for the future younger generation.
 你所提供的资料将被用于规划更好的健康方案给予如你一样的年轻一代。

Guide to filling survey forms/填写问卷指南

1. Your responses will be kept **CONFIDENTIAL**. Answer the questions based on what you know and what you do. There is no right or wrong answers.
 你提供的答案将被**保密**。请跟你所知道与你所做的来作答。答案没有对错之分。
2. Read the question carefully. Shade your answer on the answer sheet provided with a 2B pencil supplied.
 请仔细阅读问题。请使用所提供的2B铅笔并在准备好的答案纸上划黑作答。
3. How to shade the answer/如何划黑作答：
 Shade your answer like this  Not like this  or 
 如此划黑作答 不是这样划 或这样
4. Only one answer for each question UNLESS there are other instructions.
 每题只能拥有一个答案，除非有其他指示。
5. If you do not understand, please raise your hand to ask question.
 如果你在作答期间不明白，请举手发问。
6. Kindly wait for instruction from your class facilitator once you have completed the survey.
 当你回答完毕，请等待班上协调员的指令。

THANK YOU FOR YOUR WILLINGNESS TO COMPLETE THE SURVEY
感谢你愿意回答问卷

Survei Kesihatan Kebangsaan

MODULE A : PERSONAL INFORMATION			
A组：个人资料			
INSTRUCTION : Fill the student ID, date of birth and shade your answer on the answer sheet provided			
指示：填写学生编号，出生日期并在准备好的答案纸上划黑作答			
A1	Student ID/ 学生编号	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	State 州属 Strata 区域 School Category 学校类别 School code 学校编号 Class 班级 Student 学生
A2	Date of birth/ 出生日期	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Day/日期 Month/月 Year/年份
A3	Gender/性别	A. Male/男 B. Female/女	
A4	Ethnicity/种族	A. Malay/马来人 D. Sabah indigenous/沙巴土著 B. Chinese.华人 E. Sarawak indigenous /沙撈越土著 C. Indian/印度人 F. Others/其他	
		Primary school/小学	Secondary school/中学
A5	Class/年级	A. Primary 4/4年级 B. Primary 5/5年级 C. Primary 6/6年级	D. Remove class/预备班 G. Secondary3/初中3 E. Secondary1/初中1 H. Secondary4/初中4 F. Secondary2/初中2 I. Secondary5/初中5
A6	Age/年龄	A. 10 year old/10岁 B. 11 year old /11岁 C. 12 year old /12岁	D. 13 year old /13岁 G. 16 year old /16岁 E. 14 year old / 14岁 H. 17 year old / 17岁 F. 15 year old / 15岁 I. 18 year old / 18岁

MODULE B: Meal pattern	
组 B: 饮食习惯	
Instruction : Choose the answer and shade on the answer sheet provided	
指示 : 请在准备好的答案纸上划圈作答	
B1	<p>What is your school session? 请问你现在就读早上或下午班?</p> <p>A Morning session only/上午班 B Afternoon session only/下午班 C Morning and afternoon session/上午至下午班</p>
B2	<p>Normally, how many days in a week do you take breakfast (from 6.00AM till 8.00AM)? 你通常在一个星期内有几天会吃早餐(从早上6点到8点)?</p> <p>A 1 day/1天 B 2 days/2天 C 3 days/3天 D 4 days/4天 E 5 days/5天 F 6 days/6天 G 7 days/7天 H Not applicable / I do not take breakfast/不相关 / 没有吃早餐</p>
B3	<p>Normally, where do you get your breakfast from? 你通常从哪里获得早餐?</p> <p>A Prepared at home/在家准备 B Buy from school canteen/学校食堂购买 C Buy at restaurant or kiosk/餐馆或摊子购买 D Provided by the hostel/宿舍提供 E Others/其他途径 F I do not take breakfast/没有吃早餐</p>
B4	<p>If you do not take breakfast, what is the reason? 如果你没有吃早餐, 请问是什么原因?</p> <p>A No food/没有食物 B No appetite/没有胃口 C No time/没有时间 D On diet/ control body weight/节食/控制体重 E No money/没有钱 F Others/其他原因 G Not applicable/ because I take breakfast everyday 不相关/我每天都吃早餐</p>

B5 Normally, how many days in a week do you eat and/or drink during school break time?
你通常在一个星期内有几天会在学校休息节时吃食物与/或喝饮料?

A 0 day/0天
B 1 day/1天
C 2 days/2天
D 3 days/3天
E 4 days/4天
F 5 days/5天

B6 Normally, where do you obtain the food?
你通常从哪里获得该食物?

A Bring from home/在家准备
B Buy from school canteen/学校食堂购买
C Buy at restaurant or kiosk/餐馆或摊子购买
D Provided by hostel/宿舍提供
E Others/其他途径
F Not applicable/ I do not consume food and/or drink during school break time
不相关/没有在学校休息节时吃食物与/或喝饮料

B7 Normally, how many days in a week do you consume lunch (11.00AM till 3.00PM)?
你通常在一个星期内有几天会吃午餐 (从早上11点到下午3点)?

A 1 day/1天
B 2 days/2天
C 3 days/3天
D 4 days/4天
E 5 days/5天
F 6 days/6天
G 7 days/7天
H I do not take lunch/没有吃上午餐

B8 Normally, where do you obtain the food?
你通常从哪里获得该食物?

A Prepared at home/在家准备
B Buy from school canteen/学校食堂购买
C Buy from restaurant or kiosk/餐馆或摊子购买
D Provided by hostel/宿舍提供
E Others/其他途径
F Not applicable/ I do not take lunch/不相关/ 没有吃午餐

- B9** If you do not take lunch, what is the reason?
如果你没有吃午餐，请问是什么原因？
- A No food/没有食物
 - B No appetite/没有胃口
 - C No time/没有时间
 - D On diet/ control body weight/节食/控制体重
 - E No money/没有钱
 - F Others/其他原因
 - G Not applicable/ I take lunch/不相关/ 我有吃午餐
- B10** Normally, how many days in a week do you have afternoon tea (3.00PM till 6.00PM)?
你通常在一个星期内有几天会吃下午茶点（从下午3点到傍晚6点）？
- A 1 day/1天
 - B 2 days/2天
 - C 3 days/3天
 - D 4 days/4天
 - E 5 days/5天
 - F 6 days/6天
 - G 7 days/7天
 - H No afternoon tea/没有吃下午茶
- B11** Normally, where do you obtain the food?
你通常从哪里获得下午茶点的食物？
- A Prepared at home/在家准备
 - B Buy from school canteen/学校食堂购买
 - C Buy from restaurant or kiosk/餐馆或摊子购买
 - D Provided by hostel/宿舍提供
 - E Others/其他途径
 - F Not having afternoon tea/没有吃下午茶点
- B12** Normally, how many days in a week do you have dinner(6.00PM till10.00PM)?
你通常在一个星期内有几天会吃晚餐（从傍晚6点到晚上10点）？
- A 1 day/1天
 - B 2 days/2天
 - C 3 days/3天
 - D 4 days/4天
 - E 5 days/5天
 - F 6 days/6天
 - G 7 days/7天
 - H Not having dinner/没有吃晚餐

