

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

ADOLESCENT NUTRITION SURVEY

TERENGGANU



Ministry of Health Malaysia



THE NATIONAL HEALTH AND MORBIDITY SURVEY 2017

ADOLESCENT NUTRITION SURVEY 2017

Contributors

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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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 and face-to-face-interviews. Total response rates for self administered questionnaire were 89.5% for ANS, 96.4% for habitual food intake and 96.6% for dietary intake assessment.

Based on the indicator height for age (HAZ), the prevalence of normal height ($HAZ \geq -2SD$) was 89.9% and stunting was 10.1%. The prevalence of stunting was higher in rural areas (10.2%) as compared to urban areas (9.7%). In terms of BMI for age (BAZ), the prevalence of thinness was 6.6%, overweight was 15.1% and obesity was 12.1%.

Among those school-going adolescents who had actual normal weight, 50.2% correctly perceived their weight to be normal. Among those who were actually thin, 69.6% correctly perceived their weight to be thin, while among those who were actually overweight and obese, 44.3% and 13.5% correctly perceived themselves to be overweight and obese respectively. Health was the main reason among those who wanted to lose and gain weight; with 56.3% 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 23.1%. The majority of them had breakfast one to six days per week (67.8%) and some of them did not having breakfast in a week (9.1%). Among those who had breakfast, 57.3% had it at home. Adolescents from urban areas (27.0%) reported having breakfast daily (seven days per week), higher than rural areas (21.2%). The two main reasons of skipping breakfast were no appetite (45.0%) and no time (28.9%).

The prevalence of having lunch seven days per week among school-going adolescents was 36.9%; 60.1% had lunch up to six days per week and 3.0% did not have lunch in a week. No appetite (50.4%) and no time (16.2%) were the two main reasons for skipping lunch. As for dinner, 34.3% of school-going adolescents had dinner seven days per week, 61.5% 1-6 days per week and 4.1% did not have dinner in a week. Only 4.9% took heavy meals after dinner seven days per week.

There were 2.3% who had fast food daily and 9.8% did not have fast food in a week. Social media (YouTube, Facebook, Instagram, etc.) and television were reported as the main sources which affected dietary pattern in 39.6% and 43.3%. A percentage of 22.4% reported that their dietary patterns were not affected by any media sources.

The prevalence of physical activity among school-going adolescents in Terengganu was 49.2%. 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 Terengganu was 44.9% and 29.3%. 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 14.6% and 8.5% by adolescents. The most commonly consumed vitamin/minerals and food supplements were Vitamin C 37.4% (and bee product 20.7%. The main reason for taking vitamin/minerals and food supplements was due to parent's advised, which 42.7% and 27.5% respectively.

Food and nutrition labelling use was assessed among secondary school-going adolescents; 30.9% always reading food and nutrition labelling. Another 59.1% reported as sometimes and only 10.0% never reading food label. They were more concerned about fat and total energy compared to other nutrients. 39.1% of adolescents both answered correctly on nutrition facts and 21.2% of adolescents answered correctly questions regarding the front of pack labelling and only 7.8% 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 showed 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 the 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 a sedentary lifestyle are two common behavioural 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 for Malaysian adolescents aged 10 – 17 years old to continue to explore issues pertaining to nutrition related components, such as nutritional status, body weight perception, meal patterns, habitual food intake, dietary intake, physical activity level, vitamins/minerals 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 adolescents (Primary 4 to Secondary 5).

1.1.2.5 To determine the pattern of use of vitamins/minerals and food supplements among adolescents (Primary 4 to Secondary 5) in Malaysia.

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**.

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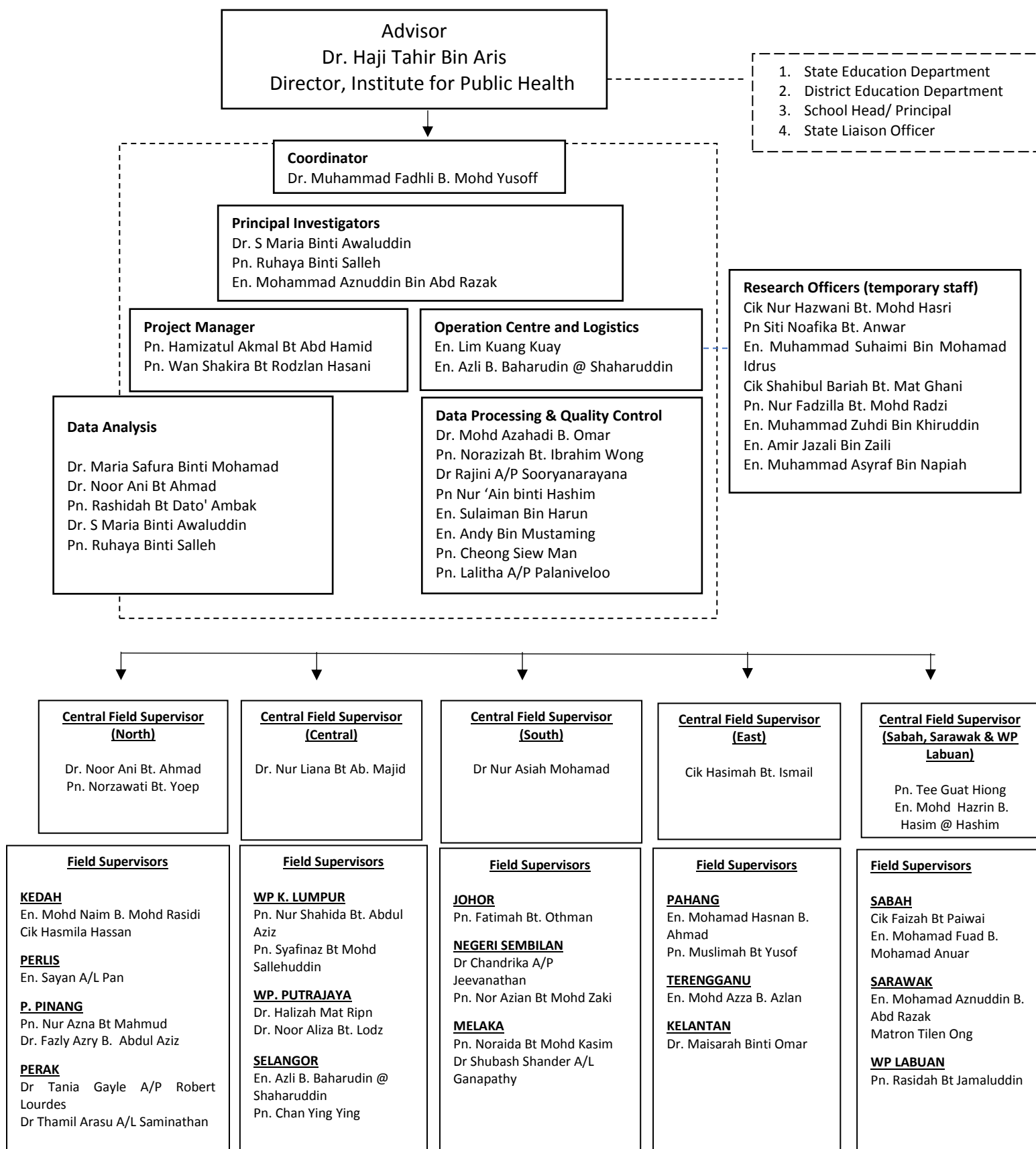


Figure 1: Organisation chart for data collection teams NHMS 2017

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 above mentioned 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 a national 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 the 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 persons in-charge at the selected school were carried out. Informed consent were obtained from both the parents and students.

2.6 Data Collection

A total of 36 teams were set up; 4 teams each for Sabah and Sarawak and 2 teams each for the remaining states. Each team consists of a field supervisor, research assistants and a driver. The field supervisor was a permanent staff from the 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 simultaneously in Kuala Lumpur for Peninsular Malaysia; and Kuching, Sarawak for East Malaysia. Data collection was conducted from 26 March to 03 May 2017.

2.7 Data Management

Quality check on the 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 completion of the survey, each student would place 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 sent via 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

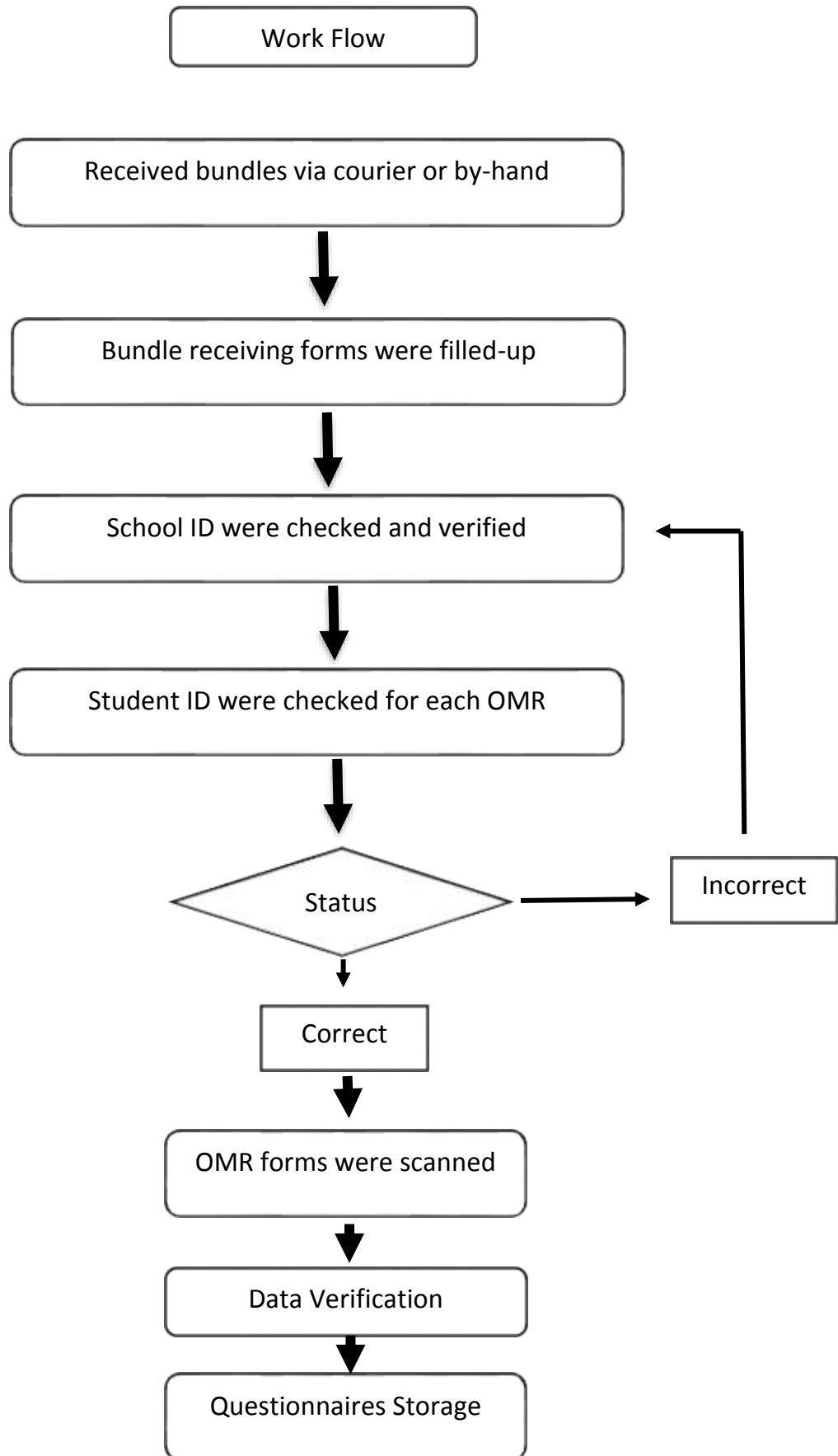


Figure 2: Work Flow of NHMS 2017

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 is normally in CSV form or Microsoft 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 multiple subtopic which is nutritional status, body weight perception, meal pattern, physical activity level, Vitamins/Minerals and Food Supplement Intake and Food and Nutrition Labelling.

3.0 Findings

3.1 General Findings

A total of 40,087 questionnaires for adolescent nutrition survey were completed by the respondents. The school and class response rate was 100% respectively, while the student response rate for adolescent nutrition survey was 89.5%. Overall, the 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

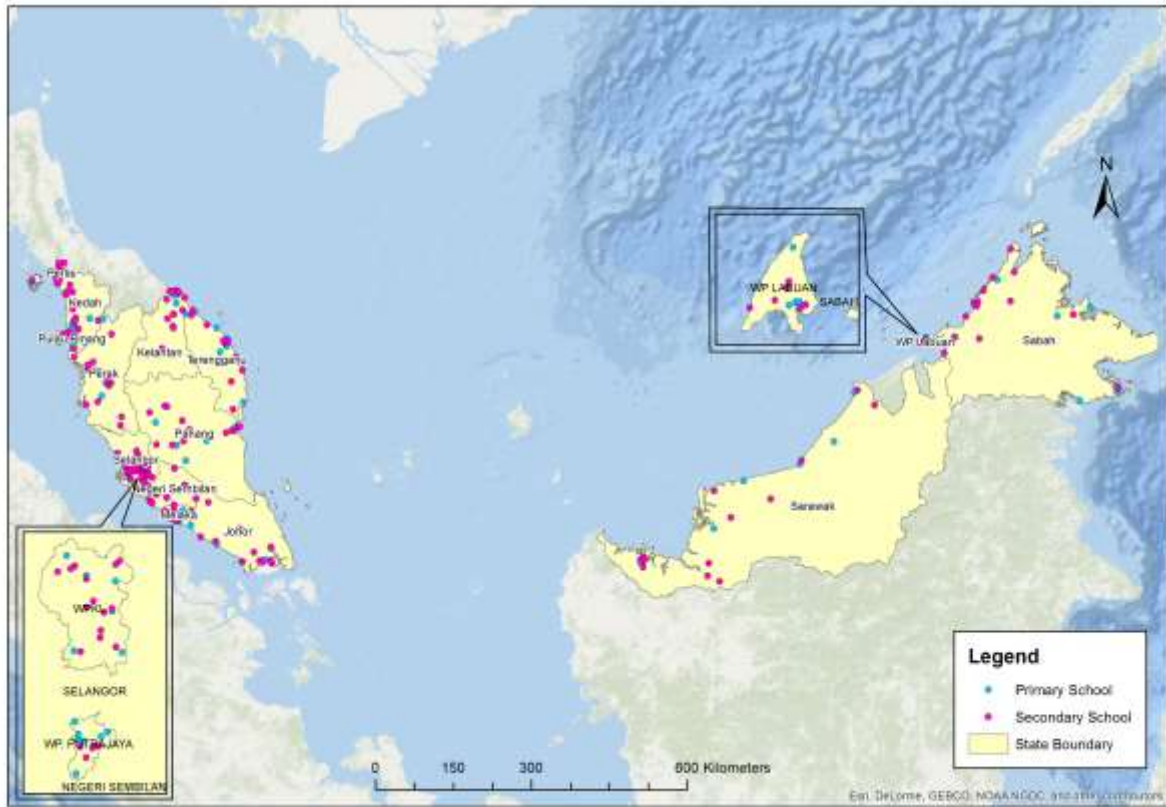


Figure 3: GIS mapping of the selected primary and secondary schools in Malaysia

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

Contributors: Azli Baharudin, Junidah Raib, Chan Ying Ying, Poh Bee Koon, Tan Beng Chin, Suhaidi Sudin, Mohamad Hasnan Ahmad

3.2.1 Introduction

Good nutritional status contributes to healthy development of children. Anthropometric measurements are part of the nutritional status components to assess body size and composition; and reflect adequate, inadequate or excessive food intake. It is also a reflection of individual activity level and disease states. Nutritional deprivation and excess may coexist, not only within household or the community but also across the country. Performing simple body measurements also help to identify individuals, families or the community 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 finding of the survey showed that 89.9% (95% CI: 88.89, 90.89) of the adolescents had normal height-for-age status (HAZ: $\geq -2SD$ to $\leq +2SD$). The prevalence was lower than national level [91.8% (95% CI: 91.19, 92.29)]. Comparing between strata, rural area had higher percentage of total stunting [10.2% (95% CI: 8.96, 11.66)] compared to urban area [9.7% (95% CI: 8.51, 11.11)]. In term of sexes, girls had higher percentage of total stunting [11.5% (95% CI: 9.84, 13.39)] compared to boys [8.6% (95% CI: 6.96, 10.61)]. Comparing class category, secondary level had slightly higher percentage of total stunting [10.1% (95% CI: 8.69, 11.69)] compared to primary level [10.0% (95% CI: 9.10, 11.05)].

3.2.4.2 BMI-for-Age z-score

In terms of BMI-for-age status, the findings showed that 66.3% (95% CI: 63.80, 68.68) of the population was in the normal range ($\geq -2SD$ to $\leq +1SD$). The prevalence was lower than national level [62.9% (95% CI: 61.84, 64.02)]. Comparing between strata, urban area had higher percentage of thinness [8.7% (95% CI: 6.10, 12.15)] compared to rural area [5.5% (95% CI: 4.19, 7.29)]. According to sexes, more boys [8.0% (95% CI: 6.03, 10.52)] were thinner than girls [5.2 (95% CI: 3.74, 7.16)]. In term of class category, primary level had higher percentage of thinness [7.8% (95% CI: 5.32, 11.20)] compared to secondary level [5.9% (95% CI: 4.27, 7.97)].

On the other hand, the prevalence of overweight in Terengganu (BMI-for-age: $> +1SD$ to $\leq +2SD$) was 15.1% (95% CI: 13.47, 16.84). The state prevalence was lower than national prevalence [15.6% (95% CI: 15.06, 16.19)]. In term of strata, urban strata had higher prevalence of overweight [15.9% (95% CI: 14.27, 17.65)] compared with rural strata [14.7% (95% CI: 12.47, 17.20)]. Comparing sexes, girls had higher prevalence of overweight [17.6% (95% CI: 15.36, 20.14)] than boys [12.5% (95% CI: 10.58, 14.66)]. According to class category, primary level had higher prevalence of overweight [15.6% (95% CI: 13.32, 18.25)] compared with secondary level [14.7% (95% CI: 12.65, 17.11)].

For the prevalence of obesity (BMI-for-age: $> +2SD$), the state prevalence was 12.1% (95% CI: 10.16, 14.27), whereas the prevalence was lower than national prevalence [14.8 (95% CI: 14.00, 15.73)]. Between strata, rural strata showed higher prevalence of obesity [13.0% (95% CI: 10.95, 15.44)] than urban strata [10.1% (95% CI: 7.24, 13.94)]. Comparing between sexes, girls had much higher prevalence of obesity [12.3% (95% CI: 10.06, 14.96)] than boys [11.8% (95% CI: 9.58, 14.51)]. In term of class category, 12.9% (95% CI: 9.09, 18.08) primary level were obese compared to secondary level [11.5% (95% CI: 9.82, 13.51)].

3.2.5 Conclusion

The prevalence of stunted for adolescent aged 10 to 17 years in Terengganu was 10.1%. On the other hand, the prevalence of overweight and obesity among this population were 15.1% and 12.1% respectively. In contrast, 6.6% of the population were found to be 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 younger age to ensure healthy physical and mental development. In consequences, it is hope reduce the prevalence of stunted, thinness, overweight and obesity.

3.2.6 Recommendation

Thinness, overweight and obesity is still a problem to be addressed for adolescent aged 10 to 17 years in Terengganu. Various agencies have to take the initiative to set up plan of action

to overcome such problem. Healthy eating and living concept should be carry out at an earlier stage. It can be implemented by develop pro-health policies and regulation to create health promoting environment in work place, school, public area and even at home.

One of the suggested initiatives that involve collaboration between Ministry of Health and Ministry of Education is to empower Parental and Teacher Association in school to disseminate and implement healthy eating programs in schools. With that, it can give the concept of healthy eating and living to the children during schooling time and further practise and implement it at home and daily life. Eventually, it hopes to reduce the prevalence of thinness, overweight and obesity in the country.