- B13** Normally, where do you obtain the food?
通常从哪获得该食物?
- A Prepared at home/在家准备
 - B Buy from restaurant or kiosk/餐馆或摊子购买
 - C Provided by hostel/宿舍提供
 - D Others/其他途径
 - E Not applicable/ I do not take dinner/不相关/ 没有吃晚餐
- B14** If you do not take dinner, what is the reason?
如果你没有吃晚餐，请问是什么原因?
- A No food/没有食物
 - B No appetite/没有胃口
 - C No time/没有时间
 - D On diet/节食
 - E No money/没有钱
 - F Others/其他原因
 - G Not applicable/ I take dinner/不相关/ 有吃晚餐
- B15** For the past one week, how often do you take heavy meals after dinner? (Example: nasilemak, roti canai, fried mee, burger, fried chicken, instant noodle and etc.This does not include light snacks, eg 2 pieces of biscuit and/or one glass of milk)
在上周里面，有几天你在完晚饭后会吃难消化的食物？（例：椰浆饭，印度煎饼，炒面，汉堡包，炸鸡，快熟面等。这不包括小吃，例如2块饼干和/或一杯牛奶）
- A 1 day/1天
 - B 2 days/2天
 - C 3 days/3天
 - D 4 days/4天
 - E 5 days/5天
 - F 6 days/6天
 - G 7 days/7天
 - H I do not take heavy meals after dinner/晚餐后不再吃东西
- B16** Where do you take the heavy meals?
你从哪里享用该食物?
- A Home/家里
 - B Restaurant/ kiosk/餐馆或摊子
 - C Hostel/宿舍
 - D Others/其他地方
 - E Not applicable/ I do not take heavy meals/不相关/ 晚餐后不再吃东西

- B17** Normally, how many days in a week do you eat fast food bought from fast food restaurant, such as burger, pizza, fried chicken, French fries, nugget and etc?
你通常在一个星期内有几天会吃从快餐店购买的食物如汉堡包, 披萨饼, 炸鸡, 薯条, 鸡肉块等等?
- A 1 day/1天
 - B 2 days/2天
 - C 3 days/3天
 - D 4 days/4天
 - E 5 days/5天
 - F 6 days/6天
 - G 7 days/7天
 - H No fast food/没有吃快餐
- B18** How often do you bring food to school?
你可否有从家里携带便当/食物到学校?
- A Everyday/每天
 - B Occasionally/偶尔 (有时候会)
 - C Never/没有携带
- B19** What is the usual packed meal that you bring to school? (Can choose **ONE** or **TWO** answer(s) only)
通常会带什么食物到学校? (只能选择一个或两个答案)
- A *Nasi lemak*/fried rice/mixed rice
椰浆饭 / 炒饭 / 饭菜
 - B Noodle / Vermicelli / KuehTeow
面 / 米粉 / 河粉
 - C Bread / Bun / Sandwich
面包 / 馒头 / 三文治
 - D Nugget / Sausage / Burger
鸡肉块 / 香肠 / 汉堡包
 - E Biscuit/饼干
 - F Fruits/水果
 - G Others/其他
 - H I do not bring packed meal/没有携带食物
- B20** How often do you bring drink to school?
你可否有从家里携带饮料到学校?
- A Everyday/每天
 - B Occasionally/偶尔 (有时候会)
 - C Never/没有携带

- B21** What is the usual drink that you bring to school?(Can choose **ONE** or **TWO** answer(s) only)
通常会带什么饮料到学校? (只能选择一个或两个答案)
- A Plain water/白开水
 - B Flavored water/packed drink/syrup drink/tea/coffee/Milo
有味饮料 / 包装饮料 / 糖浆饮料 / 茶 / 咖啡 / 美禄
 - C Carbonated drink/汽水
 - D Milk/ cultured drink/奶/ 酸奶饮品 (优格)
 - E Others/其他
 - F I don't bring drink to school/没有携带饮料
- B22** Normally, where do you mostly spend your pocket money?
你最常把零用钱花在哪一方面?
- A Buy food and/ or drink/购买食物X或饮料
 - B Buy stationery/购买文具
 - C Saving/储蓄
 - D Others/其他
 - E I do not bring pocket money to school/没有零用钱
- B23** How often do you eat outside in a week?Not included eating in the school and hostel?
你通常在一个星期内有几天会在外用餐? 不包括在学校和宿舍?
- A 1 time/1次
 - B 2 times/2次
 - C 3 times/3次
 - D 4 times/4次
 - E 5 times/5次
 - F 6 times/6次
 - G 7 times or more/7次或以上
 - H Never/没有在外面用餐
- B24** What kind of snack foods that you always eat?(Can choose **ONE** or **TWO** answer(s) only)
你最常吃的零食是什么? (只能选择一个或两个答案)
- A Bread / Bun / Sandwich/面包 / 馒头 / 三文治
 - B French fries/薯条
 - C Biscuit/饼干
 - D Fruits/水果
 - E Nuts/花生
 - F Fish cracker/炸鱼饼/虾饼
 - G Ice cream/冰淇淋
 - H I do not take snack food/没有吃零食

- B25** How often do you take snack foods in a week?
你在一个星期内吃多少次零食?
- A 1 time/1次
 - B 2 times/2次
 - C 3 times/3次
 - D 4 times/4次
 - E 5 times/5次
 - F 6 times/6次
 - G 7 times or more/7次或以上
 - H Never take snack food before/没有吃零食
- B26** What types of food and/or drinks that you always buy out of school area?(Can choose **ONE** or **TWO** answer(s) only)
你从学校范围外买些什么类型的食物和/或饮料? (只能选择一个或两个答案)
- A Candy/chocolate/糖果 / 巧克力
 - B French fries/ nugget / sausage/薯条 / 鸡肉块 / 香肠
 - C Flavoured drink/ carbonated drink/各种口味饮料 / 汽水
 - D Pickles/腌制食物
 - E Snack food/零食
 - F Fish cracker/炸鱼饼/虾饼
 - G Ice cream/冰淇淋
 - H Never take snack food outside the school area/没有买学校范围外的食物
- B27** Within a week, how often do you buy food and/or drink outside school compound?
在一星期内, 你可否有从学校范围外买食物和/或饮料?
- A 1 time/1次
 - B 2 times/2次
 - C 3 times/3次
 - D 4 times/4次
 - E 5 times/5次
 - F 6 times/6次
 - G 7 times or more/7次或以上
 - H Never/没有购买
- B28** Which media source(s) that most affect your dietary pattern? (Can choose **ONE** or **TWO** answer (s) only)/
什么媒体最影响你的食物选择? (只能选择一个或两个答案)
- A Social media (example : Surf Internet / YouTube / Facebook / Instagram, Twitter)
社交网站 (例: 浏览网站 / 视频网站 / 面子书)
 - B Television/电视机
 - C Radio/电台
 - D Printed media (Example: magazine, newspaper, billboard, brochure, catalogue)
平面媒体 (例子: 杂志, 报章, 广告牌, 传单, 购物目录)
 - E Not affected/没有被影响