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

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
Terengganu	245	15975	10.1	9.11	11.11	2192	142684	89.9	88.89	90.89
Locality of School										
Urban	80	5117	9.7	8.51	11.11	754	47450	90.3	88.89	91.49
Rural	165	10858	10.2	8.96	11.66	1438	95234	89.8	88.34	91.04
Sex										
Boys	95	6757	8.6	6.96	10.61	1022	71710	91.4	89.39	93.04
Girls	150	9218	11.5	9.84	13.39	1170	70973	88.5	86.61	90.16
Class										
Standard 4	32	2426	12.0	10.09	14.28	248	17738	88.0	85.72	89.91
Standard 5	24	1990	10.0	7.47	13.29	213	17889	90.0	86.71	92.53
Standard 6	22	1602	8.0	5.88	10.89	229	18337	92.0	89.11	94.12
Form 1	28	1898	9.5	5.98	14.73	262	18111	90.5	85.27	94.02
Form 2	35	1918	9.8	7.09	13.43	329	17623	90.2	86.57	92.91
Form 3	36	1804	9.0	7.35	10.90	375	18309	91.0	89.10	92.65
Form 4	31	1964	10.1	6.41	15.69	281	17385	89.9	84.31	93.59
Form 5	37	2375	12.1	8.84	16.28	255	17292	87.9	83.72	91.16
Class Category										
Primary Level	78	6018	10.0	9.10	11.05	690	53964	90.0	88.95	90.90
Secondary Level	167	9957	10.1	8.69	11.69	1502	88720	89.9	88.31	91.31
Ethnicity										
Malay	245	15975	10.1	9.16	11.17	2182	141910	89.9	88.83	90.84
Chinese						6	424	100.0	100.00	100.00
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						4	349	100.0	100.00	100.00

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

Characteristic	Thinness (<-2SD)					Normal BMI (≥ -2SD to ≤ +1SD)				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	152	10428	6.6	5.10	8.45	1622	105122	66.3	63.80	68.68
Locality of School										
Urban	62	4553	8.7	6.10	12.15	545	34349	65.3	61.72	68.80
Rural	90	5876	5.5	4.19	7.29	1077	70773	66.8	63.48	69.87
Sex										
Boys	86	6272	8.0	6.03	10.52	754	53126	67.7	63.92	71.27
Girls	66	4156	5.2	3.74	7.16	868	51996	64.9	61.27	68.35
Class										
Standard 4	17	1484	7.4	3.34	15.56	188	13695	68.1	63.98	72.04
Standard 5	20	1592	8.0	5.93	10.73	149	12845	64.6	58.94	69.90
Standard 6	20	1578	7.9	5.25	11.76	150	11609	58.2	49.33	66.61
Form 1	16	1209	6.0	3.44	10.39	180	12306	61.5	55.76	66.95
Form 2	27	1474	7.5	4.39	12.66	257	13847	70.9	65.27	75.89
Form 3	23	1126	5.6	3.58	8.65	284	13939	69.3	63.53	74.53
Form 4	11	708	3.7	1.69	7.75	216	13531	69.9	64.74	74.66
Form 5	18	1257	6.4	3.28	12.09	198	13348	67.9	59.94	74.89
Class Category										
Primary Level	57	4655	7.8	5.32	11.20	487	38150	63.7	60.39	66.84
Secondary Level	95	5773	5.9	4.27	7.97	1135	66972	67.9	64.77	70.82
Ethnicity										
Malay	152	10428	6.6	5.12	8.49	1614	104452	66.2	63.65	68.63
Chinese	-	-	-	-	-	4	320	75.4	33.91	94.81
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	4	349	100.0	100.00	100.00

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

Characteristic	Count	Overweight (> +1SD to ≤ +2SD)			
		Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
Terengganu	373	23911	15.1	13.47	16.84
Locality of School					
Urban	138	8352	15.9	14.27	17.65
Rural	235	15559	14.7	12.47	17.20
Sex					
Boys	144	9793	12.5	10.58	14.66
Girls	229	14118	17.6	15.36	20.14
Class					
Standard 4	42	2887	14.4	11.89	17.25
Standard 5	38	3234	16.3	13.16	19.94
Standard 6	39	3243	16.3	11.47	22.56
Form 1	48	3287	16.4	12.59	21.16
Form 2	51	2523	12.9	9.70	16.99
Form 3	57	2755	13.7	9.95	18.56
Form 4	51	2947	15.2	10.19	22.14
Form 5	47	3035	15.4	10.75	21.66
Class Category					
Primary Level	119	9364	15.6	13.32	18.25
Secondary Level	254	14547	14.7	12.65	17.11
Ethnicity					
Malay	372	23869	15.1	13.50	16.90
Chinese	1	42	9.8	1.47	44.25
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others					

3.3 Perception on body weight management Adolescent (Primary 4 To Secondary 5) In Terengganu

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3.3.1 Introduction

Body weight perception refers to the personal evaluation of one's weight as "underweight" or "normal weight" or "overweight" irrespective of 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, 43.8% (95%CI:40.53,47.20) of the adolescents in Terengganu perceived that they have normal weight. Urban adolescents had a higher perceptions of being normal weight; 46.1% (95%CI: 41.85, 50.34). Based on sex, girls had a higher perception of being normal weight at 44.9% (95%CI: 40.60, 49.30) compared to boys at 42.7% (95%CI: 37.54, 48.11). However, girls had a higher perception of being overweight at 28.3% (95%CI: 21.96, 35.58), compared to boys at 15.4% (95%CI: 11.99, 19.49) (**Table 3.3.1**).

Among the actual normal 52.5% (95% CI: 48.18, 56.81) was correctly perceived their weight to be normal, 33.8% (95% CI: 27.28,41.03) was underestimated their body weight, perceived to be thin, and 12.9% (95% CI: 9.72, 17.00), 0.7% (95% CI: 0.36, 1.52) were overestimated to be overweight, and 0 be obese respectively. However among the actual overweight 45.0% (95% CI: 34.16, 56.31) was correctly perceived their weight to be overweight, but 15.8% (95% CI: 9.81, 24.52), 37.3% (95% CI: 30.06, 45.08), were underestimated their body weight to be thin or normal respectively (**Table 3.3.2**).

Among all the adolescents who correctly perceived thin and have actual thin body weight, 69.6% (95% CI: 54.65, 81.32) reported they wanted to increase weight while adolescents who perceived normal and have actual normal body weight 28.4% (95% CI: 24.13, 33.04) have no plan to change their weight. There were no significant different in school locality, sex and school category among adolescent who correctly perceived thin and overweight between four category of action taken (**Table 3.3.3**).

However, among adolescents who were actually in overweight and obese categories but wrongly perceived themselves to be thin, most of them 59.9% (95% CI: 48.92,69.96) wanted to lose weight while 17.6% (95%CI:11.09,26.73) wanted to increase their weight Among adolescents who wanted to lose weight , there were higher in urban 63.4% (95% CI: 40.28, 81.60), girls 76.5% (95%CI: 64.13, 85.57) and primary scholars 60.0% (95% CI: 47.22, 71.52) (**Table 3.3.4**).

About 71.3% (95% CI: 65.82, 76.26) adolescents choose health purpose as the main factor that motivate to lose weight followed by increase self-confidence 21.3% (95% CI: 16.79, 26.60). If compared by sex, girls was higher than boys who choose health purpose as main factors to motivate them to reduce body weight, 71.7% (95% CI: 63.79, 78.46), 70.8% (95% CI: 65.14, 75.87), respectively (**Table 3.3.5**).

However, main factor to motivate adolescents to increase body weight was also health purpose 61.7% (95% CI: 55.85, 67.28) and followed by increase self-confidence 27.6% (95% CI: 22.93, 32.85). Primary scholars were found to be higher in choosing health purpose as the main factor to increase body weight compared with the secondary adolescent (**Table 3.3.6**).

Exercise was the highest option preferred by adolescent to lose body weight 48.9% (95% CI: 44.40, 53.42). Adolescent in urban, 50.9% (95% CI: 42.32, 59.50), boys, 56.1% (95% CI: 49.52, 62.52), primary scholars 55.8% (95% CI: 50.91, 60.49) were the higher who choose exercise as their option to lose body weight (**Table 3.3.7**).

Increase quantity of food was the highest option preferred by adolescents to increase their body weight, 53.5% (95% CI: 46.36, 60.50). Adolescent in rural, 53.4% (95% CI: 45.54, 61.99), boys, 53.6% (95% CI: 44.77, 62.16), secondary scholars 58.2% (95% CI: 50.66, 65.31) were the higher who choose exercise as their option to lose body weight (**Table 3.3.8**).

3.3.5 Discussion/Conclusion

Perception of being normal weight among adolescents in Terengganu was lower than the national prevalence 39.5% and 41.4% respectively.

Among the actual thin adolescent in Terengganu, 66.3% was correctly perceived thin, and slightly similar result compared with the national prevalence, 69.8%. adolescents with actual normal body weight, 52.5% was correctly perceived their weight to be normal and it slightly higher than national prevalence 50.2%.

In Terengganu, the trend of main factors to lose body weight among adolescent are similar with the national trend. Health purpose is the highest 71.3% main factor to lose body weight; followed by to increase self confidence 21.3%, beauty purpose 5.5% and to have more friends 1.9%.

Health purpose is the highest 61.7% main factor to increase body weight. But it was lower compared with the national prevalence. Its followed by to increase self confidence 27.6%, beauty purpose 7.5% and to have more friends 3.1%.

Adolescents choose to exercise as the preferred option to lose weight. However its was lower compared with the national prevalence, 48.9% and 56.3% respectively. Followed by reduce consumption of high fat foods 29.2%, increase intake of fruits and vegetables 9.0% and reduce intake of high sugar foods 4.7%. This trend are similar with the national trend of prevalence.

54.5% adolescents in Terengganu choose to increase quantity of food as the preferred option to increase body weight. It was higher compared with the national prevalence, 52.4%.

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 school, 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 important role, by broadcasting more information to adolescent 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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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
Terengganu	735	50876	32.1	26.23	38.56	1077	69520	43.8	40.53	47.20
Locality of School										
Urban	249	17335	33.0	23.44	44.15	380	24218	46.1	41.85	50.34
Rural	486	33541	31.6	24.54	39.71	697	45302	42.7	38.53	47.04
Sex										
Boys	433	31453	40.1	33.09	47.51	488	33538	42.7	37.54	48.11
Girls	302	19423	24.2	19.04	30.34	589	35981	44.9	40.60	49.30
School Category										
Primary	348	27411	45.7	40.70	50.79	322	24947	41.6	35.09	48.40
Secondary	387	23466	23.8	19.83	28.29	755	44573	45.2	41.92	48.53
Class										
Standard 4	133	9686	48.0	38.19	58.04	124	8941	44.3	33.35	55.92
Standard 5	118	10115	50.9	46.60	55.16	98	8016	40.3	35.48	45.36
Standard 6	97	7609	38.2	32.11	44.62	100	7989	40.1	32.50	48.15
Form 1	75	5361	26.9	18.55	37.28	136	9114	45.7	36.51	55.22
Form 2	90	5098	26.1	19.62	33.80	174	9266	47.4	42.13	52.77
Form 3	94	4718	23.5	17.87	30.15	183	8897	44.2	38.77	49.84
Form 4	70	4228	21.8	14.94	30.80	138	8817	45.6	36.95	54.47
Form 5	58	4060	20.6	15.66	26.72	124	8480	43.1	37.11	49.33
Ethnicity										
Malay	732	50530	32.0	26.18	38.48	1073	69238	43.9	40.52	47.28
Chinese	1	162	38.2	4.79	88.37	2	116	27.4	5.62	70.42
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	2	184	52.7	31.10	73.32	2	165	47.3	26.68	68.90

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
Terengganu	569	34717	21.9	17.36	27.22	55	3474	2.2	1.63	2.93
Locality of School										
Urban	184	9841	18.7	10.70	30.69	21	1172	2.2	1.27	3.88
Rural	385	24875	23.5	18.80	28.86	34	2302	2.2	1.54	3.04
Sex										
Boys	176	12060	15.4	11.99	19.49	20	1416	1.8	1.14	2.86
Girls	393	22657	28.3	21.96	35.58	35	2058	2.6	1.82	3.62
School Category										
Primary	87	6679	11.1	9.02	13.67	11	945	1.6	0.84	2.93
Secondary	482	28038	28.4	24.95	32.20	44	2528	2.6	1.92	3.42
Class										
Standard 4	20	1312	6.5	4.95	8.51	3	224	1.1	0.36	3.35
Standard 5	18	1457	7.3	4.90	10.83	3	291	1.5	0.53	3.95
Standard 6	49	3910	19.6	15.11	25.05	5	430	2.2	1.14	4.06
Form 1	73	5176	26.0	17.41	36.85	5	285	1.4	0.61	3.31
Form 2	92	4729	24.2	17.57	32.35	8	447	2.3	1.24	4.17
Form 3	121	5887	29.3	23.47	35.83	13	611	3.0	1.63	5.58
Form 4	97	5854	30.3	25.67	35.27	7	450	2.3	1.13	4.73
Form 5	99	6392	32.5	28.66	36.60	11	735	3.7	2.17	6.37
Ethnicity										
Malay	567	34633	21.9	17.42	27.26	54	3411	2.2	1.59	2.93
Chinese	2	83	19.6	2.56	69.42	1	63	14.8	1.40	68.07
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

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
Terengganu	117	76.8	68.38	83.59	30	20.2	13.52	29.11	3	1.6	0.48	4.97	2	1.4	0.31	5.92
Locality of school																
Urban	43	68.9	61.11	75.74	17	28.4	21.70	36.25	1	1.1	0.15	8.06	1	1.6	0.18	11.96
Rural	74	83.0	71.98	90.29	13	13.9	7.04	25.49	2	1.9	0.45	7.60	1	1.2	0.15	9.52
Sex																
Boys	72	84.0	75.02	90.21	10	12.1	6.44	21.46	2	1.6	0.36	7.19	2	2.3	0.51	9.59
Girls	45	66.0	49.80	79.19	20	32.5	19.43	49.08	1	1.5	0.17	11.14	-	-	-	-
School Category																
Primary	40	71.2	62.71	78.48	15	26.4	18.53	36.03	2	2.4	0.58	9.50	-	-	-	-
Secondary	77	81.4	69.49	89.34	15	15.3	8.11	26.91	1	0.9	0.11	6.97	2	2.5	0.59	9.76

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
Terengganu	518	33.8	27.28	41.03	867	52.5	48.18	56.81	225	12.9	9.72	17.00	11	0.7	0.36	1.52
Locality of school																
Urban	170	34.2	23.57	46.69	298	53.6	47.96	59.13	75	11.9	6.73	20.23	2	0.3	0.08	1.10
Rural	348	33.6	25.70	42.61	569	52.0	46.19	57.73	150	13.4	9.71	18.27	9	1.0	0.45	2.03
Sex																
Boys	300	40.7	32.87	48.97	388	50.3	43.89	56.72	59	7.9	4.95	12.47	7	1.1	0.42	2.80
Girls	218	26.8	20.47	34.25	479	54.8	49.93	59.51	166	18.0	13.40	23.86	4	0.4	0.14	1.04
School Category																
Primary	240	49.2	42.42	55.99	219	44.7	38.91	50.68	24	5.0	3.38	7.44	4	1.0	0.30	3.64
Secondary	278	25.0	20.36	30.40	648	57.0	52.95	60.87	201	17.4	14.47	20.85	7	0.6	0.32	1.03

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
Terengganu	52	15.8	9.81	24.52	130	37.3	30.06	45.08	184	45.0	34.16	56.31	7	1.9	0.92	4.00
Locality of school																
Urban	21	17.2	8.95	30.41	47	40.7	25.03	58.56	66	39.5	19.71	63.39	4	2.6	0.99	6.89
Rural	31	15.1	7.72	27.42	83	35.4	29.31	42.02	118	48.0	36.73	59.39	3	1.5	0.51	4.56
Sex																
Boys	29	21.8	13.40	33.36	60	41.7	31.22	52.97	55	36.5	27.19	47.03				
Girls	23	11.7	5.91	21.84	70	34.2	25.60	43.96	129	50.9	36.45	65.11	7	3.3	1.56	6.69
School Category																
Primary	34	28.4	19.89	38.87	56	48.3	35.12	61.78	26	20.6	15.80	26.33	3	2.7	1.07	6.47
Secondary	18	7.7	4.78	12.20	74	30.1	24.84	36.03	158	60.7	54.28	66.79	4	1.5	0.46	4.44

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

Perceived	Actual obese															
	Thin				Normal				Overweight				Obese			
	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper	n	%	Lower	Upper
Terengganu	47	18.2	11.21	28.31	50	17.4	11.29	25.97	157	53.4	43.94	62.60	35	10.9	6.84	16.97
Locality of school																
Urban	15	19.2	11.06	31.16	18	21.0	9.94	39.01	42	45.2	29.22	62.24	14	14.6	7.87	25.58
Rural	32	17.9	9.25	31.78	32	16.1	9.38	26.18	115	56.5	45.40	67.05	21	9.5	5.11	16.95
Sex																
Boys	32	26.4	16.79	38.85	30	21.2	12.80	33.14	60	44.9	34.21	56.15	11	7.5	3.90	13.80
Girls	15	10.6	5.08	20.84	20	13.9	7.66	23.82	97	61.4	50.18	71.44	24	14.2	8.60	22.45
School Category																
Primary	33	33.6	25.74	42.41	32	27.5	17.96	39.75	35	35.1	27.72	43.23	4	3.8	1.23	11.20
Secondary	14	7.8	3.82	15.36	18	10.6	5.56	19.20	122	65.9	58.76	72.30	31	15.7	11.08	21.88

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	
Terengganu	11	860	10.7	5.37	20.29	84	5578	69.6	54.65	81.32
Locality of school										
Urban	4	305	9.7	4.89	18.38	29	2112	67.3	42.22	85.33
Rural	7	555	11.4	4.12	27.75	55	3466	71.1	52.26	84.64
Sex										
Boys	5	367	7.0	2.52	17.85	51	3685	69.9	54.29	82.00
Girls	6	492	17.9	6.66	40.14	33	1893	69.0	47.04	84.78
School category										
Primary	10	794	23.9	13.88	38.07	17	1504	45.3	27.30	64.70
Secondary	1	66	1.4	0.19	9.75	67	4075	86.7	76.76	92.82

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	
Terengganu	14	1015	12.7	6.97	21.92	8	561	7.0	3.37	13.99
Locality of school										
Urban	6	385	12.3	3.67	33.95	4	335	10.7	5.20	20.66
Rural	8	630	12.9	6.83	23.08	4	226	4.6	1.34	14.78
Sex										
Boys	11	835	15.8	8.18	28.44	5	383	7.3	3.17	15.75
Girls	3	180	6.6	2.13	18.51	3	178	6.5	2.23	17.48
School category										
Primary	9	684	20.6	9.57	38.92	4	335	10.1	4.83	19.91
Secondary	5	331	7.1	3.18	14.91	4	226	4.8	1.40	15.31

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	
Terengganu	264	16603	30.1	26.16	34.35	85	5461	9.9	7.37	13.18
Locality of school										
Urban	98	5754	31.3	26.00	37.05	22	1401	7.6	4.75	11.97
Rural	166	10849	29.5	24.37	35.25	63	4061	11.0	7.87	15.30
Sex										
Boys	101	7136	26.7	19.63	35.20	52	3465	13.0	8.35	19.59
Girls	163	9467	33.3	28.70	38.22	33	1996	7.0	4.78	10.19
School category										
Primary	76	5938	34.8	26.16	44.59	20	1418	8.3	5.28	12.84
Secondary	188	10664	28.0	24.28	32.02	65	4043	10.6	7.43	14.93

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
Terengganu	241	15653	28.4	24.13	33.04	277	17447	31.6	26.68	37.03
Locality of school										
Urban	87	5915	32.1	23.51	42.18	91	5339	29.0	21.04	38.51
Rural	154	9737	26.5	22.49	30.92	186	12108	32.9	27.01	39.47
Sex										
Boys	112	7899	29.6	23.33	36.64	123	8228	30.8	25.32	36.84
Girls	129	7754	27.3	23.20	31.76	154	9219	32.4	25.73	39.92
School category										
Primary	73	5670	33.2	23.90	44.10	50	4034	23.6	17.41	31.27
Secondary	168	9982	26.2	22.71	30.02	227	13413	35.2	29.62	41.22

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
Terengganu	163	9596	89.2	82.74	93.44	-	-	-	-	-
Locality of school										
Urban	59	2957	89.7	82.99	93.98	-	-	-	-	-
Rural	104	6639	89.0	79.49	94.39	-	-	-	-	-
Sex										
Boys	47	3035	84.8	68.87	93.39	-	-	-	-	-
Girls	116	6561	91.4	85.32	95.09	-	-	-	-	-
School category										
Primary	20	1592	82.7	61.69	93.38	-	-	-	-	-
Secondary	143	8004	90.6	84.17	94.62	-	-	-	-	-

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
Terengganu	19	1072	10.0	5.72	16.81	2	90	0.8	0.22	3.13
Locality of school										
Urban	6	291	8.8	4.93	15.32	1	48	1.5	0.28	7.25
Rural	13	781	10.5	5.01	20.59	1	42	0.6	0.08	4.00
Sex										
Boys	8	543	15.2	6.61	31.13	-	-	-	-	-
Girls	11	529	7.4	3.95	13.34	2	90	1.2	0.33	4.56
School category										
Primary	6	334	17.3	6.62	38.31	-	-	-	-	-
Secondary	13	738	8.4	4.42	15.24	2	90	1.0	0.27	3.69

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	
Terengganu	59	4357	59.9	48.92	69.96	17	1279	17.6	11.09	26.73
Locality of school										
Urban	24	1554	63.4	40.28	81.60	4	278	11.3	4.40	26.14
Rural	35	2803	58.1	46.25	69.15	13	1001	20.8	12.32	32.84
Sex										
Boys	30	2294	50.1	39.74	60.47	14	1135	24.8	14.19	39.64
Girls	29	2063	76.5	64.13	85.57	3	144	5.3	1.50	17.35
School category										
Primary	40	3157	60.0	47.22	71.52	9	806	15.3	9.21	24.37
Secondary	19	1200	59.7	38.30	77.93	8	473	23.5	9.27	48.07

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	
Terengganu	17	1283	17.6	10.80	27.47	6	355	4.9	1.72	13.11
Locality of school										
Urban	5	438	17.9	7.77	35.96	3	183	7.5	3.71	14.42
Rural	12	845	17.5	9.44	30.23	3	172	3.6	0.49	21.64
Sex										
Boys	13	914	20.0	10.48	34.69	4	235	5.1	1.61	15.19
Girls	4	369	13.7	6.75	25.80	2	120	4.5	0.87	19.87
School category										
Primary	13	996	18.9	10.35	32.09	5	304	5.8	1.78	17.12
Secondary	4	287	14.2	6.05	30.01	1	51	2.6	0.30	18.47

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	
Terengganu	332	21553	43.3	38.87	47.77	229	15122	30.4	26.13	34.94
Locality of school										
Urban	108	7051	44.4	40.68	48.24	71	4453	28.1	22.88	33.89
Rural	224	14502	42.7	36.66	49.01	158	10669	31.4	25.97	37.45
Sex										
Boys	134	9811	37.2	31.79	42.88	131	9346	35.4	29.17	42.18
Girls	198	11743	50.1	44.38	55.91	98	5776	24.7	19.24	31.03
School category										
Primary	111	8434	40.1	32.07	48.76	67	5608	26.7	20.79	33.54
Secondary	221	13119	45.6	41.57	49.60	162	9514	33.0	27.84	38.69

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
Terengganu	125	8580	17.2	13.76	21.34	67	4561	9.2	7.60	10.99
Locality of school										
Urban	47	3115	19.6	14.78	25.58	20	1252	7.9	5.36	11.46
Rural	78	5465	16.1	11.78	21.62	47	3309	9.7	7.97	11.88
Sex										
Boys	62	4561	17.3	12.59	23.25	39	2680	10.2	7.65	13.34
Girls	63	4019	17.2	13.76	21.19	28	1881	8.0	5.38	11.82
School category										
Primary	61	4785	22.8	18.48	27.70	28	2192	10.4	8.55	12.65
Secondary	64	3795	13.2	9.83	17.44	39	2369	8.2	6.14	10.94

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
Terengganu	780	51090	71.3	65.82	76.26	66	3960	5.5	4.07	7.47
Locality of school										
Urban	268	17144	72.2	59.81	81.99	20	965	4.1	1.99	8.13
Rural	512	33945	70.9	65.12	76.01	46	2995	6.3	4.60	8.44
Sex										
Boys	300	21098	70.8	65.14	75.87	24	1613	5.4	3.80	7.66
Girls	480	29992	71.7	63.79	78.46	42	2347	5.6	3.50	8.87
School category										
Primary	280	21837	81.3	78.97	83.39	16	1106	4.1	2.03	8.19
Secondary	500	29253	65.3	59.77	70.53	50	2854	6.4	4.76	8.48
Class										
Standard 4	91	6743	83.8	73.85	90.40	5	293	3.6	1.52	8.45
Standard 5	103	8155	87.2	78.59	92.65	5	431	4.6	2.06	9.96
Standard 6	86	6939	73.3	67.06	78.80	6	383	4.0	1.50	10.44
Form 1	112	7665	76.3	63.08	85.87	6	424	4.2	2.35	7.48
Form 2	108	5675	69.2	61.60	75.92	11	595	7.3	4.37	11.81
Form 3	130	6467	70.7	62.82	77.58	14	678	7.4	4.68	11.54
Form 4	77	4843	56.0	46.06	65.52	10	606	7.0	4.07	11.80
Form 5	73	4604	52.7	40.07	64.95	9	552	6.3	2.69	14.08
Ethnicity										
Malay	777	50862	71.5	65.82	76.53	66	3960	5.6	4.10	7.51
Chinese	2	104	29.9	5.86	74.43	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	124	100.0	100.00	100.00	-	-	-	-	-

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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
Terengganu	247	15248	21.3	16.79	26.60	20	1336	1.9	1.11	3.13
Locality of school										
Urban	93	5037	21.2	12.48	33.73	9	586	2.5	1.48	4.09
Rural	154	10212	21.3	16.66	26.86	11	750	1.6	0.70	3.46
Sex										
Boys	84	6030	20.2	15.55	25.90	15	1061	3.6	1.88	6.63
Girls	163	9219	22.0	16.27	29.14	5	275	0.7	0.28	1.52
School category										
Primary	40	3186	11.9	10.03	13.97	10	737	2.7	1.79	4.17
Secondary	207	12062	26.9	22.23	32.25	10	599	1.3	0.52	3.41
Class										
Standard 4	14	898	11.2	7.24	16.80	2	116	1.4	0.38	5.29
Standard 5	7	708	7.6	3.96	13.98	1	60	0.6	0.11	3.84
Standard 6	19	1580	16.7	11.33	23.92	7	560	5.9	4.05	8.59
Form 1	26	1749	17.4	9.73	29.21	3	205	2.0	0.41	9.52
Form 2	35	1692	20.6	14.49	28.53	4	237	2.9	0.76	10.33
Form 3	40	1896	20.7	15.39	27.33	2	102	1.1	0.15	7.79
Form 4	53	3140	36.3	27.75	45.87	1	56	0.6	0.08	5.24
Form 5	53	3585	41.0	28.75	54.52	-	-	-	-	-
Ethnicity										
Malay	244	15003	21.1	16.50	26.53	20	1336	1.9	1.11	3.15
Chinese	3	245	70.1	25.57	94.14	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

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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
Terengganu	248	16481	61.7	55.85	67.28	33	2007	7.5	5.60	10.01
Locality of school										
Urban	71	5011	62.2	50.49	72.67	11	700	8.7	6.16	12.12
Rural	177	11471	61.5	54.75	67.86	22	1307	7.0	4.67	10.39
Sex										
Boys	140	10155	60.1	51.44	68.09	14	825	4.9	2.59	8.98
Girls	108	6326	64.6	58.45	70.34	19	1182	12.1	8.22	17.40
School category										
Primary	63	5365	60.6	46.80	72.93	7	550	6.2	3.70	10.25
Secondary	185	11117	62.3	56.66	67.58	26	1457	8.2	5.80	11.36
Class										
Standard 4	21	1774	57.4	27.70	82.54	4	272	8.8	3.30	21.40
Standard 5	27	2403	61.2	53.34	68.54	3	278	7.1	2.38	19.26
Standard 6	15	1188	64.9	37.40	85.08	-	-	-	-	-
Form 1	19	1366	66.8	44.08	83.67	2	148	7.3	1.67	26.48
Form 2	56	3122	74.3	64.80	81.90	3	146	3.5	1.21	9.57
Form 3	44	2210	58.5	47.39	68.76	11	553	14.6	9.78	21.28
Form 4	30	1866	52.8	42.93	62.46	4	223	6.3	2.18	16.91
Form 5	36	2553	59.5	50.77	67.71	6	387	9.0	3.64	20.64
Ethnicity										
Malay	248	16481	61.7	55.85	67.28	33	2007	7.5	5.60	10.01
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

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

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
Terengganu	112	7373	27.6	22.93	32.85	13	839	3.1	1.57	6.19
Locality of school										
Urban	36	2140	26.6	18.61	36.43	4	203	2.5	0.33	16.60
Rural	76	5233	28.1	22.57	34.30	9	636	3.4	1.80	6.39
Sex										
Boys	76	5268	31.1	24.54	38.63	10	663	3.9	1.93	7.80
Girls	36	2105	21.5	15.96	28.33	3	176	1.8	0.61	5.21
School category										
Primary	29	2386	27.0	18.45	37.61	8	548	6.2	2.73	13.47
Secondary	83	4987	27.9	22.63	33.94	5	291	1.6	0.61	4.25
Class										
Standard 4	11	931	30.1	12.59	56.27	2	116	3.7	0.76	16.48
Standard 5	9	916	23.3	17.26	30.74	4	329	8.4	3.34	19.50
Standard 6	9	540	29.5	15.15	49.46	2	104	5.7	0.95	27.28
Form 1	7	469	22.9	12.22	38.81	1	63	3.1	0.38	20.70
Form 2	16	936	22.3	16.10	29.92	-	-	-	-	-
Form 3	20	929	24.6	13.69	40.12	2	88	2.3	0.64	8.08
Form 4	21	1304	36.9	24.62	51.18	2	140	4.0	0.99	14.59
Form 5	19	1349	31.5	21.86	42.94	-	-	-	-	-
Ethnicity										
Malay	112	7373	27.6	22.93	32.85	13	839	3.1	1.57	6.19
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

Table 3.3.7 : Preferred option to lose body weight among adolescents by socio-demographic characteristics in Terengganu (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
Terengganu	536	35348	48.9	44.40	53.42	335	21129	29.2	24.99	33.86
Locality of school										
Urban	191	12213	50.9	42.32	59.50	103	5815	24.3	17.24	32.99
Rural	345	23135	47.9	42.90	52.91	232	15314	31.7	27.31	36.43
Sex										
Boys	243	16847	56.1	49.52	62.52	98	7390	24.6	20.10	29.77
Girls	293	18501	43.8	36.93	50.85	237	13740	32.5	26.22	39.48
School category										
Primary	200	15257	55.8	50.91	60.49	71	5909	21.6	15.73	28.89
Secondary	336	20091	44.7	39.75	49.80	264	15220	33.9	30.45	37.49
Class										
Standard 4	64	4330	53.8	44.17	63.12	25	1922	23.9	14.92	35.94
Standard 5	73	5766	58.5	51.06	65.63	20	1813	18.4	11.42	28.29
Standard 6	63	5161	54.5	46.98	61.90	26	2174	23.0	19.30	27.11
Form 1	75	5170	51.3	44.04	58.57	45	3153	31.3	23.62	40.18
Form 2	65	3401	41.8	33.19	51.03	56	2759	33.9	27.18	41.44
Form 3	82	4044	44.3	38.73	49.92	57	2794	30.6	23.94	38.13
Form 4	61	3776	43.2	37.76	48.77	53	3183	36.4	27.53	46.31
Form 5	53	3700	41.8	30.25	54.41	53	3331	37.7	26.55	50.26
Ethnicity										
Malay	533	35141	48.9	44.31	53.48	333	20926	29.1	24.74	33.91
Chinese	2	83	29.0	3.52	82.08	2	204	71.0	17.92	96.48
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	124	100.0	100.00	100.00	-	-	-	-	-

Table 3.3.7 : Preferred option to lose body weight among adolescents by socio-demographic characteristics in Terengganu (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
Terengganu	50	3378	4.7	3.18	6.81	101	6523	9.0	6.77	11.93
Locality of school										
Urban	22	1334	5.6	3.35	9.10	37	2438	10.2	5.19	18.97
Rural	28	2044	4.2	2.49	7.09	64	4085	8.5	6.76	10.53
Sex										
Boys	25	1704	5.7	3.43	9.26	28	1970	6.6	4.26	9.99
Girls	25	1675	4.0	2.00	7.69	73	4553	10.8	7.62	15.02
School category										
Primary	27	2018	7.4	5.07	10.61	38	2984	10.9	6.27	18.30
Secondary	23	1360	3.0	1.84	4.93	63	3539	7.9	6.26	9.86
Class										
Standard 4	5	458	5.7	1.70	17.38	15	1150	14.3	8.12	23.93
Standard 5	10	715	7.3	4.42	11.70	13	1046	10.6	4.72	22.16
Standard 6	12	845	8.9	4.26	17.78	10	788	8.3	4.15	16.01
Form 1	3	229	2.3	0.67	7.40	11	694	6.9	3.51	13.08
Form 2	2	112	1.4	0.36	5.12	19	1040	12.8	8.21	19.38
Form 3	9	462	5.1	2.41	10.30	14	667	7.3	3.98	13.03
Form 4	5	316	3.6	1.37	9.16	14	855	9.8	4.67	19.33
Form 5	4	242	2.7	0.87	8.25	5	283	3.2	1.17	8.47
Ethnicity										
Malay	50	3378	4.7	3.20	6.85	101	6523	9.1	6.81	11.99
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

Table 3.3.7 : Preferred option to lose body weight among adolescents by socio-demographic characteristics in Terengganu (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
Terengganu	47	2527	3.5	2.32	5.22	6	535	0.7	0.30	1.79
Locality of school										
Urban	16	760	3.2	1.34	7.30	2	148	0.6	0.08	4.58
Rural	31	1767	3.7	2.34	5.68	4	387	0.8	0.31	2.05
Sex										
Boys	13	801	2.7	1.48	4.77	6	535	1.8	0.72	4.34
Girls	34	1726	4.1	2.47	6.67					
School category										
Primary	5	299	1.1	0.42	2.78	1	146	0.5	0.08	3.65
Secondary	42	2228	5.0	3.63	6.74	5	389	0.9	0.33	2.27
Class										
Standard 4	1	74	0.9	0.13	6.34	-	-	-	-	-
Standard 5	-	-	-	-	-	1	146	1.5	0.22	9.48
Standard 6	4	224	2.4	0.68	7.97	-	-	-	-	-
Form 1	2	155	1.5	0.39	5.86	1	70	0.7	0.09	5.09
Form 2	7	342	4.2	2.07	8.37	1	60	0.7	0.09	5.62
Form 3	16	810	8.9	4.58	16.46	-	-	-	-	-
Form 4	5	266	3.0	1.27	7.09	1	106	1.2	0.16	8.79
Form 5	12	656	7.4	3.81	13.94	2	153	1.7	0.43	6.74
Ethnicity										
Malay	47	2527	3.5	2.34	5.24	6	535	0.7	0.30	1.81
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

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

Characteristics	Fasting					Professional advise				
	Unweighted count	Estimated population	Prevalence (%)	95% CI		Unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	42	2604	3.6	2.30	5.59	3	245	0.3	0.11	1.08
Locality of school										
Urban	22	1267	5.3	2.85	9.60	-	-	-	-	-
Rural	20	1337	2.8	1.55	4.88	3	245	0.5	0.17	1.53
Sex										
Boys	10	690	2.3	1.28	4.09	1	81	0.3	0.03	2.16
Girls	32	1914	4.5	2.72	7.44	2	164	0.4	0.09	1.60
School category										
Primary	9	751	2.7	1.34	5.53	-	-	-	-	-
Secondary	33	1853	4.1	2.39	7.03	3	245	0.5	0.18	1.61
Class										
Standard 4	2	116	1.4	0.43	4.74	-	-	-	-	-
Standard 5	4	366	3.7	1.51	8.86	-	-	-	-	-
Standard 6	3	270	2.9	1.03	7.66	-	-	-	-	-
Form 1	10	601	6.0	2.39	14.14	-	-	-	-	-
Form 2	7	414	5.1	1.78	13.73	-	-	-	-	-
Form 3	8	361	4.0	1.68	9.00	-	-	-	-	-
Form 4	3	162	1.8	0.52	6.30	1	81	0.9	0.13	6.12
Form 5	5	315	3.6	1.18	10.22	2	164	1.9	0.43	7.61
Ethnicity										
Malay	42	2604	3.6	2.32	5.62	3	245	0.3	0.11	1.09
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

Table 3.3.8 : Preferred option to increase body weight among adolescents by socio-demographic characteristics in Terengganu (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
Terengganu	224	14427	53.5	46.36	60.50	107	7352	27.3	23.05	31.92
Locality of school										
Urban	64	4228	52.6	39.06	65.82	37	2563	31.9	24.53	40.31
Rural	160	10199	53.9	45.54	61.99	70	4789	25.3	20.75	30.46
Sex										
Boys	135	9294	53.6	44.77	62.16	60	4487	25.9	21.73	30.49
Girls	89	5133	53.4	43.05	63.40	47	2865	29.8	22.08	38.84
School category										
Primary	45	3947	44.1	32.00	56.97	40	3138	35.1	29.64	40.92
Secondary	179	10479	58.2	50.66	65.31	67	4214	23.4	18.93	28.53
Class										
Standard 4	15	1366	42.9	15.53	75.48	14	986	31.0	18.37	47.26
Standard 5	15	1503	37.7	29.18	47.04	18	1609	40.4	28.43	53.53
Standard 6	15	1078	60.6	42.17	76.42	8	544	30.5	19.01	45.18
Form 1	19	1350	57.2	38.64	73.94	7	528	22.4	14.05	33.73
Form 2	36	1985	48.5	35.56	61.72	22	1178	28.8	20.21	39.28
Form 3	50	2390	63.8	50.16	75.53	8	417	11.1	5.36	21.69
Form 4	34	2036	57.6	46.92	67.65	16	1069	30.2	22.60	39.16
Form 5	40	2719	63.4	48.62	76.01	14	1021	23.8	14.22	37.10
Ethnicity										
Malay	224	14427	53.5	46.36	60.50	107	7352	27.3	23.05	31.92
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

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

Characteristics	Take high calorie foods					Others				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	37	2366	8.8	6.15	12.37	42	2821	10.5	7.08	15.20
Locality of school										
Urban	8	415	5.2	2.08	12.22	14	828	10.3	4.78	20.85
Rural	29	1952	10.3	7.22	14.51	28	1992	10.5	6.68	16.21
Sex										
Boys	23	1552	8.9	5.93	13.29	28	2014	11.6	7.56	17.42
Girls	14	814	8.5	5.00	13.97	14	806	8.4	4.19	16.07
School category										
Primary	10	721	8.1	3.46	17.64	14	1142	12.8	6.36	23.94
Secondary	27	1645	9.1	6.41	12.86	28	1679	9.3	5.95	14.29
Class										
Standard 4	3	226	7.1	2.43	18.95	8	604	19.0	7.02	42.10
Standard 5	5	337	8.5	3.20	20.53	6	538	13.5	7.12	24.08
Standard 6	2	158	8.9	1.56	37.44					
Form 1	1	86	3.6	0.46	23.29	6	396	16.8	5.91	39.29
Form 2	7	420	10.3	3.75	25.13	9	506	12.4	5.02	27.41
Form 3	11	584	15.6	7.71	29.03	7	355	9.5	5.03	17.11
Form 4	3	188	5.3	1.37	18.51	4	241	6.8	2.81	15.62
Form 5	5	368	8.6	3.86	17.95	2	181	4.2	1.05	15.45
Ethnicity										
Malay	37	2366	8.8	6.15	12.37	42	2821	10.5	7.08	15.20
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-

3.4 Meal patterns among adolescents (Primary 4 to Secondary 5) in Terengganu

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3.4.1 Introduction

The term ‘meal patterns’ is often used to describe an 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 also can be described in three constructs, which are patterning (frequency, spacing, regularity, skipping and timing), format (types of food combinations, sequencing of foods and nutrient profile/content); and 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 patterns of adolescents in Malaysia (Primary 4 to Secondary 5).