MODULE C : PHYSICAL ACTIVITY						
C组：体能活动						
Instruction : Choose the answer and shade on the answer sheet provided						
指示：请在准备好的答案纸上划黑作答						
C1 Physical activity during leisure time: Are you doing the activities listed below during the last 7 days (last week). If YES , how many times? 休闲体能活动：在过去的7天（上周）你有做出以下列出的哪些活动。如果有，请问多少次？						
	Activity/活动	Never/ 没有	1-2 times/ 1-2次	3-4 times/ 3-4次	5-6 times/ 5-6次	7 times or more/ 7次或以上
a	Rope skipping/跳绳	A	B	C	D	E
b	Rowing/ Canoeing/划艇	A	B	C	D	E
c	Silat / Karate / Taekwondo 马来武术/空手道/跆拳道	A	B	C	D	E
d	Chasing game/追逐游戏	A	B	C	D	E
e	Brisk walking/步行运动	A	B	C	D	E
f	Cycling/骑脚踏车	A	B	C	D	E
g	Jogging / Running/慢跑 / 赛跑	A	B	C	D	E
h	Aerobics/有氧体操	A	B	C	D	E
i	Swimming/游泳	A	B	C	D	E
j	Baseball/棒球	A	B	C	D	E
k	Dancing/跳舞	A	B	C	D	E
l	Rugby/橄榄球	A	B	C	D	E
m	Badminton/羽毛球	A	B	C	D	E
n	Hockey/曲棍球	A	B	C	D	E
o	Volleyball/排球	A	B	C	D	E
p	Basketball / Netball/篮球	A	B	C	D	E
q	Sepak takraw/藤球	A	B	C	D	E
r	Football / Futsal/足球	A	B	C	D	E
s	Ping pong/乒乓球	A	B	C	D	E

- C2** During physical education class in the last 7 days, how often are you in an active condition (playing, running, throwing, jumping)?
在过去的7天，在体育课活动期间，你是否非常活跃（玩耍，奔跑，投球，跳跃）？
- A I do not attend the physical education class/我不参与体育课
B Very rare/级少数
C Occasionally/偶尔(有时候会)
D Quite often/经常
E Always/常常
- C3** What do you usually do **during break time in the school** for the last 7 days?
在过去的7天，你都在**学校休息课**时做些什么？
- A Sitting down (chatting, reading, doing homework) /坐下(聊天，阅读，做功课)
B Standing or walking/站立或步行
C Running or playing for a short while/奔跑或偶尔玩耍
D Running and playing for a short while/奔跑和偶尔玩耍
E Running and playing all the time/奔跑和经常玩耍
- C4** What are the activities that you normally do **during lunch time** for the last 7 days (apart from eating)?
在过去的7天，除了坐下吃午餐外，你都在**吃午餐的时候**做些什么？
- A Sitting down (chatting, reading, doing homework)/坐下(聊天，阅读，做功课)
B Standing or walking/站立或步行
C Running or playing for a short while/奔跑或偶尔玩耍
D Running and playing for a short while/奔跑和适量的玩耍
E Running and playing all the time/奔跑和经常玩耍
- C5** In the last 7 days, how many days did you spend playing sports, dance or playing **actively immediately after school hours**?
在过去的7天，你有几天是**直接在放学后**运动，跳舞，或非常活跃的玩耍？
- A Never/没有
B 1 day/1天
C 2 or 3 days/2或3天
D 4 days/4天
E 5 days/5天
- C6** In the last 7 days, how many days did you play sports, dance or play **actively in the evening**?
在过去的7天，你有几天是在**下午时间**运动，跳舞，或非常活跃的玩耍？
- A Never/没有
B 1 day/1天
C 2 or 3 days/2或3天
D 4 or 5 days/4或5天
E 6 or 7 days/6或7天

- C7** How many times have you been involved with sport activities, dancing or engage in active games during last weekend?
 在上个周末，你有多少次参与运动，跳舞，或活跃的课外活动？
- A Never/没有
 - B 1 time/1次
 - C 2 or 3 times/2或3次
 - D 4 or 5 times/4或5次
 - E 6 times or more/6次或以上
- C8** Which of the following statements describe you in the last 7 days?
 以下哪项正是描述你在过去的7天的行为？
- A I use all or most of my spare time with a mild activity/
 我用全部或大部分空闲的时间做些不劳累的活动
 - B I occasionally (1-2 times per week) do physical activity during my spare time (example: involve in sport activities, running, swimming, cycling, aerobic activity)/
 在空闲的时候，我偶尔（每周1-2次）会参与课外活动（例：运动，赛跑，跳舞，游泳，骑脚踏车，有氧运动）
 - C I sometimes (3-4 times per week) do physical activity during my spare time(example: involve in sport activities, running, swimming, cycling, aerobic activity)/
 在空闲的时候，我有时（每周3-4次）会参与课外活动（例：运动，赛跑，跳舞，游泳，骑脚踏车，有氧运动）
 - D I often (5-6times per week) do physical activity during my spare time (example: involve in sport activities, running, swimming, cycling, aerobic activity)/
 在空闲的时候，我经常（每周5-6次）会参与课外活动（例：运动，赛跑，跳舞，游泳，骑脚踏车，有氧运动）
 - E I regularly (7times or more per week) do physical activity during my spare time (example: involve in sport activities, running, swimming, cycling, aerobic activity)/
 在空闲的时候，我常常（每周7次或以上）会参与课外活动（例：运动，赛跑，跳舞，游泳，骑脚踏车，有氧运动）

C9 Highlight the frequency of your activity (such as sports, playing, dancing, or any other physical activity) for each day during the last one week.

上个星期的每一天，你有多少次参与课外活动（体育，玩耍，跳舞或其他课外活动）

Day/日期		No activity/ 没有活动	Occasionally (1-2 times)/ 偶尔 (1-2 次)	Sometimes (3-4 times) / 有时 (3-4 次)	Often (5-6 times/ 经常 (5-6 次)	Regularly (7 times or more)/ 常常 (7 次或以)
a	Monday/ 星期一	A	B	C	D	E
b	Tuesday/ 星期二	A	B	C	D	E
c	Wednesday/ 星期三	A	B	C	D	E
d	Thursday/ 星期四	A	B	C	D	E
e	Friday/ 星期五	A	B	C	D	E
f	Saturday/ 星期六	A	B	C	D	E
g	Sunday/ 星期日	A	B	C	D	E

- C10** For the past week, are you sick, or are there any things that prevent you from doing regular physical activity?
在上个星期, 你是否生病或因其他原因而导致你不能参与课外活动吗?
A Yes/是
B No/不是
- C11** During **weekend**, do you watch television and/or use computer and/or play video games?
在**周末**, 你是否有看电视和/或使用电脑和/或玩电子游戏机 (example/如: PSP, Playstation, Gameboy and others)?
A Yes/是
B No/不是
- C12** How long do you watch television and/or use computer and/or play video games during **weekend**?
在**周末**, 你花多少时间在看电视和/或使用电脑和/或玩电子游戏机?
A Less than 1 hour per day/一天少过 1 小时
B 1 to 2 hours per day/一天 1 至 2 小时之间
C 2 to 3 hours per day/一天 2 至 3 小时之间
D 3 to 4 hours per day/一天 3 至 4 小时之间
E More than 4 hours per day/一天超过 4 小时
- C13** During **school day**, do you watch television and/or use computer and/or playing video games?
在**上学期间**, 你是否有看电视和/或使用电脑和/或玩电子游戏机(example/如: PSP, PlayStation, Gameboy and others)?
A Yes/是
B No/不是
- C14** How long do you watch television and/or use computer and/or play video games on **school days**?
在**上学期间**, 你花多少时间在看电视和/或使用电脑和/或玩电子游戏机?
A Less than 1 hour per day/一天少过 1 小时
B 1 to 2 hours per day/一天 1 至 2 小时之间
C 2 to 3 hours per day/一天 2 至 3 小时之间
D 3 to 4 hours per day/一天 3 至 4 小时之间
E More than 4 hours per day/一天超过 4 小时