Specific objectives:

- To determine the prevalence of consumption of individual main meals (breakfast, lunch, dinner) and intermeal (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 practice of bringing food or drinks to school.
- To identify the common type of food or drink brought to school.
- To determine the prevalence of eating out in adolescents.
- To determine the prevalence of snacking and practice of buying snack out of the school area.
- To identify common type of snack consumed and bought out of the school area.
- To identify the source of media that affect meal patterns among 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 or food intake in the early morning between 6.00 am to 8.00 am.
- **Lunch:** defined as food consumed or meal between 11.00 am to 3.00 pm.
- **Dinner:** defined as food consumed or meal between 6.00 pm to 10.00 pm.
- **Afternoon tea:** defined as food and/or drinks taken between lunch and dinner or between 3.00 pm to 6.00 pm.
- **Heavy meal after dinner:** food taken at night after the dinner or after 10.00 pm. Examples of food that are considered heavy meal is high calorie food such as *nasi lemak*, *roti canai*, fried mee, burger, 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 or frequency of eating for weight loss purposes.
- **Fast food:** meant in this question, including ready-to-eat food. Ready-to-eat food are food that can be eaten immediately after purchase. It consists of cooked food, food either hot or cold food and food that can be eaten without further cooking or heating.
- **Snacking:** consumption of energy outside of 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 a restaurant or hawker stall, and does not include buying outside food and eating it at home.
- **Snack food:** snack food such as buns, biscuits, fruits, nuts, crackers, ice cream, junk food, pickles, flavoured/carbonated drink, fries/nugget/sausage, candy or chocolate.

3.4.4 Findings

A total of 2,437 respondents out of 158,658 adolescents aged 10 to 17 years old in Terengganu were selected to participate in this module. Only 23.1 % (95% CI: 19.80, 26.73)

took their breakfast daily, followed by 67.8% who took this main meal between 1 to 6 days a week (95% CI: 64.82, 70.65) while 9.1% (95% CI: 6.79, 12.13) missed their breakfast. Around 30% of the adolescents took lunch and dinner daily [36.9% (95% CI: 33.03, 40.93) and 34.3% (95% CI: 30.77, 38.08) respectively] while more than half of them took lunch and dinner between 1 to 6 days a week. The majority of the adolescents had their food prepared at home while 21.6% (95% CI: 15.78, 28.92) and 27.5% (95% CI: 21.22, 34.77) had their breakfast and lunch from the canteen respectively. Most of them claim that having no appetite was the reason they skipped their main meal. About 65.3% (95% CI: 60.39, 69.91) ate and/or drank during recess everyday (5 days per week) and most of the food (77.9%) were obtained from the school canteen (95% CI: 74.26, 81.11) while 13.6% (95% CI: 10.12, 18.12) brought food from home for recess. Only 4.9% (95% CI: 3.89, 6.09) took daily heavy meal after dinner but the majority of them took it for 1 to 6 days per week [78.5% (95% CI: 75.45, 81.31)]. Half of the adolescents (51%) took the before-mentioned meal at home (95% CI: 46.28, 55.72). The majority of the adolescents consumed fast food for 1 to 6 days a week [88% (95% CI: 84.77, 90.58)] and there was not much difference between urban and rural adolescents in terms of frequency of fast food consumption per week. Only 6.1% (95% CI: 4.55, 8.05) brought food and 32.1% (95% CI: 26.57, 38.17) brought drinks to school every day. Type of food most frequently taken to school are Nasi lemak/fried rice/mixed rice (54.4%; 95% CI: 47.60, 60.97) while plain water is the most likely type of drink taken to school (87.4%; 95% CI: 83.65, 90.45). Buying food or drinks was the most common pocket money expenditure. Only 3.8% (95% CI: 2.84, 5.08) ate out 7 times or more in a week. 'Bread/bun/sandwich' type of snack was most commonly consumed, and most of them take snacks 1 to 3 times in a week (60.8%, 95% CI: 56.94, 64.59). Meanwhile, more than half of the adolescents bought snack food/or drink out of school area 1 to 4 times per week (60.3%; 95% CI: 55.82, 64.71) and the highest preference type of items were flavoured drink/carbonated drink, followed by french fries/nugget/sausage and Candy/chocolate. It was also found that television and social media was the most influential media source on the majority of the adolescents with regards to their dietary intake patterns.

3.4.5 Discussions/Conclusion

The majority of adolescents would skip one of their main meal intake in a week, especially their breakfast. The importance of taking breakfast and other main meals regularly should be emphasized to the adolescents in order to improve their health status. Easy accessibility to fast food might be the reason why adolescents very commonly consume fast food, regardless of their school or home locality. More adolescents should be encouraged to bring drinks to school, particularly plain water, to reduce their intake of sweetened beverages, especially with the alarming finding of high preference for flavoured/carbonated drinks which are known to have a high sugar content. Further research should also be done to investigate the relation between snacking and reduced appetite for main meal intake among adolescents.

3.4.6 Recommendations

Taken together from the survey, several recommendations were proposed. Advocacy on proper meal pattern practice among adolescent is crucial therefore, an a holistic and comprehensive nutrition intervention should be implemented nation-wide, where every stakeholders must work together. Current adolescent is the future adult, thus healthier adolescent generation is warranted for a healthier nation. As the most of adolescents are school-aged individuals, therefore, more health promotion such as healthy eating habits in house, school and eating out must be addressed systematically. Positive behavioral changes on dietary pattern need a longer time but the support and intervention must be continuous. Ministry of Health and Ministry of Education together with support and cooperation from Parents 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 the adolescent on proper nutrition intakes daily especially on main meals.

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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	
Terengganu	553	36522	23.1	19.80	26.73	1639	107273	67.8	64.82	70.65
Locality of school										
Urban	220	14097	27.0	22.58	31.83	530	33241	63.6	60.95	66.10
Rural	333	22425	21.2	17.32	25.62	1109	74033	69.9	66.34	73.23
Sex										
Boys	265	18050	23.1	19.08	27.57	753	53814	68.7	64.82	72.40
Girls	288	18473	23.1	19.44	27.25	886	53459	66.9	63.10	70.47
Ethnicity										
Malay	550	36283	23.0	19.75	26.71	1636	106925	67.9	64.92	70.77
Chinese	2	116	27.4	5.62	70.42	2	225	53.0	10.33	91.70
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	124	35.4	14.22	64.43	1	124	35.4	14.22	64.43
School level										
Primary school	231	17953	30.0	27.98	32.20	490	38411	64.3	60.83	67.61
Secondary school	322	18569	18.9	16.01	22.08	1149	68862	69.9	66.34	73.31
Class										
Standard 4	103	8014	40.2	28.96	52.59	155	10551	52.9	38.85	66.57
Standard 5	58	4539	22.8	16.23	31.13	163	13898	69.9	64.87	74.52
Standard 6	70	5401	27.1	22.26	32.52	172	13962	70.0	63.33	75.96
Form 1	60	4071	20.3	13.17	30.08	193	13663	68.3	57.74	77.24
Form 2	71	3847	19.7	14.40	26.32	254	13629	69.7	64.33	74.67
Form 3	89	4223	21.1	15.69	27.75	278	13724	68.5	60.73	75.42
Form 4	53	3315	17.1	10.04	27.69	217	13525	69.9	62.60	76.32
Form 5	49	3113	15.9	11.98	20.87	207	14322	73.3	65.09	80.13
School session										
Morning session	372	24703	22.6	18.66	27.06	1141	74483	68.1	64.52	71.46
Evening session	5	448	34.3	12.31	66.00	12	812	62.2	30.38	86.08
Morning and evening session	176	11371	24.0	20.26	28.20	484	31834	67.2	63.36	70.84
BMI-for-age status (BAZ)										
Thinness (<-2sd)	39	2664	25.7	18.90	33.91	96	6689	64.5	57.37	71.08
Normal (≥-2sd - ≤+1sd)	398	26073	24.9	21.22	28.94	1070	69480	66.3	62.83	69.60
Overweight (>+1sd - ≤+2sd)	59	3938	16.5	11.88	22.49	272	17558	73.6	67.09	79.25
Obese (>+2sd)	56	3782	19.8	13.62	27.80	201	13547	70.8	62.21	78.14
Height-for-age status (HAZ)										
Stunting (<-2sd)	62	4242	26.7	18.41	37.05	163	10378	65.3	54.70	74.62
Normal (≥-2sd)	491	32280	22.7	19.18	26.60	1476	96896	68.1	64.56	71.40

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
Terengganu	238	14416	9.1	6.79	12.13
Locality of school					
Urban	80	4956	9.5	6.40	13.83
Rural	158	9460	8.9	5.99	13.12
Sex					
Boys	96	6429	8.2	5.97	11.19
Girls	142	7987	10.0	7.12	13.85
Ethnicity					
Malay	234	14231	9.0	6.77	11.97
Chinese	2	83	19.6	2.56	69.42
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	2	102	29.2	2.85	85.31
School level					
Primary school	44	3384	5.7	3.61	8.78
Secondary school	194	11032	11.2	8.27	15.02
Class					
Standard 4	19	1366	6.9	4.27	10.82
Standard 5	16	1442	7.3	3.40	14.82
Standard 6	9	576	2.9	0.95	8.48
Form 1	37	2274	11.4	6.02	20.43
Form 2	39	2064	10.6	7.16	15.32
Form 3	42	2076	10.4	6.57	15.97
Form 4	42	2509	13.0	8.85	18.61
Form 5	34	2110	10.8	6.17	18.21
School session					
Morning session	169	10209	9.3	7.16	12.08
Evening session	1	46	3.5	0.34	28.07
Morning and evening session	68	4161	8.8	5.16	14.57
BMI-for-age status (BAZ)					
Thinness (<-2sd)	16	1014	9.8	6.05	15.44
Normal (\geq -2sd - \leq +1sd)	149	9244	8.8	6.76	11.43
Overweight (>+1sd - \leq +2sd)	41	2354	9.9	6.45	14.81
Obese (>+2sd)	32	1804	9.4	4.64	18.22
Height-for-age status (HAZ)					
Stunting (<-2sd)	18	1264	8.0	4.38	14.02
Normal (\geq -2sd)	220	13152	9.2	6.75	12.52

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
Terengganu	1229	81998	57.3	48.90	65.38	436	30943	21.6	15.78	28.92
Locality of school										
Urban	408	27520	58.6	38.53	76.11	142	9564	20.4	12.02	32.33
Rural	821	54478	56.7	48.96	64.21	294	21379	22.3	14.99	31.77
Sex										
Boys	599	42787	59.9	51.66	67.57	213	15497	21.7	15.86	28.92
Girls	630	39212	54.8	45.10	64.17	223	15446	21.6	15.16	29.80
Ethnicity										
Malay	1224	81473	57.2	48.74	65.28	435	30880	21.7	15.79	29.02
Chinese	3	278	81.6	25.29	98.30	1	63	18.4	1.70	74.71
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	2	247	100.0	100.00	100.00					
School level										
Primary school	410	32264	57.4	50.74	63.79	256	19549	34.8	27.93	42.31
Secondary school	819	49735	57.3	44.09	69.56	180	11394	13.1	9.45	17.96
Class										
Standard 4	139	10327	55.8	41.07	69.51	103	7058	38.1	23.90	54.70
Standard 5	123	9896	53.7	45.96	61.22	84	7214	39.1	33.63	44.92
Standard 6	148	12041	62.5	54.79	69.67	69	5276	27.4	19.18	37.50
Form 1	147	10575	59.9	47.61	71.04	35	2555	14.5	9.16	22.10
Form 2	203	10926	63.3	50.34	74.62	31	1843	10.7	6.79	16.40
Form 3	192	9735	54.8	38.25	70.36	45	2271	12.8	7.88	20.08
Form 4	154	9762	58.6	46.99	69.26	31	2029	12.2	7.33	19.54
Form 5	123	8735	50.1	30.98	69.20	38	2697	15.5	8.36	26.84
School session										
Morning session	909	59830	60.6	53.72	67.09	329	22397	22.7	16.86	29.81
Evening session	3	271	21.5	8.95	43.31	8	560	44.4	24.17	66.71
Morning and evening session	315	21753	50.7	36.52	64.83	99	7987	18.6	11.18	29.40
BMI-for-age status (BAZ)										
Thinness (<-2sd)	86	6019	64.6	54.42	73.64	34	2261	24.3	16.37	34.43
Normal (≥-2sd - ≤+1sd)	813	53870	56.7	47.89	65.05	289	20628	21.7	15.80	29.05
Overweight (>+1sd - ≤+2sd)	185	12335	57.8	46.06	68.71	57	4059	19.0	12.13	28.55
Obese (>+2sd)	144	9709	56.4	44.90	67.22	56	3995	23.2	14.78	34.49
Height-for-age status (HAZ)										
Stunting (<-2sd)	124	8031	55.1	44.20	65.47	51	3736	25.6	16.44	37.62
Normal (≥-2sd)	1105	73968	57.6	49.09	65.68	385	27207	21.2	15.47	28.30

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	
Terengganu	93	6433	4.5	3.14	6.40	378	20948	14.6	6.85	28.61
Locality of school										
Urban	38	2800	6.0	3.19	10.87	139	6107	13.0	1.44	60.47
Rural	55	3633	3.8	2.68	5.32	239	14841	15.5	8.38	26.78
Sex										
Boys	48	3604	5.0	3.38	7.46	130	8082	11.3	5.32	22.44
Girls	45	2829	4.0	2.53	6.12	248	12866	18.0	8.29	34.71
Ethnicity										
Malay	93	6433	4.5	3.16	6.43	378	20948	14.7	6.88	28.71
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	27	2472	4.4	1.89	9.89	7	623	1.1	0.42	2.91
Secondary school	66	3961	4.6	3.53	5.88	371	20325	23.4	11.92	40.88
Class										
Standard 4	11	878	4.7	2.33	9.42	3	192	1.0	0.24	4.29
Standard 5	8	743	4.0	1.83	8.64	4	432	2.3	0.67	7.83
Standard 6	8	851	4.4	1.38	13.27					
Form 1	11	701	4.0	2.29	6.80	55	3591	20.3	9.64	37.93
Form 2	11	620	3.6	1.95	6.54	74	3763	21.8	10.54	39.77
Form 3	15	719	4.0	1.94	8.23	109	4951	27.9	13.21	49.53
Form 4	13	829	5.0	3.17	7.70	61	3601	21.6	12.06	35.64
Form 5	16	1093	6.3	3.28	11.65	72	4418	25.3	10.75	48.88
School session										
Morning session	64	4458	4.5	2.99	6.77	178	10495	10.6	5.30	20.20
Evening session	4	303	24.1	8.19	52.93	2	126	10.0	1.68	42.10
Morning and evening session	25	1672	3.9	2.47	6.11	198	10327	24.1	9.48	49.02
BMI-for-age status (BAZ)										
Thinness (<-2sd)	9	728	7.8	3.69	15.80	3	168	1.8	0.53	5.94
Normal (≥-2sd - ≤+1sd)	57	4039	4.2	2.78	6.45	269	14552	15.3	7.29	29.34
Overweight (>+1sd - ≤+2sd)	20	1262	5.9	3.31	10.36	63	3494	16.4	6.46	35.69
Obese (>+2sd)	7	404	2.3	0.93	5.78	43	2734	15.9	6.78	32.89
Height-for-age status (HAZ)										
Stunting (<-2sd)	9	620	4.3	1.78	9.82	35	1905	13.1	5.50	27.96
Normal (≥-2sd)	84	5814	4.5	3.03	6.71	343	19043	14.8	6.97	28.81

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
Terengganu	41	2675	1.9	1.17	2.99
Locality of school					
Urban	16	1004	2.1	1.31	3.45
Rural	25	1672	1.7	0.87	3.47
Sex					
Boys	21	1487	2.1	1.23	3.52
Girls	20	1188	1.7	0.83	3.29
Ethnicity					
Malay	41	2675	1.9	1.17	3.00
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	18	1308	2.3	1.23	4.37
Secondary school	23	1367	1.6	0.81	3.06
Class					
Standard 4	1	66	0.4	0.05	2.44
Standard 5	2	152	0.8	0.24	2.82
Standard 6	15	1090	5.7	2.99	10.44
Form 1	4	236	1.3	0.54	3.28
Form 2	2	103	0.6	0.08	4.37
Form 3	2	88	0.5	0.14	1.75
Form 4	8	449	2.7	0.95	7.42
Form 5	7	492	2.8	1.08	7.13
School session					
Morning session	24	1539	1.6	0.89	2.72
Evening session					
Morning and evening session	17	1136	2.7	1.27	5.46
BMI-for-age status (BAZ)					
Thinness (<-2sd)	2	139	1.5	0.35	6.16
Normal ($\geq -2sd$ - $\leq +1sd$)	31	1969	2.1	1.23	3.47
Overweight ($> +1sd$ - $\leq +2sd$)	3	191	0.9	0.18	4.33
Obese ($> +2sd$)	5	376	2.2	0.88	5.32
Height-for-age status (HAZ)					
Stunting (<-2sd)	5	292	2.0	0.74	5.31
Normal ($\geq -2sd$)	36	2384	1.9	1.17	2.93

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

Socio-demographic Characteristics	Reasons for skipping breakfast									
	No food available					No appetite				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
Lower				Upper	Lower				Upper	
Terengganu	189	12854	11.4	9.22	14.12	767	50485	45.0	40.46	49.53
Locality of school										
Urban	75	4930	13.8	10.53	17.95	251	16072	45.1	39.50	50.78
Rural	114	7924	10.3	7.80	13.58	516	34413	44.9	38.89	51.06
Sex										
Boys	107	7761	14.0	10.99	17.68	327	24150	43.6	38.30	49.00
Girls	82	5092	9.0	6.58	12.06	440	26335	46.3	40.45	52.23
Ethnicity										
Malay	187	12730	11.4	9.10	14.16	765	50199	44.9	40.46	49.45
Chinese	1	63	20.4	1.73	78.79	1	162	52.6	7.35	93.95
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	60	26.8	2.31	84.93	1	124	54.8	7.93	94.47
School level										
Primary school	73	5776	15.3	12.10	19.14	251	19565	51.8	44.56	58.95
Secondary school	116	7078	9.5	7.30	12.26	516	30921	41.5	36.84	46.29
Class										
Standard 4	31	2120	21.5	15.11	29.73	67	4513	45.8	29.89	62.69
Standard 5	27	2421	16.9	14.04	20.28	83	7068	49.4	40.47	58.43
Standard 6	15	1234	9.1	6.12	13.20	101	7983	58.6	52.85	64.07
Form 1	17	1187	8.4	4.41	15.55	100	7032	50.0	41.00	58.97
Form 2	25	1414	9.5	6.67	13.43	131	7115	47.9	40.19	55.74
Form 3	27	1343	9.1	6.04	13.62	115	5813	39.6	30.76	49.14
Form 4	18	1113	7.3	4.63	11.41	91	5577	36.7	29.17	44.97
Form 5	29	2021	12.8	8.48	18.97	79	5384	34.2	27.48	41.62
School session										
Morning session	138	9145	11.8	9.36	14.70	547	35853	46.1	40.83	51.55
Evening session	1	92	10.7	2.70	34.29	7	436	50.8	18.61	82.36
Morning and evening session	50	3616	10.8	7.58	15.06	212	14110	42.0	36.12	48.09
BMI-for-age status (BAZ)										
Thinness (<-2sd)	14	1070	15.3	9.82	22.94	50	3394	48.4	37.59	59.36
Normal (≥-2sd - ≤+1sd)	125	8534	11.8	9.10	15.18	518	33855	46.8	41.72	52.01
Overweight (>+1sd - ≤+2sd)	27	1676	8.9	6.02	13.07	126	8188	43.7	37.44	50.08
Obese (>+2sd)	23	1574	11.0	7.25	16.49	73	5048	35.4	28.86	42.62
Height-for-age status (HAZ)										
Stunting (<-2sd)	18	1271	12.2	7.13	19.98	70	4282	41.0	29.96	52.97
Normal (≥-2sd)	171	11582	11.4	9.09	14.13	697	46203	45.4	40.96	49.83