<p>MODULE D : PERCEPTION OF WEIGHT MANAGEMENT D组：体重管理的自我观点</p>	
<p>INSTRUCTION : Choose the answer and shade on the answer sheet provided. 指示：请在准备好的答案纸上划圈作答</p>	
<p>D1</p>	<p>At the present time, you think you are: 目前, 你觉得你:</p> <p>A Significant underweight/体重非常不足 B Underweight/体重不足 C Has appropriate body weight/拥有适当的体重 D Overweight/体重过重 E Obese/肥胖</p>
<p>D2</p>	<p>What are you doing to your body weight? 你对你的体重做了些什么?</p> <p>A I am trying to reduce my body weight/我正在努力减轻自己的体重 B I am trying to increase my body weight/我正在努力增加自己的体重 C I am not doing anything to my body weight/我什么也没做 D I am maintaining my body weight/我正在维持自己的体重</p>
<p>D3</p>	<p>If you intend to lose body weight, what are the main factor that motivate you to do so?/如果你想减肥, 是什么主要因素驱使你这样做呢?</p> <p>A Health/健康 B Beauty/漂亮 C Increase self-confidence/提高自信 D To have more friends/结交更多朋友 E Does not intend to lose body weight/没有想过减肥</p>
<p>D4</p>	<p>If you intend to lose body weight, what is the preferred option? 如果你想减肥, 什么方法是你的首选?</p> <p>A Exercise/运动 B Reduce consumption of high fat foods/减少吃油腻的食物(Example/例子: fried food/煎炸食物) C Reduce intake of sugary foods/减少吃甜食 D Increase intake of vegetables and fruits/多吃蔬菜和水果 E Skip main meals/不吃正餐 (breakfast/早餐, lunch/午餐, dinner/晚餐) F Taking diet pills/ use slimming cream/吃减肥药/用减肥霜 G Fasting/禁食 H Get professional advise/征求专业服务 I Does not intend to lose body weight/没有想过减肥</p>
<p>D5</p>	<p>If you intend to increase body weight, what are the main factor that motivate you to do so? 如果你想增肥, 是什么主要因素驱使你这样做呢?</p> <p>A Healthy/健康 B Beauty/漂亮 C Increase self-confidence/提高自信 D To have more friends/结交更多朋友 E Does not intend to increase body weight/没有想过增肥</p>
<p>D6</p>	<p>If you intend to increase body weight, what is the preferred option? 如果你想增肥, 什么方法是你的首选?</p> <p>A Increase the quantity of food consumed/吃更多的食物 B Taking supplement (Additional foods such as milk, vitamin)/吃补品 (如奶, 维生素补品) C Take high-calorie foods/吃高卡路里的食物 D Others/其他 E Does not intend to increase body weight/没有想过增肥</p>

<p>MODULE E: SUPPLEMENT INTAKE E组：食用营养补助品</p>	
<p><i>instruction : Choose the answer and shade on the answer sheet provided</i> <i>指示：请在准备好的答案纸上划黑作答</i></p>	
<p>E1</p>	<p>Are you taking any vitamin supplement/ minerals? 你有在食用维生素/矿物质的补助品吗？</p> <p>A Yes/有 B No/没有</p> <p>(If No, please answer 'I DON'T TAKE SUPPLEMENT' at question E2, E3, danE4 (如果没有，请在E2, E3 和 E4 回答没有食用补助品)</p>
<p>E2</p>	<p>What type of vitamin supplement/ minerals that you usually take? 你在食用什么维生素/矿物质补助品？</p> <p>A Multivitamin/多元维生素 B Vitamin C/维生素C C Iron supplement (Ferum)/铁质 D Others/其他 E I do not take supplement/没有食用补助品</p>
<p>E3</p>	<p>What is the reason for you to take vitamin supplement/ minerals? 是什么原因使你在食用维生素/矿物质补助品？</p> <p>A Prescribed by doctor/医生指示 B Advised by parent/父母要求 C Self-awareness/自我意识 D Friend influence/朋友影响 E Others/其他 F I do not take supplement/没有食用补助品</p>
<p>E4</p>	<p>How often do you take vitamin supplement / minerals? 你如何食用该维生素/矿物质补助品？</p> <p>A Everyday/每天 B 5-6 times per week/一星期5至6次 C 3-4 times per week/一星期3至4次 D 1-2 times per week/一星期1至2次 E I do not take supplement/没有服用补助品</p>
<p>E5</p>	<p>Are you taking any food supplement? 你有在食用食物补助品吗？</p> <p>A Yes/有 B No/没有</p> <p>(If NO, please answer 'I DON'T TAKE SUPPLEMENT' at question E6, E7, danE8) (如果没有，请在E6, E7 和 E8 回答没有食用补助品)</p>

E6 What kind of food supplement that you usually take?
你在食用什么食物补助品？

- A Spirulina/螺旋藻
- B Fish oil/鱼油
- C Honey/蜜糖或蜜糖制品
- D Chicken essence/鸡精
- E Others/其他
- F I do not take supplement/没有食用补助品

E7 What is the reason for you to take food supplement?
是什么原因使你在食用食物补助品？

- A Prescribed by doctor/医生指示
- B Advised by parent/父母要求
- C Self-awareness/自我意识
- D Friend influence/朋友影响
- E Others/其他
- F I do not take supplement/没有服用补助品

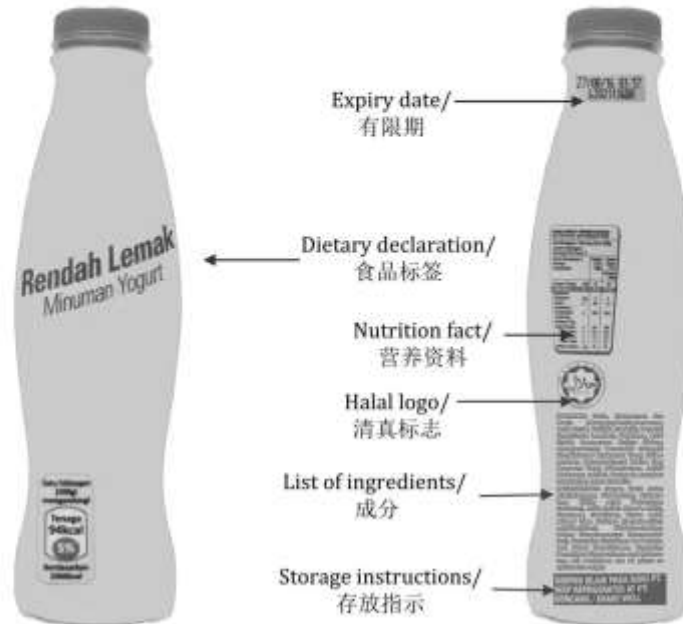
E8 How often do you take food supplement?
你如何食用该维生素/矿物质补助品？

- A Everyday/每天
- B 5-6 times per week/一星期 5 至 6 次
- C 3-4 times per week/一星期 3 至 4 次
- D 1-2 times per week/一星期 1 至 2 次
- E I do not take supplement/没有服用补助品

MODULE F: NUTRITION AND FOOD LABELLING																			
F 组：食品标签（只限于中学生作答）																			
<i>Instruction: Choose the answer and shade on the answer sheet provided</i> <i>指示：请在准备好的答案纸上划黑作答</i>																			
F1	<p>Do you read food label when buying or receiving food/drink? 当你正在购买或接受食品/饮料的时候，你会否阅读食品标签？</p> <p>A. Yes, every time/每次都会</p> <p>B. Yes, sometimes/偶尔会</p> <p>C. No/不会</p>																		
	<p style="text-align: right;">} (Straight to question F3 and answer till question F10/ 请直接跳去回答问题 F3，并继续回答至 F10)</p> <p style="text-align: right;">(Please answer question F2 and question F5 till F8/ 请回答问题 F2，并直接跳去 F5 继续回答至 F8)</p>																		
F2	<p>If you do not read food labels, specify the reason? You may choose more than one answer 如果你没有阅读食品标签，请列明原因。你可以选择多个答案</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Reasons for not reading food labels/ 没有阅读食品标签的原因</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A</td> <td>Small printing font/字体太小</td> </tr> <tr> <td style="text-align: center;">B</td> <td>Do not understand food labels/不明白</td> </tr> <tr> <td style="text-align: center;">C</td> <td>Not interesting/不感兴趣</td> </tr> <tr> <td style="text-align: center;">D</td> <td>Do not know the importance/不懂其重要性</td> </tr> <tr> <td style="text-align: center;">E</td> <td>No time/没有时间</td> </tr> <tr> <td style="text-align: center;">F</td> <td>Already know the information/已经知道相关资料</td> </tr> </tbody> </table>	Reasons for not reading food labels/ 没有阅读食品标签的原因		A	Small printing font/字体太小	B	Do not understand food labels/不明白	C	Not interesting/不感兴趣	D	Do not know the importance/不懂其重要性	E	No time/没有时间	F	Already know the information/已经知道相关资料				
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F3	<p>What kind of information do you read from the food label? You may choose more than one answer. 你会从食物营养标签上阅读哪些营养资料？你可以选择多个答案</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Nutrition fact information/营养资料</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A</td> <td>Energy content/日能</td> </tr> <tr> <td style="text-align: center;">B</td> <td>Carbohydrate/sugar content/碳水化合物/糖含量</td> </tr> <tr> <td style="text-align: center;">C</td> <td>Fat content/脂肪含量</td> </tr> <tr> <td style="text-align: center;">D</td> <td>Protein content/蛋白质含量</td> </tr> <tr> <td style="text-align: center;">E</td> <td>Salt/ sodium content/钠含量</td> </tr> <tr> <td style="text-align: center;">F</td> <td>Vitamin content/维生素含量</td> </tr> <tr> <td style="text-align: center;">G</td> <td>Mineral content/矿物质含量</td> </tr> <tr> <td style="text-align: center;">H</td> <td>Fiber/纤维</td> </tr> </tbody> </table>	Nutrition fact information/营养资料		A	Energy content/日能	B	Carbohydrate/sugar content/碳水化合物/糖含量	C	Fat content/脂肪含量	D	Protein content/蛋白质含量	E	Salt/ sodium content/钠含量	F	Vitamin content/维生素含量	G	Mineral content/矿物质含量	H	Fiber/纤维
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F	Vitamin content/维生素含量																		
G	Mineral content/矿物质含量																		
H	Fiber/纤维																		

F4 Based on the picture of drink sample below, what kind of information do you read?
You can choose more than one answer

根据以下饮品为例，你会阅读以下哪些资料？您可以选择多个答案



Type of Information/食品资料	
A	Expiry date/有限期
B	Dietary declaration/食品标签
C	Nutrition fact/营养资料
D	Halal logo/清真标志
E	List of Ingredients/成分
F	Storage instruction/存放指示

Based on nutrition fact on **Packed Drink XYZ** shown below, please read and state whether the statement is correct or wrong

根据以下**XYZ包装饮料**的食品说明。请阅读明白并确定下列陈述正确与否

Nutrition Facts for Drink XYZ/ XYZ 包装饮料食品说明		
Serving size:食用分量: 250 ml /毫升 Serving per box/每包装所含食用份量: 1		
	Every 100 ml/ 每 100 毫升	Every serving 250 ml/ 每食用份量 250 毫升
Energy/能量 (kcal/千卡)	56	140
Carbohydrate/碳水化合物 (g/克)	10.9	27.3
Total sugar/总糖量 (g/克)	10.6	26.5
Protein/蛋白质 (g/克)	0	0
Fat/脂肪 (g/克)	0	0

F5 If I drink 100ml of this drink, it provides 56 kcal of energy.
如果我喝下这100毫升的饮料，它将提供56千卡能量。

- A True/正确
- B False/不正确
- C Don't know.不知道

F6 If I drink 1 box of this packed drink, I obtain 26.5 gram of sugar.
如果我喝下这包饮料，就等于我摄取了26.5克糖。

- A True/正确
- B False/不正确
- C Don't know/不知道

Based on the energy content from the front part of label (shown below), please indicate whether the following statement is true or false.

根据以下前面的能量摄取标签(*front of pack labelling*), 请确定下列陈述正确与否

One serving/每食用份量
Contain/含有 250 ml/毫升



Base on/根据
2000 kcal/千卡


- F7** Energy for 2 serving of this food is 140 kcal
两份食用份量将提供140千卡的能量
- A True/正确
 - B False/不正确
 - C Don't know/不知道
- F8** If I drink one serve of this food, it provides 7% energy from 2000 calories
如果我喝了一份食用份量, 它将从 2000 千卡中提供 7% 的能量。
- A True/正确
 - B False/不正确
 - C Don't know/不知道

Product Ice Cream A
冰淇淋 A 产品

List of ingredients/成分:

Sugar, Olein/Palm kernel, Milk solids,
Glucose syrup, Cocoa powder.

糖, 精油/棕榈仁油, 乳固体, 葡萄糖浆,
可可粉



F9 What ingredient that is mostly used in this ice cream?
在这冰淇淋内, 什么成分是最高的?

- A. Milk solids/乳固体
- B. Glucose syrup/葡萄糖浆
- C. Sugar/糖
- D. Olein / Palm kernel oil/精油/棕榈仁油
- E. Cocoa powder/可可粉

F10 What ingredient that is least used in this ice cream?
在这冰淇淋内, 什么成分是最低的?

- A. Glucose syrup/葡萄糖浆
- B. Sugar/糖
- C. Olein/Palm kernel oil/精油/棕榈仁油
- D. Milk solids/乳固体
- E. Cocoa powder/可可粉

MODULE G : ANTHROPOMETRIC MEASUREMENT													
G组： 人体测量													
<i>Instruction: This section will be completed by the student in the answer sheets provided</i> 指示：在这环节，学生将在所准备的答案纸上作答													
G1	Anthropometry measurement date/测量日期: <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 20%;"><input type="text"/></td> <td style="width: 20%;"><input type="text"/></td> <td style="width: 20%;"><input type="text"/></td> <td style="width: 20%;"><input type="text"/></td> <td style="width: 20%;"><input type="text"/></td> <td style="width: 20%;"><input type="text"/></td> </tr> <tr> <td>Day/日期</td> <td>Month/月份</td> <td colspan="4">Year/年份</td> </tr> </table>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Day/日期	Month/月份	Year/年份			
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Day/日期	Month/月份	Year/年份											
G2	Body weight/体重												
G2a	Weight 1/体重1 <input type="text"/> <input type="text"/> <input type="text"/> : <input type="text"/> kg/公斤												
G2b	Weight 2/体重2 <input type="text"/> <input type="text"/> <input type="text"/> : <input type="text"/> kg/公斤												
	Refuse to be measured 不愿被测量 <input type="text"/>												
G3	Body height/身高												
G3a	Height 1/身高1 <input type="text"/> <input type="text"/> <input type="text"/> : <input type="text"/> cm/厘米												
G3b	Height 2/身高2 <input type="text"/> <input type="text"/> <input type="text"/> : <input type="text"/> cm/厘米												
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Appendix 8: Consent Form