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	
Terengganu	536	32508	28.9	24.49	33.85	90	6246	5.6	4.10	7.51
Locality of school										
Urban	184	10648	29.9	24.11	36.33	16	1083	3.0	1.90	4.83
Rural	352	21860	28.5	22.70	35.16	74	5163	6.7	4.94	9.12
Sex										
Boys	216	14312	25.8	20.73	31.67	45	3270	5.9	3.77	9.11
Girls	320	18197	32.0	27.09	37.32	45	2976	5.2	3.57	7.61
Ethnicity										
Malay	533	32384	29.0	24.56	33.82	90	6246	5.6	4.12	7.54
Chinese	2	83	27.0	2.39	84.82					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	42	18.4	1.52	76.75					
School level										
Primary school	107	8184	21.7	17.60	26.37	15	1311	3.5	2.23	5.37
Secondary school	429	24324	32.6	27.35	38.39	75	4935	6.6	4.76	9.14
Class										
Standard 4	32	2103	21.4	13.30	32.49	5	377	3.8	1.62	8.75
Standard 5	40	3435	24.0	19.42	29.32	4	361	2.5	1.18	5.32
Standard 6	35	2646	19.4	12.47	28.94	6	573	4.2	1.91	9.00
Form 1	45	3149	22.4	15.24	31.62	12	841	6.0	2.81	12.25
Form 2	87	4206	28.3	18.82	40.26	8	499	3.4	1.37	7.99
Form 3	109	5221	35.6	27.81	44.14	18	926	6.3	3.12	12.33
Form 4	91	5374	35.4	26.21	45.76	24	1633	10.7	6.32	17.69
Form 5	97	6374	40.5	32.27	49.29	13	1036	6.6	3.75	11.30
School session										
Morning session	367	22220	28.6	23.49	34.31	56	3865	5.0	3.63	6.78
Evening session	1	53	6.1	0.86	32.83	2	162	18.8	4.41	53.83
Morning and evening session	167	10177	30.3	23.73	37.75	32	2219	6.6	3.97	10.79
BMI-for-age status (BAZ)										
Thinness (<-2sd)	26	1667	23.8	15.93	33.91	3	247	3.5	1.07	10.97
Normal (≥-2sd - ≤+1sd)	342	20673	28.6	23.43	34.38	46	3112	4.3	2.94	6.25
Overweight (>+1sd - ≤+2sd)	94	5801	30.9	25.18	37.34	25	1600	8.5	5.03	14.09
Obese (>+2sd)	74	4367	30.7	22.70	39.96	16	1287	9.0	5.33	14.90
Height-for-age status (HAZ)										
Stunting (<-2sd)	52	3087	29.5	19.24	42.43	4	230	2.2	0.83	5.67
Normal (≥-2sd)	484	29422	28.9	24.57	33.62	86	6016	5.9	4.33	8.01

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	
Terengganu	49	3413	3.0	2.08	4.42	104	6804	6.1	4.50	8.10
Locality of school										
Urban	14	977	2.7	1.39	5.32	31	1946	5.5	2.97	9.82
Rural	35	2436	3.2	2.01	4.99	73	4858	6.3	4.54	8.79
Sex										
Boys	30	2190	4.0	2.47	6.27	56	3738	6.7	4.59	9.82
Girls	19	1223	2.1	1.24	3.71	48	3066	5.4	3.64	7.92
Ethnicity										
Malay	49	3413	3.1	2.09	4.44	104	6804	6.1	4.52	8.15
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	21	1578	4.2	2.58	6.70	15	1361	3.6	1.84	6.95
Secondary school	28	1835	2.5	1.48	4.06	89	5443	7.3	5.48	9.67
Class										
Standard 4	7	427	4.3	1.08	15.81	3	305	3.1	0.80	11.21
Standard 5	9	611	4.3	1.51	11.51	4	402	2.8	0.84	8.98
Standard 6	5	540	4.0	1.60	9.46	8	654	4.8	2.61	8.64
Form 1	12	839	6.0	2.26	14.81	14	1021	7.3	3.76	13.56
Form 2	9	597	4.0	1.74	8.99	18	1018	6.9	3.57	12.75
Form 3	3	137	0.9	0.19	4.54	26	1246	8.5	4.83	14.48
Form 4	3	199	1.3	0.34	4.85	19	1296	8.5	4.51	15.56
Form 5	1	64	0.4	0.05	3.05	12	862	5.5	2.74	10.64
School session										
Morning session	33	2256	2.9	1.81	4.64	64	4361	5.6	4.22	7.42
Evening session	1	70	8.1	2.07	26.83	1	46	5.4	0.47	40.65
Morning and evening session	15	1088	3.2	2.42	4.32	39	2397	7.1	4.03	12.32
BMI-for-age status (BAZ)										
Thinness (<-2sd)	2	147	2.1	0.45	9.26	7	488	7.0	3.16	14.65
Normal (≥-2sd - ≤+1sd)	29	2029	2.8	1.73	4.53	64	4093	5.7	3.85	8.24
Overweight (>+1sd - ≤+2sd)	7	456	2.4	1.16	5.03	16	1036	5.5	3.12	9.61
Obese (>+2sd)	11	781	5.5	2.84	10.33	17	1187	8.3	4.82	14.02
Height-for-age status (HAZ)										
Stunting (<-2sd)	7	577	5.5	2.31	12.64	13	1005	9.6	4.88	18.07
Normal (≥-2sd)	42	2835	2.8	1.83	4.22	91	5799	5.7	4.12	7.81

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
Terengganu	903	58428	36.9	33.03	40.93	1457	95259	60.1	55.96	64.19
Locality of school										
Urban	322	20391	38.8	32.95	45.07	490	30850	58.8	52.98	64.30
Rural	581	38037	35.9	31.13	41.03	967	64409	60.8	55.30	66.11
Sex										
Boys	409	28248	36.1	31.86	40.64	667	47414	60.6	55.77	65.32
Girls	494	30180	37.6	33.70	41.74	790	47845	59.7	55.35	63.83
Ethnicity										
Malay	900	58263	37.0	33.10	41.02	1451	94774	60.1	55.89	64.23
Chinese	2	104	24.6	5.19	66.09	4	320	75.4	33.91	94.81
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	60	17.3	1.20	78.21	2	165	47.3	26.68	68.90
School level										
Primary school	263	20452	34.2	26.96	42.19	486	38118	63.7	55.17	71.41
Secondary school	640	37976	38.5	34.58	42.68	971	57141	58.0	54.10	61.81
Class										
Standard 4	119	9103	45.1	28.38	63.08	154	10669	52.9	36.21	68.99
Standard 5	63	5297	26.7	21.31	32.95	168	14123	71.3	62.53	78.66
Standard 6	81	6052	30.4	22.11	40.29	164	13325	67.0	58.02	74.94
Form 1	109	7572	37.8	28.84	47.77	168	11623	58.1	49.79	65.95
Form 2	135	7447	38.1	30.47	46.39	215	11304	57.8	50.04	65.28
Form 3	169	8167	40.7	34.77	46.98	229	11260	56.2	49.91	62.22
Form 4	119	7468	38.6	30.64	47.21	187	11499	59.4	50.89	67.44
Form 5	108	7322	37.4	30.60	44.80	172	11456	58.6	52.45	64.41
School session										
Morning session	613	40276	36.7	32.71	40.98	1024	66370	60.6	55.97	64.96
Evening session	6	397	30.4	13.30	55.44	12	909	69.6	44.56	86.70
Morning and evening session	284	17755	37.6	31.63	43.92	419	27835	58.9	52.41	65.11
BMI-for-age status (BAZ)										
Thinness (<-2sd)	61	4096	39.3	33.01	45.93	89	6217	59.6	52.46	66.39
Normal (≥-2sd - ≤+1sd)	628	40375	38.5	34.48	42.62	942	61437	58.5	54.29	62.66
Overweight (>+1sd - ≤+2sd)	123	7886	33.1	27.89	38.87	234	14894	62.6	56.45	68.38
Obese (>+2sd)	91	6071	31.7	24.71	39.70	191	12645	66.1	58.14	73.24
Height-for-age status (HAZ)										
Stunting (<-2sd)	101	6497	40.7	33.29	48.50	140	9233	57.8	50.40	64.87
Normal (≥-2sd)	802	51931	36.5	32.00	41.19	1317	86026	60.4	55.55	65.08

Table 3.4.6 : 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	
Terengganu	73	4687	3.0	2.10	4.16
Locality of school					
Urban	21	1264	2.4	1.29	4.46
Rural	52	3423	3.2	2.17	4.80
Sex					
Boys	37	2520	3.2	1.95	5.29
Girls	36	2167	2.7	1.90	3.83
Ethnicity					
Malay	72	4563	2.9	2.02	4.13
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	124	35.4	14.22	64.43
School level					
Primary school	17	1291	2.2	1.25	3.70
Secondary school	56	3396	3.4	2.32	5.09
Class					
Standard 4	7	392	1.9	0.52	6.98
Standard 5	5	397	2.0	0.57	6.80
Standard 6	5	502	2.5	1.02	6.14
Form 1	13	814	4.1	1.64	9.76
Form 2	14	789	4.0	1.99	8.04
Form 3	12	624	3.1	1.28	7.39
Form 4	6	382	2.0	0.73	5.21
Form 5	11	786	4.0	2.04	7.77
School session					
Morning session	48	2962	2.7	1.73	4.20
Evening session					
Morning and evening session	24	1663	3.5	2.14	5.74
BMI-for-age status (BAZ)					
Thinness (<-2sd)	2	115	1.1	0.27	4.39
Normal (≥-2sd - ≤+1sd)	50	3147	3.0	2.00	4.48
Overweight (>+1sd - ≤+2sd)	14	1010	4.2	2.53	7.04
Obese (>+2sd)	7	416	2.2	1.09	4.30
Height-for-age status (HAZ)					
Stunting (<-2sd)	4	244	1.5	0.48	4.72
Normal (≥-2sd)	69	4443	3.1	2.23	4.35

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	
Terengganu	1163	78117	51.1	43.60	58.48	613	42030	27.5	21.22	34.77
Locality of school										
Urban	366	25229	49.4	31.88	67.06	205	13990	27.4	16.53	41.81
Rural	797	52888	51.9	45.39	58.36	408	28040	27.5	20.32	36.12
Sex										
Boys	516	37374	49.8	42.96	56.67	322	23034	30.7	24.09	38.21
Girls	647	40743	52.3	43.27	61.14	291	18996	24.4	17.65	32.64
Ethnicity										
Malay	1159	77748	51.0	43.58	58.46	611	41893	27.5	21.21	34.84
Chinese	2	204	48.0	11.22	87.10	2	137	32.4	5.23	80.58
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	2	165	73.2	15.07	97.69					
School level										
Primary school	354	28594	49.1	40.54	57.80	317	24200	41.6	34.78	48.74
Secondary school	809	49523	52.3	41.49	62.81	296	17831	18.8	14.30	24.34
Class										
Standard 4	119	9442	47.9	30.67	65.69	130	8791	44.6	27.72	62.87
Standard 5	113	9145	47.7	39.45	56.10	97	8246	43.0	36.41	49.90
Standard 6	122	10007	51.8	44.61	58.92	90	7162	37.1	31.70	42.79
Form 1	142	10160	53.1	42.25	63.74	62	4385	22.9	15.78	32.10
Form 2	177	9719	52.2	43.09	61.14	71	3944	21.2	14.43	29.97
Form 3	184	9361	48.3	32.73	64.22	72	3539	18.3	12.00	26.80
Form 4	169	10782	56.8	47.92	65.35	47	2819	14.9	9.82	21.86
Form 5	137	9501	50.8	34.37	67.11	44	3143	16.8	10.62	25.59
School session										
Morning session	853	57319	53.9	47.14	60.59	453	30065	28.3	22.06	35.48
Evening session	5	376	30.2	15.36	50.87	6	361	29.1	16.00	46.84
Morning and evening session	304	20363	44.9	33.10	57.39	153	11519	25.4	16.77	36.59
BMI-for-age status (BAZ)										
Thinness (<-2sd)	83	5779	56.4	47.80	64.59	48	3249	31.7	25.03	39.21
Normal (≥-2sd - ≤+1sd)	770	51459	50.8	42.37	59.13	399	27801	27.4	20.58	35.54
Overweight (>+1sd - ≤+2sd)	165	10794	47.7	37.65	57.99	92	6189	27.4	19.56	36.86
Obese (>+2sd)	145	10085	54.0	46.01	61.80	73	4726	25.3	18.00	34.33
Height-for-age status (HAZ)										
Stunting (<-2sd)	119	8138	52.4	39.38	65.06	61	4001	25.7	17.35	36.43
Normal (≥-2sd)	1044	69979	50.9	43.68	58.13	552	38029	27.7	21.37	35.00

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	
Terengganu	136	8320	5.4	3.81	7.71	377	20638	13.5	6.10	27.25
Locality of school										
Urban	69	4049	7.9	5.07	12.20	151	6724	13.2	1.47	60.67
Rural	67	4271	4.2	2.63	6.62	226	13914	13.7	7.63	23.24
Sex										
Boys	69	4573	6.1	4.15	8.86	129	7994	10.7	4.85	21.81
Girls	67	3747	4.8	3.03	7.54	248	12644	16.2	7.22	32.53
Ethnicity										
Malay	134	8237	5.4	3.80	7.65	377	20638	13.5	6.13	27.35
Chinese	2	83	19.6	2.56	69.42					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	57	3997	6.9	4.88	9.59	7	753	1.3	0.40	4.12
Secondary school	79	4323	4.6	2.57	7.97	370	19885	21.0	10.00	38.81
Class										
Standard 4	20	1264	6.4	3.55	11.32	2	139	0.7	0.10	4.97
Standard 5	12	997	5.2	4.09	6.61	4	530	2.8	0.57	12.40
Standard 6	25	1735	9.0	6.13	12.98	1	84	0.4	0.06	3.01
Form 1	10	615	3.2	1.41	7.16	57	3618	18.9	8.52	36.89
Form 2	19	896	4.8	1.84	11.99	70	3478	18.7	8.99	34.79
Form 3	22	1107	5.7	2.85	11.11	110	4951	25.6	11.68	47.10
Form 4	14	788	4.2	1.73	9.64	61	3494	18.4	9.43	32.89
Form 5	14	918	4.9	2.92	8.16	72	4344	23.2	8.88	48.49
School session										
Morning session	107	6254	5.9	4.01	8.56	180	10213	9.6	4.60	19.00
Evening session	1	78	6.3	1.47	23.09	5	428	34.4	14.76	61.39
Morning and evening session	28	1988	4.4	2.47	7.67	192	9997	22.1	8.23	47.20
BMI-for-age status (BAZ)										
Thinness (<-2sd)	7	486	4.7	2.70	8.19	2	122	1.2	0.24	5.67
Normal (≥-2sd - ≤+1sd)	92	5655	5.6	3.77	8.18	269	14445	14.3	6.55	28.26
Overweight (>+1sd - ≤+2sd)	23	1387	6.1	3.46	10.63	65	3619	16.0	6.42	34.61
Obese (>+2sd)	14	792	4.2	2.24	7.89	41	2452	13.1	5.32	28.90
Height-for-age status (HAZ)										
Stunting (<-2sd)	13	776	5.0	2.85	8.62	40	2243	14.4	6.13	30.37
Normal (≥-2sd)	123	7544	5.5	3.79	7.89	337	18395	13.4	6.04	27.07

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
Terengganu	61	3861	2.5	1.63	3.88
Locality of school					
Urban	20	1087	2.1	0.78	5.64
Rural	41	2774	2.7	1.73	4.26
Sex					
Boys	32	2054	2.7	1.46	5.08
Girls	29	1807	2.3	1.38	3.88
Ethnicity					
Malay	60	3801	2.5	1.62	3.82
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	60	26.8	2.31	84.93
School level					
Primary school	10	644	1.1	0.49	2.50
Secondary school	51	3217	3.4	2.24	5.11
Class					
Standard 4	1	66	0.3	0.05	2.38
Standard 5	3	248	1.3	0.53	3.12
Standard 6	6	330	1.7	0.47	5.98
Form 1	5	341	1.8	0.70	4.47
Form 2	11	587	3.2	0.88	10.66
Form 3	9	419	2.2	1.25	3.71
Form 4	15	1084	5.7	2.52	12.43
Form 5	11	786	4.2	2.28	7.62
School session					
Morning session	39	2424	2.3	1.36	3.81
Evening session					
Morning and evening session	22	1437	3.2	1.65	6.03
BMI-for-age status (BAZ)					
Thinness (<-2sd)	9	614	6.0	2.91	11.96
Normal (≥-2sd - ≤+1sd)	33	2000	2.0	1.15	3.36
Overweight (>+1sd - ≤+2sd)	11	629	2.8	1.19	6.37
Obese (>+2sd)	8	618	3.3	1.91	5.68
Height-for-age status (HAZ)					
Stunting (<-2sd)	5	380	2.4	0.76	7.60
Normal (≥-2sd)	56	3481	2.5	1.70	3.75

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	
Terengganu	186	12272	13.8	11.17	16.94	669	44821	50.4	46.08	54.72
Locality of school										
Urban	66	3998	13.6	8.72	20.66	236	15395	52.5	43.80	60.97
Rural	120	8273	13.9	11.02	17.35	433	29426	49.4	44.78	54.00
Sex										
Boys	107	7453	16.3	13.15	20.12	288	21491	47.1	41.63	52.67
Girls	79	4819	11.1	7.72	15.77	381	23330	53.9	49.30	58.35
Ethnicity										
Malay	185	12148	13.7	11.15	16.82	666	44461	50.3	46.05	54.53
Chinese						2	236	85.0	27.84	98.82
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	124	50.0	50.00	50.00	1	124	50.0	50.00	50.00
School level										
Primary school	71	5487	15.0	10.81	20.47	250	20050	54.9	47.69	61.84
Secondary school	115	6785	13.0	9.91	16.76	419	24771	47.3	42.79	51.82
Class										
Standard 4	22	1427	14.4	8.43	23.49	71	5111	51.5	36.91	65.91
Standard 5	28	2462	18.2	12.65	25.60	91	7749	57.4	47.28	66.98
Standard 6	21	1597	12.2	6.83	20.73	88	7190	54.7	44.01	65.05
Form 1	12	817	7.9	4.46	13.59	77	5387	52.0	44.18	59.80
Form 2	23	1230	11.6	6.90	18.84	107	5735	54.1	41.94	65.78
Form 3	33	1667	16.4	12.03	21.87	93	4554	44.7	37.49	52.17
Form 4	24	1459	13.7	9.27	19.92	79	4927	46.4	39.42	53.58
Form 5	23	1612	15.2	9.45	23.42	63	4168	39.2	31.15	47.86
School session										
Morning session	143	8972	14.6	11.82	17.91	456	30472	49.6	44.24	54.99
Evening session	3	316	37.7	12.98	70.99	6	401	47.8	21.37	75.54
Morning and evening session	40	2984	11.3	7.47	16.67	206	13862	52.4	48.54	56.20
BMI-for-age status (BAZ)										
Thinness (<-2sd)	12	811	14.2	9.11	21.35	53	3676	64.2	51.58	75.17
Normal (≥-2sd - ≤+1sd)	128	8391	14.6	11.99	17.69	453	30396	52.9	48.04	57.76
Overweight (>+1sd - ≤+2sd)	24	1577	11.1	7.17	16.68	90	5734	40.2	32.93	47.94
Obese (>+2sd)	22	1493	13.0	8.13	20.26	72	4948	43.2	34.52	52.36
Height-for-age status (HAZ)										
Stunting (<-2sd)	19	1344	15.7	10.63	22.52	72	4799	56.0	48.31	63.40
Normal (≥-2sd)	167	10928	13.6	10.88	16.87	597	40022	49.8	45.21	54.40