Parents Consent Form

Borang Persetujuan Ibu Bapa/Penjaga NHMS 2017

RISALAH MAKLUMAT IBU BAPA/ PENJAGA (RESPONDEN BAWAH 18 TAHUN)**1. Tajuk:**

Tinjauan Kebangsaan Kesihatan dan Morbiditi (NHMS) 2017

2. Nama Penyelidik dan Institusi:

- i. Dr. S Maria Binti Awaluddin, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia
- ii. Puan Ruhaya Binti Salleh, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia
- iii. Dr. Mohd Kamal Ariff Bin Abdul Ghani, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia

3. Nama Penaja:

Kementerian Kesihatan Malaysia

4. Pengenalan:

Kementerian Kesihatan Malaysia sedang menjalankan Tinjauan Kebangsaan Kesihatan dan Morbiditi 2017 pada tahun ini. Terdapat dua fokus utama dalam kajian ini iaitu Tinjauan Kesihatan Remaja dan Tinjauan Pemakanan Remaja. Maklumat di bawah akan menjelaskan hal-hal berkenaan tinjauan tersebut untuk anda membenarkan anak anda menyertai tinjauan ini.

Adalah penting untuk anda memahami mengapa tinjauan ini dilakukan dan apa yang perlu anak anda lakukan. Sila ambil masa yang secukupnya untuk membaca dengan teliti penerangan yang diberi sebelum anda memberi persetujuan untuk anak anda menyertai tinjauan ini. Jika anda mempunyai sebarang kemusykilan ataupun memerlukan maklumat lanjut, anda boleh bertanya dengan mana-mana ahli kumpulan tinjauan ini.

Setelah anda memahami maklumat tinjauan ini dan memberi keizinan untuk anak anda mengambil bahagian, anda perlu menandatangani Borang Persetujuan Ibu Bapa/ Penjaga (**Salinan Ibu-Bapa/Penjaga & Salinan Penyelidik**) yang disertakan bersama-sama risalah ini. Tuan/Puan mempunyai masa selama tujuh (7) hari untuk membuat keputusan bagi penyertaan anak Tuan/Puan dalam kajian ini. Borang persetujuan yang telah ditandatangani akan dikumpul oleh pasukan penyelidik sebelum pengumpulan data dijalankan. Penyertaan anak anda dalam tinjauan ini adalah secara sukarela dan anak anda boleh menarik diri pada bila-bila masa. Anak anda boleh tidak menjawab mana-mana soalan atau menarik diri dari pemeriksaan yang disebutkan sekiranya tidak mahu. Keengganan anak anda untuk mengambil bahagian atau menarik diri tidak akan menjejaskan sebarang manfaat perubatan atau kesihatan yang sememangnya hak anak anda.

Tinjauan ini ditaja sepenuhnya oleh Kementerian Kesihatan Malaysia dan telah mendapat kelulusan Jawatankuasa Etika dan Penyelidikan Perubatan, Kementerian Kesihatan Malaysia.

5. Apakah tujuan tinjauan ini dilakukan?

Tujuan tinjauan ini dijalankan adalah untuk memperoleh maklumat berkenaan kesihatan dan faktor pelindung serta menilai status pemakanan, corak pengambilan makanan dan corak aktiviti fizikal dalam kalangan remaja berumur 10 hingga 17 tahun. Maklumat yang diperolehi ini akan dikaji dan dinilai bagi membantu penilaian keberkesanan strategi yang dilaksanakan di peringkat sekolah dan untuk meningkatkan kesihatan remaja.

6. Apakah yang perlu anak saya lalui/lakukan sekiranya bersetuju untuk menyertai tinjauan ini?

Memberi respon terhadap soalan-soalan kaji selidik yang perlu dijawab oleh anak anda dan juga pengambilan ukuran berat dan tinggi yang akan dilakukan oleh pasukan penyelidik.

7. Apakah tanggungjawab anak saya sewaktu menyertai tinjauan ini?

Adalah penting untuk anak anda menjawab kesemua soalan yang ditanya oleh ahli penyelidik dengan lengkap. Menyertai tinjauan ini tidak memerlukan anda mengeluarkan sebarang perbelanjaan.

8. Apakah risiko dan kesan-kesan sampingan menyertai tinjauan ini?

Tiada risiko terhadap anak anda sekiranya menyertai tinjauan ini memandangkan tiada kaedah yang invasif atau merbahaya digunakan.

9. Apakah manfaatnya anak saya menyertai tinjauan ini?

Tinjauan ini tidak memberikan sebarang saguhati atau kesan kesihatan secara langsung apabila anak anda menyertai tinjauan ini. Namun, segala maklumat yang diperolehi daripada tinjauan ini akan dapat membantu penggubal dasar untuk merancang dan menambahkan program sedia ada untuk golongan remaja di Malaysia.

10. Adakah maklumat perubatan anak saya akan dirahsiakan?

Segala maklumat anak anda yang diperolehi dalam tinjauan ini akan disimpan dan dikendalikan secara sulit, bersesuaian dengan peraturan-peraturan dan/atau undang-undang yang berkenaan. Hanya penyelidik, peninjau yang berkelayakan, auditor, dan pihak berkuasa yang berkaitan kajian ini sahaja mempunyai akses kepada maklumat yang anak anda berikan. Sekiranya hasil tinjauan ini diterbitkan atau dibentangkan kepada orang ramai, identiti anak anda tidak akan didedahkan tanpa kebenaran anda terlebih dahulu.

11. Siapakah yang perlu saya hubungi sekiranya saya mempunyai sebarang pertanyaan?

Sekiranya anda mempunyai sebarang soalan mengenai tinjauan ini atau memerlukan keterangan lanjut, Tuan/Puan boleh hubungi penyelidik, Dr. S Maria Awaluddin, Puan Ruhaya Salleh dan Dr. Mohd Kamal Ariff Abdul Ghani di Institut Kesihatan Umum, Jalan Bangsar, Kuala Lumpur di talian 03-22979400 untuk penjelasan lebih lanjut.

Jika anda mempunyai sebarang pertanyaan berkaitan dengan hak-hak anak anda sebagai responden dalam tinjauan ini, sila hubungi Setiausaha, Jawatankuasa Etika & Penyelidikan Perubatan (MREC), Kementerian Kesihatan Malaysia di talian 03-22874032.