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	
Terengganu	220	14433	16.2	13.99	18.75	120	7571	8.5	6.69	10.78
Locality of school										
Urban	66	4414	15.0	12.61	17.85	35	2042	7.0	4.67	10.25
Rural	154	10019	16.8	13.77	20.37	85	5529	9.3	7.02	12.17
Sex										
Boys	113	7726	16.9	14.14	20.16	45	3239	7.1	5.36	9.35
Girls	107	6707	15.5	12.38	19.20	75	4331	10.0	7.30	13.55
Ethnicity										
Malay	220	14433	16.3	14.07	18.87	119	7529	8.5	6.69	10.78
Chinese						1	42	15.0	1.18	72.16
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	63	5205	14.2	11.60	17.37	25	2083	5.7	4.49	7.20
Secondary school	157	9228	17.6	14.59	21.11	95	5488	10.5	8.11	13.44
Class										
Standard 4	26	1892	19.1	14.34	24.95	9	561	5.7	2.61	11.83
Standard 5	13	1238	9.2	5.25	15.56	7	587	4.3	1.88	9.76
Standard 6	24	2074	15.8	12.09	20.36	9	935	7.1	3.66	13.39
Form 1	22	1590	15.4	9.14	24.65	16	1154	11.1	6.45	18.58
Form 2	36	1820	17.2	10.79	26.19	14	653	6.2	3.44	10.80
Form 3	41	2020	19.8	13.50	28.17	18	847	8.3	4.09	16.17
Form 4	25	1518	14.3	9.16	21.66	29	1707	16.1	10.59	23.67
Form 5	33	2280	21.4	14.24	30.96	18	1126	10.6	5.73	18.76
School session										
Morning session	159	10605	17.3	14.35	20.63	84	5094	8.3	6.04	11.28
Evening session	1	53	6.3	0.83	34.71					
Morning and evening session	60	3775	14.3	10.01	19.92	35	2416	9.1	7.02	11.80
BMI-for-age status (BAZ)										
Thinness (<-2sd)	14	993	17.3	10.38	27.55					
Normal (≥-2sd - ≤+1sd)	128	8181	14.2	11.55	17.45	66	4040	7.0	5.24	9.38
Overweight (>+1sd - ≤+2sd)	45	2992	21.0	14.63	29.14	34	2307	16.2	10.60	23.89
Obese (>+2sd)	33	2267	19.8	12.38	30.15	20	1224	10.7	7.51	14.99
Height-for-age status (HAZ)										
Stunting (<-2sd)	19	1215	14.2	10.11	19.51	6	324	3.8	1.37	10.03
Normal (≥-2sd)	201	13218	16.4	13.91	19.34	114	7247	9.0	7.13	11.34

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	
Terengganu	68	4561	5.1	3.82	6.86	85	5276	5.9	4.14	8.43
Locality of school										
Urban	26	1545	5.3	2.95	9.21	33	1954	6.7	3.46	12.42
Rural	42	3016	5.1	3.62	7.04	52	3322	5.6	3.64	8.45
Sex										
Boys	42	2906	6.4	4.56	8.84	40	2800	6.1	4.03	9.25
Girls	26	1655	3.8	2.41	6.00	45	2476	5.7	3.83	8.46
Ethnicity										
Malay	68	4561	5.2	3.85	6.89	85	5276	6.0	4.18	8.46
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	32	2323	6.4	4.06	9.82	19	1398	3.8	2.22	6.51
Secondary school	36	2238	4.3	3.13	5.81	66	3878	7.4	5.01	10.81
Class										
Standard 4	11	687	6.9	2.21	19.66	4	238	2.4	0.76	7.34
Standard 5	13	962	7.1	4.13	12.03	7	495	3.7	1.74	7.56
Standard 6	8	674	5.1	2.83	9.12	8	665	5.1	2.22	11.14
Form 1	11	752	7.3	4.57	11.36	10	653	6.3	3.67	10.63
Form 2	12	696	6.6	3.49	12.01	10	468	4.4	1.85	10.16
Form 3	5	241	2.4	0.86	6.32	17	856	8.4	4.30	15.76
Form 4	2	118	1.1	0.32	3.81	13	882	8.3	5.11	13.25
Form 5	6	430	4.0	1.76	9.01	16	1019	9.6	4.59	18.91
School session										
Morning session	47	2971	4.8	3.47	6.71	50	3312	5.4	3.78	7.64
Evening session	1	70	8.3	1.82	30.55					
Morning and evening session	20	1520	5.7	3.51	9.26	34	1905	7.2	3.37	14.72
BMI-for-age status (BAZ)										
Thinness (<-2sd)	1	47	0.8	0.10	6.75	2	197	3.4	0.87	12.54
Normal (≥-2sd - ≤+1sd)	49	3312	5.8	4.24	7.80	50	3112	5.4	3.64	7.99
Overweight (>+1sd - ≤+2sd)	11	779	5.5	2.97	9.82	16	874	6.1	3.29	11.13
Obese (>+2sd)	7	423	3.7	1.81	7.39	17	1093	9.5	5.41	16.28
Height-for-age status (HAZ)										
Stunting (<-2sd)	8	506	5.9	2.67	12.53	5	383	4.5	1.29	14.40
Normal (≥-2sd)	60	4055	5.0	3.64	6.96	80	4893	6.1	4.28	8.60

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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	
Terengganu	849	54315	34.3	30.77	38.08	1485	97361	61.5	57.96	65.00
Locality of school										
Urban	335	21011	40.1	35.94	44.32	473	29735	56.7	52.73	60.57
Rural	514	33304	31.5	27.58	35.69	1012	67626	64.0	59.77	67.93
Sex										
Boys	436	29689	37.9	32.98	43.18	639	45822	58.6	53.21	63.74
Girls	413	24627	30.8	27.41	34.40	846	51539	64.5	61.10	67.67
Ethnicity										
Malay	843	53943	34.3	30.64	38.09	1482	97083	61.7	57.99	65.22
Chinese	3	146	34.4	7.37	77.62	3	278	65.6	22.38	92.63
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	3	226	64.6	35.57	85.78					
School level										
Primary school	254	19523	32.6	26.09	39.88	480	37599	62.8	55.29	69.75
Secondary school	595	34792	35.4	31.47	39.50	1005	59763	60.8	57.22	64.23
Class										
Standard 4	111	8256	41.2	27.13	56.84	149	10327	51.5	34.37	68.30
Standard 5	65	5361	27.0	19.79	35.60	165	13844	69.6	62.21	76.17
Standard 6	78	5905	29.6	24.11	35.79	166	13428	67.3	61.46	72.73
Form 1	93	6209	31.1	24.12	39.09	186	12983	65.1	57.59	71.86
Form 2	136	7339	37.7	30.71	45.21	214	11472	58.9	52.82	64.73
Form 3	163	7852	39.2	33.27	45.54	234	11565	57.8	52.26	63.12
Form 4	106	6624	34.4	27.94	41.40	188	11638	60.4	53.69	66.66
Form 5	97	6768	34.5	29.49	39.93	183	12105	61.7	57.09	66.18
School session										
Morning session	570	37056	33.8	30.68	37.12	1047	68067	62.1	58.59	65.55
Evening session	5	261	20.0	5.92	49.81	13	1045	80.0	50.19	94.08
Morning and evening session	274	16998	36.1	29.19	43.56	422	28044	59.5	53.43	65.29
BMI-for-age status (BAZ)										
Thinness (<-2sd)	64	4265	41.4	32.26	51.09	83	5706	55.3	46.99	63.37
Normal (≥-2sd - ≤+1sd)	608	38625	36.8	32.33	41.60	951	62267	59.4	54.81	63.82
Overweight (>+1sd - ≤+2sd)	99	6335	26.6	21.28	32.59	256	16341	68.5	62.88	73.62
Obese (>+2sd)	77	5025	26.3	21.27	31.95	195	13049	68.2	61.95	73.86
Height-for-age status (HAZ)										
Stunting (<-2sd)	85	5444	34.1	27.02	41.92	152	9970	62.4	54.84	69.42
Normal (≥-2sd)	764	48871	34.4	30.55	38.39	1333	87391	61.4	57.45	65.30

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	
Terengganu	96	6523	4.1	3.04	5.57
Locality of school					
Urban	25	1705	3.3	1.82	5.75
Rural	71	4818	4.6	3.20	6.45
Sex					
Boys	38	2723	3.5	2.32	5.20
Girls	58	3800	4.8	3.48	6.46
Ethnicity					
Malay	95	6399	4.1	3.04	5.42
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	124	35.4	14.22	64.43
School level					
Primary school	33	2745	4.6	2.58	8.02
Secondary school	63	3778	3.8	2.81	5.24
Class					
Standard 4	19	1465	7.3	4.12	12.64
Standard 5	7	674	3.4	1.13	9.73
Standard 6	7	606	3.0	1.45	6.24
Form 1	10	763	3.8	2.22	6.52
Form 2	13	665	3.4	1.69	6.78
Form 3	12	597	3.0	1.74	5.06
Form 4	17	1020	5.3	3.58	7.76
Form 5	11	733	3.7	1.71	8.00
School session					
Morning session	68	4430	4.0	3.00	5.44
Evening session					
Morning and evening session	28	2093	4.4	2.85	6.86
BMI-for-age status (BAZ)					
Thinness (<-2sd)	4	342	3.3	0.84	12.12
Normal (≥-2sd - ≤+1sd)	58	3941	3.8	2.64	5.33
Overweight (>+1sd - ≤+2sd)	17	1181	4.9	2.84	8.49
Obese (>+2sd)	17	1059	5.5	3.44	8.78
Height-for-age status (HAZ)					
Stunting (<-2sd)	8	561	3.5	1.71	7.06
Normal (≥-2sd)	88	5962	4.2	2.98	5.86

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	
Terengganu	1577	105854	70.5	60.75	78.74	256	16979	11.3	8.78	14.47
Locality of school										
Urban	500	34191	68.1	43.19	85.69	121	7514	15.0	9.95	21.88
Rural	1077	71663	71.8	63.49	78.79	135	9465	9.5	7.31	12.20
Sex										
Boys	731	52380	70.3	62.37	77.11	142	10115	13.6	10.82	16.88
Girls	846	53474	70.8	58.63	80.58	114	6864	9.1	6.32	12.89
Ethnicity										
Malay	1570	105327	70.5	60.69	78.70	255	16916	11.3	8.77	14.49
Chinese	5	361	85.2	31.93	98.60	1	63	14.8	1.40	68.07
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	2	165	73.2	15.07	97.69					
School level										
Primary school	586	45633	80.9	78.31	83.29	100	7743	13.7	11.32	16.56
Secondary school	991	60221	64.3	50.73	75.88	156	9236	9.9	6.53	14.62
Class										
Standard 4	213	15336	84.0	79.10	87.89	35	2382	13.0	8.53	19.43
Standard 5	175	14352	75.6	69.09	81.12	33	3017	15.9	9.76	24.81
Standard 6	198	15945	83.3	79.29	86.65	32	2344	12.2	8.74	16.91
Form 1	189	13346	70.2	55.74	81.57	19	1299	6.8	4.28	10.74
Form 2	230	12623	68.0	56.13	77.86	29	1509	8.1	3.49	17.80
Form 3	222	11189	57.9	41.36	72.88	46	2257	11.7	7.72	17.31
Form 4	194	12226	67.4	56.95	76.29	26	1645	9.1	5.73	14.04
Form 5	156	10837	58.1	39.17	74.96	36	2526	13.6	8.11	21.77
School session										
Morning session	1154	76680	73.6	66.58	79.65	201	12794	12.3	9.66	15.50
Evening session	11	731	56.0	35.28	74.76	2	209	16.0	2.96	54.41
Morning and evening session	410	28322	63.8	45.14	79.00	52	3891	8.8	5.77	13.08
BMI-for-age status (BAZ)										
Thinness (<-2sd)	119	8065	82.7	73.23	89.36	17	1248	12.8	7.25	21.61
Normal (≥-2sd - ≤+1sd)	1038	69642	69.7	59.44	78.33	168	11344	11.4	8.82	14.51
Overweight (>+1sd - ≤+2sd)	232	15362	68.0	55.95	78.12	43	2661	11.8	7.48	18.08
Obese (>+2sd)	187	12718	71.5	59.12	81.34	28	1727	9.7	6.24	14.80
Height-for-age status (HAZ)										
Stunting (<-2sd)	168	11247	73.4	61.52	82.68	27	1841	12.0	7.41	18.91
Normal (≥-2sd)	1409	94607	70.2	60.37	78.47	229	15138	11.2	8.63	14.50

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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	
Terengganu	399	21976	14.6	6.86	28.55	78	5263	3.5	2.79	4.40
Locality of school										
Urban	154	6953	13.8	1.69	60.08	25	1558	3.1	2.25	4.27
Rural	245	15023	15.0	8.37	25.55	53	3704	3.7	2.78	4.93
Sex										
Boys	144	8787	11.8	5.54	23.32	45	3267	4.4	3.27	5.85
Girls	255	13188	17.5	8.06	33.81	33	1996	2.6	2.09	3.33
Ethnicity										
Malay	399	21976	14.7	6.89	28.66	77	5202	3.5	2.76	4.38
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						1	60	26.8	2.31	84.93
School level										
Primary school	9	710	1.3	0.64	2.47	29	2304	4.1	3.05	5.46
Secondary school	390	21266	22.7	11.30	40.36	49	2959	3.2	2.29	4.34
Class										
Standard 4	2	139	0.8	0.11	5.22	6	406	2.2	0.90	5.42
Standard 5	3	280	1.5	0.46	4.63	16	1336	7.0	4.44	10.98
Standard 6	4	292	1.5	0.53	4.28	7	562	2.9	1.93	4.44
Form 1	58	3699	19.5	9.12	36.81	10	655	3.4	1.65	7.06
Form 2	77	3928	21.1	10.76	37.36	10	513	2.8	1.33	5.66
Form 3	114	5209	27.0	12.60	48.60	13	662	3.4	2.05	5.67
Form 4	64	3769	20.8	11.27	35.09	8	511	2.8	1.54	5.08
Form 5	77	4661	25.0	9.83	50.48	8	617	3.3	1.53	7.03
School session										
Morning session	198	11616	11.2	5.83	20.31	49	3048	2.9	2.17	3.93
Evening session	4	274	21.0	8.36	43.51	1	92	7.1	1.56	26.71
Morning and evening session	197	10086	22.7	8.17	49.24	28	2123	4.8	3.26	6.96
BMI-for-age status (BAZ)										
Thinness (<-2sd)	3	168	1.7	0.51	5.62	4	267	2.7	1.02	7.13
Normal (≥-2sd - ≤+1sd)	283	15240	15.3	7.19	29.50	55	3671	3.7	2.83	4.76
Overweight (>+1sd - ≤+2sd)	67	3745	16.6	6.97	34.53	12	809	3.6	1.94	6.53
Obese (>+2sd)	46	2823	15.9	6.76	32.95	7	516	2.9	1.23	6.67
Height-for-age status (HAZ)										
Stunting (<-2sd)	36	1956	12.8	5.11	28.45	5	274	1.8	0.74	4.24
Normal (≥-2sd)	363	20020	14.9	7.01	28.77	73	4989	3.7	2.91	4.70

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	
Terengganu	187	12534	13.5	10.90	16.50	739	49417	53.0	48.75	57.28
Locality of school										
Urban	57	3665	13.1	9.30	18.04	233	15151	54.0	46.55	61.25
Rural	130	8869	13.6	10.47	17.54	506	34266	52.6	47.42	57.79
Sex										
Boys	96	7009	16.1	12.96	19.93	309	22398	51.6	45.91	57.24
Girls	91	5525	11.1	8.16	14.94	430	27019	54.3	49.95	58.59
Ethnicity										
Malay	186	12372	13.3	10.72	16.48	737	49219	53.1	48.78	57.29
Chinese	1	162	58.3	8.86	95.25	1	74	26.8	2.22	85.48
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						1	124	100.0	100.00	100.00
School level										
Primary school	65	5214	14.0	9.93	19.49	281	22041	59.4	54.26	64.28
Secondary school	122	7320	13.1	10.04	16.82	458	27376	48.8	44.19	53.53
Class										
Standard 4	25	1786	17.1	11.29	25.18	85	5932	57.0	52.91	60.90
Standard 5	23	1905	14.3	7.35	26.12	93	7976	60.1	50.45	68.95
Standard 6	17	1524	11.3	8.63	14.78	103	8134	60.6	54.71	66.13
Form 1	22	1646	15.0	10.03	21.77	80	5515	50.2	43.69	56.63
Form 2	25	1370	12.3	8.31	17.71	107	5741	51.4	44.34	58.33
Form 3	34	1668	15.7	9.72	24.44	100	5009	47.2	37.75	56.89
Form 4	16	1070	9.3	4.75	17.29	92	5636	48.8	41.57	56.10
Form 5	25	1566	13.4	8.67	20.05	79	5476	46.7	37.83	55.85
School session										
Morning session	137	8983	13.9	11.07	17.35	516	34055	52.7	47.01	58.42
Evening session	2	172	16.4	4.05	47.82	2	218	20.8	3.10	68.46
Morning and evening session	48	3380	12.4	8.69	17.27	220	15059	55.0	48.64	61.29
BMI-for-age status (BAZ)										
Thinness (<-2sd)	11	673	12.1	5.55	24.39	44	3117	56.1	45.67	65.96
Normal (≥-2sd - ≤+1sd)	126	8416	14.3	10.95	18.38	504	33592	56.9	51.34	62.36
Overweight (>+1sd - ≤+2sd)	26	1732	10.7	6.77	16.41	109	7058	43.5	36.23	51.00
Obese (>+2sd)	24	1712	13.8	8.71	21.28	82	5649	45.7	39.71	51.75
Height-for-age status (HAZ)										
Stunting (<-2sd)	17	1230	12.8	8.84	18.18	79	5199	54.1	45.90	62.03
Normal (≥-2sd)	170	11304	13.5	10.89	16.69	660	44218	52.9	48.32	57.47

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	
Terengganu	125	8487	9.1	7.34	11.25	235	14776	15.9	12.24	20.30
Locality of school										
Urban	46	3102	11.1	7.63	15.76	70	4081	14.5	8.99	22.66
Rural	79	5385	8.3	6.57	10.37	165	10695	16.4	12.08	21.95
Sex										
Boys	61	4775	11.0	7.89	15.13	71	4882	11.2	7.78	15.99
Girls	64	3711	7.5	5.78	9.58	164	9894	19.9	15.71	24.84
Ethnicity										
Malay	125	8487	9.1	7.36	11.32	234	14734	15.9	12.28	20.29
Chinese						1	42	15.0	1.18	72.16
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	48	4021	10.8	7.88	14.72	32	2813	7.6	5.06	11.21
Secondary school	77	4465	8.0	6.28	10.06	203	11963	21.3	18.78	24.16
Class										
Standard 4	15	1098	10.5	5.71	18.66	7	488	4.7	1.66	12.49
Standard 5	17	1667	12.6	7.87	19.43	9	920	6.9	3.93	11.93
Standard 6	16	1256	9.4	5.14	16.42	16	1405	10.5	6.41	16.63
Form 1	13	851	7.7	4.02	14.42	29	2112	19.2	12.19	28.95
Form 2	25	1363	12.2	8.10	17.96	32	1643	14.7	9.95	21.18
Form 3	19	886	8.4	5.35	12.80	45	2160	20.4	15.35	26.49
Form 4	5	326	2.8	1.14	6.83	57	3553	30.8	25.40	36.72
Form 5	15	1039	8.9	6.68	11.68	40	2495	21.3	14.49	30.17
School session										
Morning session	89	6040	9.4	7.30	11.91	164	10285	15.9	12.17	20.58
Evening session	3	219	21.0	7.09	47.91	3	182	17.4	8.18	33.36
Morning and evening session	33	2228	8.1	5.90	11.14	67	4248	15.5	10.78	21.85
BMI-for-age status (BAZ)										
Thinness (<-2sd)	14	985	17.7	11.96	25.44	3	294	5.3	1.76	14.82
Normal (≥-2sd - ≤+1sd)	78	5379	9.1	6.93	11.91	116	6942	11.8	8.74	15.66
Overweight (>+1sd - ≤+2sd)	21	1314	8.1	4.75	13.45	68	4438	27.3	19.96	36.19
Obese (>+2sd)	12	809	6.5	3.61	11.56	48	3102	25.1	16.63	35.96
Height-for-age status (HAZ)										
Stunting (<-2sd)	15	1095	11.4	7.53	16.85	22	1284	13.4	7.43	22.83
Normal (≥-2sd)	110	7392	8.8	6.88	11.30	213	13492	16.1	12.29	20.93

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	
Terengganu	29	1912	2.1	1.15	3.64	95	6041	6.5	5.20	8.05
Locality of school										
Urban	8	405	1.4	0.45	4.50	27	1660	5.9	4.72	7.38
Rural	21	1507	2.3	1.21	4.39	68	4382	6.7	5.04	8.94
Sex										
Boys	18	1290	3.0	1.62	5.38	44	3056	7.0	4.91	10.00
Girls	11	622	1.2	0.48	3.23	51	2986	6.0	4.43	8.07
Ethnicity										
Malay	29	1912	2.1	1.16	3.65	95	6041	6.5	5.23	8.08
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	15	1012	2.7	1.10	6.58	28	2024	5.5	3.94	7.50
Secondary school	14	900	1.6	0.86	2.97	67	4018	7.2	5.51	9.28
Class										
Standard 4	6	368	3.5	0.95	12.28	11	744	7.1	4.38	11.43
Standard 5	5	303	2.3	0.54	9.21	8	508	3.8	1.53	9.23
Standard 6	4	341	2.5	0.97	6.46	9	771	5.7	3.62	9.00
Form 1	3	235	2.1	0.52	8.34	8	634	5.8	2.73	11.76
Form 2	3	173	1.5	0.38	6.09	17	888	7.9	4.52	13.60
Form 3	4	211	2.0	0.59	6.45	13	675	6.4	3.41	11.58
Form 4	1	69	0.6	0.07	4.75	14	893	7.7	4.09	14.16
Form 5	3	212	1.8	0.62	5.21	15	928	7.9	4.55	13.45
School session										
Morning session	23	1436	2.2	1.36	3.61	59	3762	5.8	4.43	7.64
Evening session	1	70	6.7	1.76	22.04	2	185	17.7	4.62	48.83
Morning and evening session	5	406	1.5	0.45	4.77	33	2036	7.4	5.13	10.68
BMI-for-age status (BAZ)										
Thinness (<-2sd)	3	174	3.1	0.97	9.58	5	317	5.7	2.30	13.42
Normal (≥-2sd - ≤+1sd)	17	1144	1.9	0.95	3.94	54	3526	6.0	4.40	8.06
Overweight (>+1sd - ≤+2sd)	6	418	2.6	0.99	6.52	22	1276	7.9	5.66	10.81
Obese (>+2sd)	3	176	1.4	0.33	5.94	14	923	7.5	4.03	13.40
Height-for-age status (HAZ)										
Stunting (<-2sd)	5	279	2.9	1.02	7.96	8	528	5.5	2.74	10.68
Normal (≥-2sd)	24	1633	2.0	1.03	3.67	87	5514	6.6	5.23	8.30

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	
Terengganu	1603	103493	65.3	60.39	69.91	785	52056	32.8	28.28	37.77
Locality of school										
Urban	559	35269	67.1	62.25	71.60	258	16323	31.1	26.35	36.18
Rural	1044	68223	64.4	57.50	70.78	527	35733	33.7	27.47	40.64
Sex										
Boys	731	51038	65.1	59.81	70.02	362	25941	33.1	28.07	38.51
Girls	872	52454	65.5	60.37	70.32	423	26115	32.6	28.08	37.51
Ethnicity										
Malay	1596	103016	65.3	60.40	69.94	783	51820	32.9	28.29	37.77
Chinese	4	188	44.2	7.54	88.54	2	236	55.8	11.46	92.46
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	3	289	82.7	21.79	98.80					
School level										
Primary school	486	38196	63.8	54.82	71.93	267	20781	34.7	26.76	43.64
Secondary school	1117	65297	66.2	60.46	71.51	518	31275	31.7	26.45	37.49
Class										
Standard 4	192	14425	71.5	50.04	86.32	81	5291	26.2	12.60	46.74
Standard 5	131	10754	54.1	47.44	60.61	103	8951	45.0	37.83	52.44
Standard 6	163	13017	65.7	58.57	72.19	83	6539	33.0	25.91	40.97
Form 1	171	11876	59.4	50.27	67.84	108	7391	36.9	29.42	45.15
Form 2	263	14084	72.1	61.43	80.71	95	5158	26.4	18.18	36.66
Form 3	276	13417	66.9	59.76	73.30	126	6229	31.0	24.15	38.90
Form 4	206	12633	65.3	55.34	74.06	103	6491	33.5	25.22	43.05
Form 5	201	13288	67.6	55.71	77.52	86	6006	30.5	21.38	41.55
School session										
Morning session	1119	72190	65.8	61.44	69.94	535	35504	32.4	28.12	36.94
Evening session	9	659	50.4	20.54	79.99	9	648	49.6	20.01	79.46
Morning and evening session	473	30524	64.5	57.61	70.91	240	15819	33.5	27.19	40.36
BMI-for-age status (BAZ)										
Thinness (<-2sd)	104	6801	65.2	57.06	72.57	47	3575	34.3	26.64	42.85
Normal (≥-2sd - ≤+1sd)	1093	70565	67.2	61.42	72.57	495	32345	30.8	25.65	36.52
Overweight (>+1sd - ≤+2sd)	240	15349	64.2	58.02	69.93	126	8189	34.2	28.55	40.45
Obese (>+2sd)	165	10712	56.0	48.18	63.51	117	7947	41.5	33.77	49.75
Height-for-age status (HAZ)										
Stunting (<-2sd)	166	10702	67.0	59.26	73.91	72	4820	30.2	23.55	37.75
Normal (≥-2sd)	1437	92790	65.1	59.93	69.96	713	47236	33.1	28.39	38.27

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				
	Never (0 day)				
	Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper	
Terengganu	47	2933	1.9	1.34	2.55
Locality of school					
Urban	17	975	1.9	0.95	3.58
Rural	30	1958	1.8	1.31	2.61
Sex					
Boys	23	1437	1.8	1.14	2.94
Girls	24	1495	1.9	1.05	3.29
Ethnicity					
Malay	46	2872	1.8	1.30	2.54
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	60	17.3	1.20	78.21
School level					
Primary school	14	878	1.5	0.68	3.13
Secondary school	33	2054	2.1	1.56	2.78
Class					
Standard 4	7	448	2.2	0.80	5.99
Standard 5	3	174	0.9	0.25	3.02
Standard 6	4	257	1.3	0.47	3.50
Form 1	11	742	3.7	2.23	6.11
Form 2	6	298	1.5	0.43	5.24
Form 3	8	416	2.1	0.83	5.08
Form 4	3	224	1.2	0.44	3.00
Form 5	5	374	1.9	0.62	5.69
School session					
Morning session	32	1984	1.8	1.26	2.59
Evening session					
Morning and evening session	15	948	2.0	1.07	3.73
BMI-for-age status (BAZ)					
Thinness (<-2sd)	1	51	0.5	0.06	3.95
Normal (≥-2sd - ≤+1sd)	32	2035	1.9	1.28	2.92
Overweight (>+1sd - ≤+2sd)	7	373	1.6	0.64	3.76
Obese (>+2sd)	7	474	2.5	1.30	4.68
Height-for-age status (HAZ)					
Stunting (<-2sd)	7	452	2.8	1.40	5.64
Normal (≥-2sd)	40	2481	1.7	1.25	2.41

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	
Terengganu	289	21100	13.6	10.12	18.12	1883	120506	77.9	74.26	81.11
Locality of school										
Urban	119	9067	17.7	10.64	27.90	644	39146	76.3	68.53	82.63
Rural	170	12033	11.6	8.76	15.29	1239	81361	78.7	74.91	81.97
Sex										
Boys	128	10109	13.3	9.92	17.51	849	58864	77.2	72.13	81.61
Girls	161	10991	14.0	9.52	20.11	1034	61643	78.5	74.19	82.28
Ethnicity										
Malay	289	21100	13.7	10.15	18.24	1877	119918	77.8	74.24	81.08
Chinese						4	341	80.4	30.58	97.44
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						2	247	85.6	22.20	99.20
School level										
Primary school	155	12797	21.8	18.14	26.04	561	43192	73.7	69.37	77.59
Secondary school	134	8303	8.6	6.55	11.31	1322	77314	80.4	76.09	84.13
Class										
Standard 4	51	4033	20.6	15.04	27.63	209	14693	75.2	66.66	82.08
Standard 5	56	4507	22.9	18.66	27.88	167	14364	73.1	67.04	78.45
Standard 6	48	4257	21.9	13.95	32.69	185	14136	72.8	60.53	82.33
Form 1	31	2079	10.9	6.36	17.99	210	14631	76.5	69.48	82.40
Form 2	29	1605	8.4	5.57	12.45	295	15864	83.0	76.71	87.79
Form 3	24	1207	6.1	3.58	10.34	341	16767	85.3	78.62	90.22
Form 4	27	1598	8.4	4.65	14.65	260	16053	84.2	74.89	90.54
Form 5	23	1814	9.5	5.08	16.91	216	14000	72.9	59.25	83.31
School session										
Morning session	201	14432	13.5	9.78	18.32	1327	85156	79.6	75.49	83.15
Evening session	4	417	31.9	13.29	58.93	13	820	62.8	40.20	80.86
Morning and evening session	84	6251	13.5	8.73	20.35	540	34325	74.2	69.52	78.44
BMI-for-age status (BAZ)										
Thinness (<-2sd)	25	2040	19.7	11.39	31.79	115	7605	73.3	61.30	82.61
Normal (≥-2sd - ≤+1sd)	181	12847	12.6	9.46	16.53	1276	81715	80.0	76.69	82.90
Overweight (>+1sd - ≤+2sd)	41	3203	13.6	8.91	20.33	282	17653	75.2	69.08	80.44
Obese (>+2sd)	42	3009	16.1	11.05	22.94	209	13468	72.2	63.29	79.61
Height-for-age status (HAZ)										
Stunting (<-2sd)	32	2393	15.7	9.92	23.94	182	11580	75.9	69.13	81.63
Normal (≥-2sd)	257	18706	13.4	10.04	17.69	1701	108926	78.1	74.56	81.24

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
Terengganu	76	5296	3.4	2.28	5.11	73	4373	2.8	1.54	5.14
Locality of school										
Urban	19	1400	2.7	1.91	3.89	10	523	1.0	0.18	5.43
Rural	57	3895	3.8	2.21	6.35	63	3850	3.7	2.04	6.68
Sex										
Boys	29	1868	2.5	1.35	4.40	29	1868	2.5	1.35	4.40
Girls	44	2504	3.2	1.61	6.21	44	2504	3.2	1.61	6.21
Ethnicity										
Malay	76	5296	3.4	2.28	5.14	73	4373	2.8	1.55	5.16
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	23	1892	3.2	2.35	4.42	3	223	0.4	0.15	0.98
Secondary school	53	3403	3.5	1.93	6.42	70	4150	4.3	2.56	7.19
Class										
Standard 4	8	617	3.2	1.69	5.83	1	70	0.4	0.05	2.55
Standard 5	7	589	3.0	1.41	6.25	1	70	0.4	0.06	2.23
Standard 6	8	685	3.5	2.48	4.99	1	84	0.4	0.06	3.03
Form 1	12	780	4.1	1.78	9.06	15	1050	5.5	2.70	10.87
Form 2	5	242	1.3	0.48	3.30	16	880	4.6	2.12	9.71
Form 3	10	479	2.4	1.23	4.78	18	778	4.0	1.78	8.57
Form 4	4	259	1.4	0.59	3.08	9	603	3.2	1.32	7.38
Form 5	22	1643	8.6	4.03	17.27	12	838	4.4	1.59	11.45
School session										
Morning session	46	3044	2.8	1.45	5.51	37	2172	2.0	1.01	4.04
Evening session										
Morning and evening session	30	2252	4.9	3.38	6.97	36	2201	4.8	2.35	9.39
BMI-for-age status (BAZ)										
Thinness (<-2sd)	8	569	5.5	3.19	9.26					
Normal (≥-2sd - ≤+1sd)	42	3018	3.0	2.05	4.24	47	2662	2.6	1.45	4.63
Overweight (>+1sd - ≤+2sd)	17	1102	4.7	2.27	9.45	17	1098	4.7	2.05	10.32
Obese (>+2sd)	9	607	3.3	1.51	6.86	9	613	3.3	0.96	10.61
Height-for-age status (HAZ)										
Stunting (<-2sd)	12	753	4.9	2.44	9.75	5	260	1.7	0.51	5.61
Normal (≥-2sd)	64	4542	3.3	2.15	4.91	68	4112	2.9	1.62	5.32

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
Terengganu	56	3479	2.2	1.36	3.70
Locality of school					
Urban	21	1174	2.3	1.00	5.13
Rural	35	2305	2.2	1.18	4.17
Sex					
Boys	30	2011	2.6	1.36	5.07
Girls	26	1467	1.9	1.12	3.10
Ethnicity					
Malay	53	3354	2.2	1.36	3.46
Chinese	2	83	19.6	2.56	69.42
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	42	14.4	0.80	77.80
School level					
Primary school	6	512	0.9	0.53	1.43
Secondary school	50	2967	3.1	1.85	5.10
Class					
Standard 4	2	135	0.7	0.09	4.88
Standard 5	2	113	0.6	0.18	1.80
Standard 6	2	264	1.4	0.40	4.48
Form 1	9	573	3.0	1.28	6.84
Form 2	11	534	2.8	1.15	6.61
Form 3	9	414	2.1	0.82	5.34
Form 4	8	545	2.9	1.47	5.47
Form 5	13	901	4.7	1.42	14.39
School session					
Morning session	34	2194	2.1	1.25	3.35
Evening session	1	70	5.3	1.19	20.78
Morning and evening session	21	1215	2.6	1.19	5.68
BMI-for-age status (BAZ)					
Thinness (<-2sd)	3	163	1.6	0.46	5.23
Normal (≥-2sd - ≤+1sd)	32	1934	1.9	1.04	3.42
Overweight (>+1sd - ≤+2sd)	8	421	1.8	0.79	4.03
Obese (>+2sd)	13	961	5.2	2.67	9.71
Height-for-age status (HAZ)					
Stunting (<-2sd)	4	264	1.7	0.61	4.78
Normal (≥-2sd)	52	3215	2.3	1.34	3.94

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	
Terengganu	748	49699	31.4	27.68	35.30	1493	96194	60.7	56.23	65.00
Locality of school										
Urban	252	17258	32.8	25.43	41.19	525	31971	60.8	52.14	68.87
Rural	496	32441	30.6	26.84	34.71	968	64223	60.6	55.48	65.58
Sex										
Boys	378	26120	33.3	28.92	38.07	665	47224	60.3	55.19	65.16
Girls	370	23579	29.4	24.85	34.46	828	48971	61.1	55.33	66.61
Ethnicity										
Malay	747	49636	31.5	27.74	35.47	1489	95793	60.7	56.23	65.08
Chinese	1	63	14.8	1.40	68.07	3	278	65.6	22.38	92.63
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						1	124	35.4	14.22	64.43
School level										
Primary school	224	18208	30.4	23.18	38.78	498	38072	63.6	56.15	70.46
Secondary school	524	31491	31.9	28.20	35.92	995	58122	58.9	53.52	64.15
Class										
Standard 4	101	8137	40.4	25.66	57.01	162	11002	54.6	39.98	68.40
Standard 5	59	5087	25.6	17.71	35.46	164	13597	68.4	61.79	74.33
Standard 6	64	4985	25.2	20.37	30.64	172	13474	68.0	61.11	74.18
Form 1	90	6084	30.5	23.76	38.21	176	12146	60.9	53.73	67.63
Form 2	118	6420	32.9	26.58	39.81	209	11044	56.5	48.34	64.36
Form 3	129	6303	31.3	26.88	36.18	241	11715	58.2	52.19	64.06
Form 4	108	6939	35.9	29.79	42.43	181	10933	56.5	48.69	64.01
Form 5	79	5744	29.2	22.15	37.43	188	12285	62.5	54.27	70.00
School session										
Morning session	520	34875	31.8	27.58	36.34	1027	66179	60.3	55.21	65.27
Evening session	5	341	26.1	7.26	61.51	13	965	73.9	38.49	92.74
Morning and evening session	222	14421	30.5	25.86	35.55	451	28906	61.1	55.90	66.09
BMI-for-age status (BAZ)										
Thinness (<-2sd)	48	3368	32.3	26.58	38.59	5	296	2.8	1.23	6.42
Normal (≥-2sd - ≤+1sd)	529	35249	33.6	28.67	38.86	117	7575	7.2	5.72	9.07
Overweight (>+1sd - ≤+2sd)	100	6388	26.8	21.56	32.76	28	1813	7.6	4.80	11.83
Obese (>+2sd)	70	4629	24.2	19.69	29.35	44	2893	15.1	9.57	23.06
Height-for-age status (HAZ)										
Stunting (<-2sd)	22	1512	9.5	5.83	15.00	90	5969	37.4	30.71	44.54
Normal (≥-2sd)	172	11064	7.8	5.95	10.08	658	43730	30.7	26.71	34.98

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	
Terengganu	194	12576	7.9	6.10	10.26
Locality of school					
Urban	57	3337	6.3	3.64	10.85
Rural	137	9239	8.7	6.61	11.43
Sex					
Boys	73	5000	6.4	4.91	8.25
Girls	121	7576	9.5	6.71	13.17
Ethnicity					
Malay	189	12267	7.8	6.00	10.03
Chinese	2	83	19.6	2.56	69.42
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	3	226	64.6	35.57	85.78
School level					
Primary school	45	3577	6.0	4.03	8.78
Secondary school	149	8999	9.1	6.75	12.22
Class					
Standard 4	17	1025	5.1	2.90	8.75
Standard 5	14	1195	6.0	2.81	12.39
Standard 6	14	1357	6.8	3.55	12.80
Form 1	23	1714	8.6	4.83	14.84
Form 2	37	2076	10.6	5.99	18.14
Form 3	41	2095	10.4	7.11	15.01
Form 4	23	1476	7.6	4.61	12.38
Form 5	25	1638	8.3	4.96	13.65
School session					
Morning session	139	8609	7.9	5.97	10.25
Evening session					
Morning and evening session	55	3967	8.4	5.36	12.89
BMI-for-age status (BAZ)					
Thinness (<-2sd)	99	6764	64.9	57.73	71.40
Normal (≥-2sd - ≤+1sd)	975	62174	59.2	53.25	64.92
Overweight (>+1sd - ≤+2sd)	244	15645	65.6	58.65	71.96
Obese (>+2sd)	175	11611	60.7	54.12	66.89
Height-for-age status (HAZ)					
Stunting (<-2sd)	133	8494	53.2	45.23	60.95
Normal (≥-2sd)	1360	87701	61.5	56.85	66.04

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	
Terengganu	1301	87190	60.0	51.65	67.89	337	23633	16.3	11.49	22.54
Locality of school										
Urban	400	27809	57.0	36.61	75.25	129	8927	18.3	9.69	31.84
Rural	901	59381	61.6	54.58	68.16	208	14706	15.3	10.16	22.28
Sex										
Boys	591	42237	57.9	50.27	65.08	189	13819	18.9	13.59	25.73
Girls	710	44953	62.3	51.99	71.54	148	9814	13.6	8.80	20.42
Ethnicity										
Malay	1298	86862	60.0	51.65	67.83	335	23496	16.2	11.42	22.55
Chinese	2	204	59.7	12.61	93.85	2	137	40.3	6.15	87.39
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	124	100.0	100.00	100.00					
School level										
Primary school	449	35428	63.5	55.42	70.86	204	15531	27.8	22.09	34.41
Secondary school	852	51761	57.9	45.59	69.30	133	8102	9.1	6.07	13.33
Class										
Standard 4	160	12061	63.7	49.01	76.23	78	5416	28.6	17.93	42.37
Standard 5	134	11218	60.6	50.26	70.00	74	5950	32.1	25.31	39.78
Standard 6	155	12149	66.2	62.41	69.84	52	4166	22.7	18.66	27.34
Form 1	158	11123	61.0	48.76	72.02	38	2703	14.8	8.70	24.13
Form 2	195	10544	60.6	48.53	71.42	28	1630	9.4	4.94	17.04
Form 3	184	9343	52.0	34.85	68.62	39	1917	10.7	5.95	18.38
Form 4	179	11225	63.0	52.42	72.44	14	860	4.8	3.01	7.64
Form 5	136	9527	53.0	36.29	69.14	14	992	5.5	2.67	11.07
School session										
Morning session	956	63928	63.6	56.62	70.04	244	16536	16.4	11.78	22.51
Evening session	6	437	35.6	18.50	57.45	6	438	35.7	15.52	62.72
Morning and evening session	337	22704	52.5	37.85	66.72	86	6574	15.2	9.00	24.53
BMI-for-age status (BAZ)										
Thinness (<-2sd)	93	6368	64.1	54.86	72.46	31	2218	22.3	14.44	32.90
Normal (≥-2sd - ≤+1sd)	859	57843	59.6	50.39	68.26	219	15187	15.7	10.80	22.17
Overweight (>+1sd - ≤+2sd)	202	13044	59.3	47.64	70.04	43	3233	14.7	9.11	22.87
Obese (>+2sd)	147	9934	61.2	53.24	68.55	44	2996	18.4	11.99	27.30
Height-for-age status (HAZ)										
Stunting (<-2sd)	127	8558	59.2	45.86	71.27	34	2294	15.9	8.88	26.72
Normal (≥-2sd)	1174	78632	60.1	51.86	67.88	303	21339	16.3	11.55	22.57