BORANG PERSETUJUAN IBU BAPA/ PENJAGA (Salinan Ibu Bapa/Penjaga)

Tajuk kajian : Tinjauan Kebangsaan Kesihatan dan Morbiditi (NHMS) 2017

Dengan menandatangani di bawah (Salinan Ibu Bapa/Penjaga dan Salinan Penyelidik), saya mengesahkan bahawa:

	Sila tandakan ✓ di dalam kotak
1. Saya telah diberi maklumat tentang tinjauan di atas dan saya telah membaca dan memahami segala maklumat yang diberikan di dalam risalah ini.	<input type="checkbox"/>
2. Saya mempunyai masa yang secukupnya untuk mempertimbangkan penyertaan anak saya dalam tinjauan ini dan telah diberi peluang untuk bertanyakan soalan dan semua soalan saya telah dijawab dengan memuaskan.	<input type="checkbox"/>
3. Saya faham bahawa penyertaan anak saya adalah secara sukarela dan boleh menarik diri daripada tinjauan ini pada bila-bila masa tanpa memberi sebarang sebab.	<input type="checkbox"/>
4. Saya memahami risiko dan manfaat dari tinjauan ini dan saya memberi keizinan secara sukarela untuk anak saya mengambil bahagian dalam tinjauan. Saya faham bahawa anak saya mesti mengikuti arahan yang berkaitan dengan penyertaannya dalam tinjauan ini.	<input type="checkbox"/>
5. Saya akan menerima satu salinan maklumat tinjauan/borang persetujuan ibu bapa/penjaga termaklum ini yang telah ditandatangani dan bertarikh.	<input type="checkbox"/>

Saya, _____ **memberi/tidak memberi keizinan*** untuk anak/jagaan saya bernama _____ dari kelas _____ mengambil bahagian di dalam Tinjauan Kebangsaan Kesihatan dan Morbiditi (NHMS) 2017 sepertimana yang telah dimaklumkan. (***Potong yang tidak berkenaan**)

(Tandatangan)
 Nama Ibubapa/Penjaga* : _____
 Nombor K/P : _____
 Tarikh : _____

BORANG PERSETUJUAN IBU BAPA/ PENJAGA (Salinan Penyelidik)

Tajuk kajian : Tinjauan Kebangsaan Kesihatan dan Morbiditi (NHMS) 2017

Dengan menandatangani di bawah (Salinan Ibu Bapa/Penjaga dan Salinan Penyelidik), saya mengesahkan bahawa:

	Sila tandakan ✓ di dalam kotak
1. Saya telah diberi maklumat tentang tinjauan di atas dan saya telah membaca dan memahami segala maklumat yang diberikan di dalam risalah ini.	<input type="checkbox"/>
2. Saya mempunyai masa yang secukupnya untuk mempertimbangkan penyertaan anak saya dalam tinjauan ini dan telah diberi peluang untuk bertanyakan soalan dan semua soalan saya telah dijawab dengan memuaskan.	<input type="checkbox"/>
3. Saya faham bahawa penyertaan anak saya adalah secara sukarela dan boleh menarik diri daripada tinjauan ini pada bila-bila masa tanpa memberi sebarang sebab.	<input type="checkbox"/>
4. Saya memahami risiko dan manfaat dari tinjauan ini dan saya memberi keizinan secara sukarela untuk anak saya mengambil bahagian dalam tinjauan. Saya faham bahawa anak saya mesti mengikuti arahan yang berkaitan dengan penyertaannya dalam tinjauan ini.	<input type="checkbox"/>
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Saya, _____ **memberi/tidak memberi keizinan*** untuk anak/jagaan saya bernama _____ dari kelas _____ mengambil bahagian di dalam Tinjauan Kebangsaan Kesihatan dan Morbiditi 2017 sepertimana yang telah dimaklumkan. (***Potong yang tidak berkenaan**)

(Tandatangan)

Nama Iubapa/Penjaga* :

Nombor K/P :

Tarikh :

Students Consent Form

Borang Persetujuan Responden (Bawah 18 Tahun) NHMS 2017

RISALAH MAKLUMAT RESPONDEN (BAWAH 18 TAHUN)**1. Tajuk:**

Tinjauan Kebangsaan Kesihatan dan Morbiditi (NHMS) 2017

2. Nama Penyelidik Utama dan Institusi:

- i. Dr. S Maria Binti Awaluddin, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia
- ii. Puan Ruhaya Binti Salleh, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia
- iii. Dr. Mohd Kamal Ariff Bin Abdul Ghani, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia

3. Nama Penaja:

Kementerian Kesihatan Malaysia

4. Pengenalan:

Kementerian Kesihatan Malaysia sedang menjalankan Tinjauan Kebangsaan Kesihatan dan Morbiditi 2017 pada tahun ini. Terdapat dua fokus utama dalam kajian ini iaitu Tinjauan Kesihatan Remaja dan Tinjauan Pemakanan Remaja. Maklumat di bawah akan menjelaskan hal-hal berkenaan tinjauan tersebut untuk persetujuan anda menyertai tinjauan ini.

Adalah penting untuk anda memahami mengapa tinjauan ini dilakukan dan apa yang perlu anda lakukan. Sila ambil masa yang secukupnya untuk membaca dengan teliti penerangan yang diberi sebelum anda bersetuju untuk menyertai tinjauan ini. Jika anda mempunyai sebarang kemusykilan ataupun memerlukan maklumat lanjut, anda boleh bertanya dengan mana-mana ahli kumpulan tinjauan ini.

Setelah anda memahami maklumat tinjauan ini dan diberi keizinan oleh Ibu Bapa/Penjaga untuk anda mengambil bahagian, anda perlu menandatangani Borang Persetujuan Responden (**Salinan Responden & Salinan Penyelidik**) yang disertakan bersama-sama risalah ini. Anda mempunyai masa selama tujuh (7) hari untuk membuat keputusan bagi penyertaan dalam kajian ini. Borang persetujuan yang telah ditandatangani akan dikumpul oleh pasukan penyelidik sebelum pengumpulan data dijalankan. Penyertaan anda dalam tinjauan ini adalah secara sukarela dan anda boleh menarik diri pada bila-bila masa. Anda boleh tidak menjawab mana-mana soalan atau menarik diri dari pemeriksaan yang disebutkan sekiranya tidak mahu. Keengganan anda untuk mengambil bahagian atau menarik diri tidak akan menjejaskan sebarang manfaat perubatan atau kesihatan yang sememangnya hak anda.

Tinjauan ini ditaja sepenuhnya oleh Kementerian Kesihatan Malaysia dan telah mendapat kelulusan Jawatankuasa Etika dan Penyelidikan Perubatan, Kementerian Kesihatan Malaysia.

5. Apakah tujuan tinjauan ini dilakukan?

Tujuan tinjauan ini dijalankan adalah untuk memperoleh maklumat berkenaan kesihatan dan faktor pelindung serta menilai status pemakanan, corak pengambilan makanan dan corak aktiviti fizikal dalam kalangan remaja berumur 10 hingga 17 tahun. Maklumat yang diperolehi ini akan dikaji dan dinilai bagi membantu penilaian keberkesanan strategi yang dilaksanakan di peringkat sekolah dan untuk meningkatkan kesihatan remaja.

6. Apakah yang perlu saya lalui/lakukan sekiranya bersetuju untuk menyertai tinjauan ini?

Memberi respon terhadap soalan-soalan kaji selidik yang perlu dijawab oleh anda dan juga pengambilan ukuran berat dan tinggi yang akan dilakukan oleh pasukan penyelidik.

7. Apakah tanggungjawab saya sewaktu menyertai tinjauan ini?

Adalah penting untuk anda menjawab kesemua soalan yang ditanya oleh ahli penyelidik dengan lengkap. Menyertai tinjauan ini tidak memerlukan anda mengeluarkan sebarang perbelanjaan.

8. Apakah risiko dan kesan-kesan sampingan menyertai tinjauan ini?

Tiada risiko terhadap anda sekiranya menyertai tinjauan ini memandangkan tiada kaedah yang invasif atau merbahaya digunakan.

9. Apakah manfaatnya saya menyertai tinjauan ini?

Tinjauan ini tidak memberikan sebarang saguhati atau kesan kesihatan secara langsung apabila anda menyertai tinjauan ini. Namu, segala maklumat yang diperolehi daripada tinjauan ini akan dapat membantu penggubal dasar untuk merancang dan menambahbaik program sedia ada untuk golongan remaja di Malaysia.

10. Adakah maklumat saya akan dirahsiakan?

Segala maklumat anda yang diperolehi dalam tinjauan ini akan disimpan dan dikendalikan secara sulit, bersesuaian dengan peraturan-peraturan dan/ atau undang-undang yang berkenaan. Hanya penyelidik, peninjau yang berkeelayakan, auditor, dan pihak berkuasa yang berkaitan kajian ini sahaja mempunyai akses kepada maklumat yang anda berikan. Sekiranya hasil tinjauan ini diterbitkan atau dibentangkan kepada orang ramai, identiti anda tidak akan didedahkan tanpa kebenaran anda terlebih dahulu.

11. Siapakah yang perlu saya hubungi sekiranya saya mempunyai sebarang pertanyaan?

Sekiranya anda mempunyai sebarang soalan mengenai tinjauan ini atau memerlukan keterangan lanjut, anda boleh hubungi penyelidik, Dr. S Maria Awaluddin, Puan Ruhaya Salleh dan Dr. Mohd Kamal Ariff Abdul Ghani di Institut Kesihatan Umum, Jalan Bangsar, Kuala Lumpur di talian 03-22979400 untuk penjelasan lebih lanjut.

Jika anda mempunyai sebarang pertanyaan berkaitan dengan hak-hak anda sebagai responden dalam tinjauan ini, sila hubungi Setiausaha, Jawatankuasa Etika & Penyelidikan Perubatan (MREC), Kementerian Kesihatan Malaysia di talian 03-22874032.

BORANG PERSETUJUAN RESPONDEN BAWAH 18 TAHUN (Untuk Salinan Responden)

Tajuk kajian: Tinjauan Kebangsaan Kesihatan dan Morbiditi (NHMS) 2017

Dengan menandatangani di bawah (Salinan Responden dan Salinan Penyelidik), saya mengesahkan bahawa:

	Sila tandakan ✓ di dalam kotak
1. Saya telah diberi maklumat tentang tinjauan di atas secara lisan dan bertulis dan saya telah membaca dan memahami segala maklumat yang diberikan di dalam risalah ini.	<input type="checkbox"/>
2. Saya mempunyai masa yang secukupnya untuk mempertimbangkan penyertaan saya dalam tinjauan ini dan telah diberi peluang untuk bertanyakan soalan dan semua soalan saya telah dijawab dengan memuaskan.	<input type="checkbox"/>
3. Saya faham bahawa penyertaan saya adalah secara sukarela dan boleh menarik diri daripada tinjauan ini pada bila-bila masa tanpa memberi sebarang sebab.	<input type="checkbox"/>
4. Saya memahami risiko dan manfaat dari tinjauan ini dan saya memberi keizinan secara sukarela untuk mengambil bahagian dalam tinjauan. Saya faham bahawa saya mesti mengikuti arahan yang berkaitan dengan penyertaan saya dalam tinjauan ini.	<input type="checkbox"/>
5. Saya faham bahawa penyelidik, peninjau yang berkeelayakan, auditor, dan pihak kuasa yang berkaitan mempunyai akses kepada maklumat yang saya berikan untuk memastikan maklumat tinjauan dicatat dengan betul. Saya faham segala maklumat peribadi dan data tinjauan ini akan dirahsiakan.	<input type="checkbox"/>
6. Saya akan menerima satu salinan maklumat tinjauan/borang persetujuan ini yang telah ditandatangani dan bertarikh.	<input type="checkbox"/>

Responden :
 Tandatangan :
 Nama :
 Nombor K/P :
 Tarikh :

Penyelidik:
 Tandatangan :
 Nama :
 Nombor K/P :
 Tarikh :

BORANG PERSETUJUAN RESPONDEN BAWAH 18 TAHUN (Untuk Salinan Penyelidik)

Tajuk kajian: Tinjauan Kebangsaan Kesihatan dan Morbiditi (NHMS) 2017

Dengan menandatangani di bawah (**Salinan Responden dan Salinan Penyelidik**), saya mengesahkan bahawa:

	Sila tandakan <input type="checkbox"/> di dalam kotak
1. Saya telah diberi maklumat tentang tinjauan di atas secara lisan dan bertulis dan saya telah membaca dan memahami segala maklumat yang diberikan di dalam risalah ini.	<input type="checkbox"/>
2. Saya mempunyai masa yang secukupnya untuk mempertimbangkan penyertaan saya dalam tinjauan ini dan telah diberi peluang untuk bertanyakan soalan dan semua soalan saya telah dijawab dengan memuaskan.	<input type="checkbox"/>
3. Saya faham bahawa penyertaan saya adalah secara sukarela dan boleh menarik diri daripada tinjauan ini pada bila-bila masa tanpa memberi sebarang sebab.	<input type="checkbox"/>
4. Saya memahami risiko dan manfaat dari tinjauan ini dan saya memberi keizinan secara sukarela untuk mengambil bahagian dalam tinjauan. Saya faham bahawa saya mesti mengikuti arahan yang berkaitan dengan penyertaan saya dalam tinjauan ini.	<input type="checkbox"/>
5. Saya faham bahawa penyelidik, peninjau yang berkeelayakan, auditor, dan pihak kuasa yang berkaitan mempunyai akses kepada maklumat yang saya berikan untuk memastikan maklumat tinjauan dicatat dengan betul. Saya faham segala maklumat peribadi dan data tinjauan ini akan dirahsiakan.	<input type="checkbox"/>
6. Saya akan menerima satu salinan maklumat tinjauan/borang persetujuan ini yang telah ditandatangani dan bertarikh.	<input type="checkbox"/>

Responden :

Tandatangan :
 Nama :
 Nombor K/P :
 Tarikh :

Penyelidik:

Tandatangan :
 Nama :
 Nombor K/P :
 Tarikh :

Appendix 9: List of Abbreviations

FFQ	Food Frequency Questionnaire
PE	Physical Education
PA	Physical Activity
BAZ	BMI-for-Age
HAZ	Height-for-Age
MDG	Malaysian Dietary Guidelines
RNI	Recommended Nutrient Intake
Kcal	Kilocalorie
NHMS	National Health and Morbidity Survey
CCT	Central Coordinating Team
PSP	Pegawai Sains Pemakanan
RA	Research Assistant
RO	Research Officer
g	gram
mg	milligram
µg	microgram
IU	International Unit
ANS	Adolescent Nutrition Survey
MSNS	Malaysian School-based Nutrition Survey
ID	Identity Detail
DPQ	Department of Proposal and Quality
DR	Dietary recall
QC	Quality Control
CI	Confidence Interval
PAQ-C	Physical Activity Questionnaire for Older Children
PAL	Physical Activity Level
cm	Centimeter
SD	Standard Deviation
MOH	Ministry of Health
IOM	Institute of Medicine
AL	Adequate intake
UL	Upper level intake
Tsp	tea spoon
Tbsp	table spoon



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