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	
Terengganu	136	8822	6.1	4.24	8.64	384	20986	14.5	6.49	29.14
Locality of school										
Urban	63	3737	7.7	3.61	15.51	157	7078	14.5	1.72	62.15
Rural	73	5085	5.3	3.89	7.11	227	13908	14.4	7.83	25.06
Sex										
Boys	81	5751	7.9	5.78	10.66	139	8570	11.7	5.31	23.96
Girls	55	3071	4.3	2.49	7.18	245	12416	17.2	7.62	34.34
Ethnicity										
Malay	136	8822	6.1	4.25	8.67	384	20986	14.5	6.51	29.22
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	38	3025	5.4	3.77	7.74	8	690	1.2	0.51	2.97
Secondary school	98	5797	6.5	3.88	10.63	376	20297	22.7	10.83	41.53
Class										
Standard 4	16	1105	5.8	3.61	9.32	4	284	1.5	0.43	5.14
Standard 5	8	887	4.8	1.37	15.40	2	199	1.1	0.25	4.45
Standard 6	14	1033	5.6	3.13	9.92	2	207	1.1	0.30	4.12
Form 1	9	602	3.3	1.42	7.51	55	3383	18.6	7.95	37.56
Form 2	17	867	5.0	2.60	9.34	75	3814	21.9	10.72	39.58
Form 3	28	1377	7.7	4.43	12.93	107	4791	26.6	12.02	49.12
Form 4	15	926	5.2	2.77	9.55	62	3615	20.3	10.59	35.33
Form 5	29	2025	11.3	5.58	21.48	77	4694	26.1	10.30	52.17
School session										
Morning session	104	6398	6.4	4.21	9.51	178	10222	10.2	5.04	19.46
Evening session	1	92	7.5	1.49	30.33	4	259	21.1	9.70	40.02
Morning and evening session	31	2332	5.4	2.95	9.64	202	10505	24.3	9.04	50.88
BMI-for-age status (BAZ)										
Thinness (<-2sd)	12	860	8.7	5.12	14.28	4	231	2.3	0.84	6.33
Normal (≥-2sd - ≤+1sd)	86	5533	5.7	3.90	8.28	276	14874	15.3	6.93	30.59
Overweight (>+1sd - ≤+2sd)	25	1623	7.4	4.61	11.61	67	3716	16.9	6.83	36.06
Obese (>+2sd)	12	740	4.6	2.10	9.62	37	2165	13.3	5.84	27.60
Height-for-age status (HAZ)										
Stunting (<-2sd)	16	981	6.8	3.47	12.85	36	1955	13.5	5.45	29.75
Normal (≥-2sd)	120	7841	6.0	4.13	8.64	348	19032	14.6	6.56	29.24

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	
				Lower	Upper
Terengganu	71	4573	3.1	2.36	4.19
Locality of school					
Urban	20	1244	2.5	1.41	4.56
Rural	51	3329	3.5	2.52	4.72
Sex					
Boys	37	2627	3.6	2.54	5.07
Girls	34	1946	2.7	1.81	4.00
Ethnicity					
Malay	71	4573	3.2	2.37	4.20
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	15	1127	2.0	1.20	3.37
Secondary school	56	3445	3.9	2.89	5.12
Class					
Standard 4	1	66	0.3	0.05	2.49
Standard 5	3	271	1.5	0.52	4.03
Standard 6	11	791	4.3	2.01	9.00
Form 1	6	419	2.3	1.02	5.12
Form 2	11	557	3.2	1.35	7.38
Form 3	11	553	3.1	1.12	8.20
Form 4	18	1196	6.7	4.35	10.21
Form 5	10	721	4.0	2.17	7.31
School session					
Morning session	55	3440	3.4	2.49	4.69
Evening session					
Morning and evening session	16	1132	2.6	1.32	5.11
BMI-for-age status (BAZ)					
Thinness (<-2sd)	4	252	2.5	0.94	6.68
Normal (≥-2sd - ≤+1sd)	56	3543	3.7	2.53	5.25
Overweight (>+1sd - ≤+2sd)	6	373	1.7	0.74	3.82
Obese (>+2sd)	5	405	2.5	1.04	5.85
Height-for-age status (HAZ)					
Stunting (<-2sd)	10	675	4.7	2.40	8.87
Normal (≥-2sd)	61	3898	3.0	2.14	4.14

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	
Terengganu	117	7713	4.9	3.89	6.09	1898	124254	78.5	75.45	81.31
Locality of school										
Urban	39	2593	4.9	3.02	8.01	644	40183	76.6	72.82	80.01
Rural	78	5120	4.8	3.84	6.08	1254	84071	79.5	75.37	83.04
Sex										
Boys	68	4743	6.1	4.75	7.72	891	62549	80.0	75.95	83.55
Girls	49	2971	3.7	2.58	5.31	1007	61705	77.1	73.35	80.39
Ethnicity										
Malay	116	7653	4.9	3.90	6.05	1894	123831	78.6	75.58	81.41
Chinese						3	299	70.6	15.90	96.81
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	60	17.3	1.20	78.21	1	124	35.4	14.22	64.43
School level										
Primary school	36	2904	4.9	3.19	7.36	598	46701	78.3	72.77	83.01
Secondary school	81	4809	4.9	3.77	6.29	1300	77553	78.6	74.90	81.96
Class										
Standard 4	15	1177	5.9	2.91	11.47	200	14347	71.6	58.29	81.92
Standard 5	15	1225	6.2	4.17	9.22	193	16057	81.8	75.64	86.60
Standard 6	6	502	2.5	0.99	6.23	205	16297	81.7	77.65	85.22
Form 1	6	443	2.2	1.14	4.26	223	15767	78.8	69.50	85.84
Form 2	15	855	4.4	2.54	7.46	275	14886	76.2	66.78	83.57
Form 3	28	1385	6.9	4.08	11.46	320	15502	77.3	68.95	83.95
Form 4	22	1466	7.6	5.33	10.67	248	15428	79.7	76.31	82.78
Form 5	10	659	3.4	1.67	6.63	234	15970	81.2	74.58	86.42
School session										
Morning session	78	5236	4.8	3.73	6.10	1321	86030	78.5	74.80	81.76
Evening session						14	1098	84.0	52.72	96.13
Morning and evening session	39	2477	5.3	3.77	7.28	560	36921	78.4	73.17	82.78
BMI-for-age status (BAZ)										
Thinness (<-2sd)	7	433	4.2	2.03	8.47	120	8314	80.6	72.33	86.88
Normal (≥-2sd - ≤+1sd)	96	6158	5.9	4.43	7.74	1254	81739	77.9	74.50	80.98
Overweight (>+1sd - ≤+2sd)	7	555	2.3	0.90	5.85	290	18713	78.3	73.10	82.67
Obese (>+2sd)	7	568	3.0	1.26	6.87	233	15423	81.0	75.61	85.43
Height-for-age status (HAZ)										
Stunting (<-2sd)	9	546	3.4	1.34	8.47	192	12631	79.1	73.49	83.73
Normal (≥-2sd)	108	7167	5.0	4.02	6.29	1706	111623	78.5	75.16	81.43

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	
Terengganu	418	26276	16.6	13.84	19.80
Locality of school					
Urban	150	9675	18.4	14.17	23.65
Rural	268	16601	15.7	12.40	19.66
Sex					
Boys	155	10876	13.9	10.48	18.24
Girls	263	15400	19.2	15.66	23.39
Ethnicity					
Malay	413	25985	16.5	13.74	19.70
Chinese	3	125	29.4	3.19	84.10
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	2	165	47.3	26.68	68.90
School level					
Primary school	131	10023	16.8	11.82	23.35
Secondary school	287	16253	16.5	13.46	20.02
Class					
Standard 4	64	4525	22.6	11.51	39.50
Standard 5	27	2359	12.0	8.13	17.39
Standard 6	40	3140	15.7	13.43	18.38
Form 1	61	3799	19.0	12.18	28.36
Form 2	74	3799	19.4	12.94	28.16
Form 3	62	3164	15.8	10.72	22.62
Form 4	42	2454	12.7	9.26	17.13
Form 5	48	3037	15.4	9.65	23.80
School session					
Morning session	287	18347	16.7	13.63	20.38
Evening session	4	209	16.0	3.87	47.28
Morning and evening session	127	7720	16.4	12.08	21.84
BMI-for-age status (BAZ)					
Thinness (<-2sd)	24	1566	15.2	9.99	22.40
Normal (≥-2sd - ≤+1sd)	270	17017	16.2	13.47	19.40
Overweight (>+1sd - ≤+2sd)	76	4643	19.4	14.76	25.10
Obese (>+2sd)	48	3050	16.0	11.69	21.56
Height-for-age status (HAZ)					
Stunting (<-2sd)	44	2798	17.5	12.78	23.53
Normal (≥-2sd)	374	23478	16.5	13.66	19.80

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	
Terengganu	997	66006	51.0	46.28	55.72	637	42300	32.7	28.68	36.97
Locality of school										
Urban	301	19999	47.6	36.38	59.11	235	15080	35.9	27.72	45.01
Rural	696	46006	52.6	48.38	56.86	402	27220	31.1	27.11	35.49
Sex										
Boys	445	31252	47.7	42.75	52.76	334	23669	36.2	31.49	41.08
Girls	552	34754	54.4	48.88	59.76	303	18631	29.1	24.60	34.16
Ethnicity										
Malay	995	65869	51.1	46.35	55.82	636	42138	32.7	28.71	36.94
Chinese	2	137	45.9	5.74	92.18	1	162	54.1	7.82	94.26
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	328	25504	53.0	48.66	57.38	218	17197	35.8	33.22	38.39
Secondary school	669	40502	49.8	42.88	56.74	419	25103	30.9	25.11	37.30
Class										
Standard 4	107	7824	52.8	45.43	60.01	80	5704	38.5	33.39	43.83
Standard 5	108	8353	49.6	39.90	59.35	73	6472	38.4	30.03	47.60
Standard 6	113	9327	56.8	47.91	65.28	65	5021	30.6	24.34	37.62
Form 1	110	7775	49.8	43.17	56.35	63	4399	28.2	20.86	36.81
Form 2	149	8232	53.5	45.87	60.93	70	3698	24.0	16.71	33.26
Form 3	158	7794	46.5	39.75	53.31	119	5819	34.7	26.32	44.14
Form 4	140	8897	52.7	42.26	62.84	91	5754	34.1	27.69	41.06
Form 5	112	7803	46.9	34.79	59.44	76	5433	32.7	23.27	43.71
School session										
Morning session	699	46286	51.6	47.81	55.38	476	30798	34.3	30.41	38.50
Evening session	5	406	43.0	19.05	70.81	2	199	21.1	3.49	66.32
Morning and evening session	291	19170	49.7	40.59	58.85	158	11243	29.2	23.68	35.31
BMI-for-age status (BAZ)										
Thinness (<-2sd)	66	4339	50.0	40.07	59.86	49	3502	40.3	29.55	52.13
Normal (≥-2sd - ≤+1sd)	654	43028	50.0	44.20	55.75	415	27614	32.1	27.80	36.67
Overweight (>+1sd - ≤+2sd)	146	9553	50.9	41.47	60.33	98	6375	34.0	26.29	42.63
Obese (>+2sd)	130	9021	57.1	49.40	64.49	75	4809	30.4	23.32	38.67
Height-for-age status (HAZ)										
Stunting (<-2sd)	100	6645	51.7	41.53	61.72	59	3966	30.9	23.85	38.86
Normal (≥-2sd)	897	59361	50.9	46.25	55.60	578	38335	32.9	28.77	37.30

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
Terengganu	199	11162	8.6	4.40	16.23	147	9929	7.7	6.02	9.74
Locality of school										
Urban	78	3534	8.4	1.25	40.04	58	3383	8.1	5.23	12.20
Rural	121	7628	8.7	5.45	13.70	89	6547	7.5	5.57	10.01
Sex										
Boys	75	4857	7.4	4.10	13.06	81	5696	8.7	6.59	11.40
Girls	124	6305	9.9	4.57	20.01	66	4233	6.6	4.93	8.83
Ethnicity										
Malay	199	11162	8.7	4.42	16.28	145	9745	7.6	5.96	9.55
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						2	184	100.0	0.00	100.00
School level										
Primary school	12	976	2.0	1.03	3.98	58	4405	9.2	6.85	12.16
Secondary school	187	10186	12.5	6.44	22.94	89	5525	6.8	4.80	9.54
Class										
Standard 4	3	223	1.5	0.53	4.24	16	1073	7.2	4.79	10.80
Standard 5	2	292	1.7	0.24	11.36	21	1720	10.2	8.07	12.86
Standard 6	7	461	2.8	1.33	5.85	21	1612	9.8	5.94	15.80
Form 1	23	1589	10.2	5.09	19.28	25	1863	11.9	6.99	19.59
Form 2	43	2230	14.5	8.20	24.33	22	1232	8.0	4.70	13.31
Form 3	54	2450	14.6	7.62	26.20	14	710	4.2	2.22	7.90
Form 4	26	1549	9.2	4.09	19.30	13	694	4.1	1.56	10.38
Form 5	41	2368	14.2	4.96	34.56	15	1025	6.2	3.24	11.42
School session										
Morning session	101	5997	6.7	3.76	11.63	101	6606	7.4	5.61	9.62
Evening session	4	283	30.0	14.70	51.65	1	55	5.9	0.55	41.37
Morning and evening session	94	4883	12.7	4.83	29.28	45	3268	8.5	5.89	12.04
BMI-for-age status (BAZ)										
Thinness (<-2sd)	4	247	2.8	0.97	8.02	7	596	6.9	3.57	12.80
Normal (≥-2sd - ≤+1sd)	151	8390	9.7	5.24	17.40	106	7065	8.2	6.22	10.75
Overweight (>+1sd - ≤+2sd)	24	1408	7.5	2.61	19.75	22	1421	7.6	4.56	12.32
Obese (>+2sd)	20	1117	7.1	3.29	14.55	12	848	5.4	2.96	9.54
Height-for-age status (HAZ)										
Stunting (<-2sd)	22	1182	9.2	3.35	22.83	15	1061	8.3	4.92	13.53
Normal (≥-2sd)	177	9980	8.6	4.50	15.70	132	8868	7.6	5.91	9.75

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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	
Terengganu	50	3590	2.3	1.57	3.27	2151	139091	88.0	84.77	90.58
Locality of school										
Urban	14	1107	2.1	1.06	4.20	741	45555	87.3	76.71	93.47
Rural	36	2483	2.3	1.52	3.61	1410	93536	88.3	86.81	89.68
Sex										
Boys	27	2029	2.6	1.78	3.78	977	68433	87.8	84.87	90.17
Girls	23	1561	1.9	1.16	3.25	1174	70658	88.2	83.36	91.75
Ethnicity										
Malay	50	3590	2.3	1.58	3.29	2142	138378	88.0	84.71	90.59
Chinese						6	424	100.0	100.00	100.00
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						3	289	82.7	21.79	98.80
School level										
Primary school	26	2030	3.4	2.43	4.76	676	52044	87.3	78.17	92.98
Secondary school	24	1560	1.6	0.91	2.76	1475	87048	88.4	86.91	89.70
Class										
Standard 4	13	855	4.3	3.04	6.01	229	16103	80.6	63.33	90.95
Standard 5	7	698	3.5	1.96	6.27	215	17799	90.0	84.72	93.57
Standard 6	6	477	2.4	0.91	6.20	232	18142	91.4	85.01	95.19
Form 1	5	406	2.0	0.60	6.68	251	17343	87.2	81.97	91.15
Form 2	6	280	1.4	0.42	4.79	319	17099	87.5	81.76	91.63
Form 3	3	146	0.7	0.26	1.99	359	17555	87.5	82.92	90.99
Form 4	6	390	2.0	0.83	4.79	291	18005	93.1	89.12	95.64
Form 5	4	338	1.7	0.37	7.55	255	17046	86.7	83.58	89.26
School session										
Morning session	32	2277	2.1	1.36	3.19	1488	95819	87.6	83.39	90.91
Evening session	1	146	11.2	1.14	57.76	15	991	75.8	34.74	94.87
Morning and evening session	17	1167	2.5	1.27	4.76	646	42135	89.2	85.98	91.73
BMI-for-age status (BAZ)										
Thinness (<-2sd)	2	198	1.9	0.48	7.33	139	9418	91.0	82.52	95.54
Normal (≥-2sd - ≤+1sd)	37	2674	2.6	1.64	3.96	1422	91574	87.5	84.15	90.19
Overweight (>+1sd - ≤+2sd)	5	302	1.3	0.50	3.18	333	21170	88.7	83.39	92.50
Obese (>+2sd)	6	415	2.2	0.78	5.90	256	16864	88.1	83.68	91.51
Height-for-age status (HAZ)										
Stunting (<-2sd)	5	427	2.7	1.12	6.24	219	14113	88.3	82.37	92.48
Normal (≥-2sd)	45	3163	2.2	1.50	3.30	1932	124978	87.9	84.73	90.55

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
Terengganu	229	15417	9.8	7.38	12.79
Locality of school					
Urban	75	5526	10.6	5.24	20.21
Rural	154	9891	9.3	7.75	11.21
Sex					
Boys	107	7509	9.6	7.39	12.46
Girls	122	7907	9.9	6.65	14.40
Ethnicity					
Malay	228	15356	9.8	7.36	12.84
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	60	17.3	1.20	78.21
School level					
Primary school	62	5529	9.3	4.44	18.39
Secondary school	167	9887	10.0	8.57	11.73
Class					
Standard 4	36	3009	15.1	5.90	33.43
Standard 5	14	1284	6.5	3.66	11.27
Standard 6	12	1236	6.2	3.29	11.48
Form 1	32	2129	10.7	7.53	15.02
Form 2	39	2161	11.1	7.19	16.63
Form 3	48	2361	11.8	8.04	16.91
Form 4	15	954	4.9	2.53	9.39
Form 5	33	2282	11.6	8.34	15.93
School session					
Morning session	162	11245	10.3	7.34	14.23
Evening session	2	170	13.0	2.11	50.88
Morning and evening session	64	3943	8.3	5.88	11.72
BMI-for-age status (BAZ)					
Thinness (<-2sd)	10	738	7.1	3.69	13.33
Normal ($\geq -2sd - \leq +1sd$)	158	10438	10.0	7.47	13.19
Overweight ($> +1sd - \leq +2sd$)	34	2388	10.0	6.14	15.89
Obese ($> +2sd$)	27	1854	9.7	6.23	14.76
Height-for-age status (HAZ)					
Stunting (<-2sd)	21	1435	9.0	5.07	15.43
Normal ($\geq -2sd$)	208	13982	9.8	7.53	12.75

Table 3.4.17 : Practice of bring 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
Terengganu	140	9615	6.1	4.55	8.05	1257	83089	52.4	46.98	57.83
Locality of school										
Urban	57	3929	7.5	5.26	10.51	467	29659	56.4	47.59	64.87
Rural	83	5686	5.4	3.62	7.89	790	53430	50.5	43.95	56.94
Sex										
Boys	77	5607	7.2	5.32	9.57	495	35759	45.7	39.66	51.77
Girls	63	4008	5.0	3.33	7.44	762	47330	59.1	52.94	64.92
Ethnicity										
Malay	139	9552	6.1	4.51	8.09	1251	82555	52.4	46.99	57.67
Chinese	1	63	14.8	1.40	68.07	3	245	57.8	17.70	89.74
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						3	289	82.7	21.79	98.80
School level										
Primary school	75	5846	9.8	8.20	11.62	492	38423	64.3	58.54	69.62
Secondary school	65	3769	3.8	2.88	5.05	765	44665	45.3	41.99	48.58
Class										
Standard 4	39	2892	14.3	10.25	19.71	158	11233	55.7	45.51	65.44
Standard 5	15	1194	6.0	3.07	11.48	166	13735	69.3	62.53	75.33
Standard 6	21	1760	8.9	6.38	12.26	168	13456	68.0	65.83	70.01
Form 1	16	1084	5.4	3.20	9.01	142	9589	47.9	37.80	58.22
Form 2	13	664	3.4	1.93	5.91	174	9009	46.1	39.32	53.03
Form 3	14	640	3.2	1.77	5.64	176	8670	43.1	35.52	51.03
Form 4	7	363	1.9	0.84	4.14	127	7900	40.8	32.23	50.04
Form 5	15	1020	5.2	2.82	9.33	146	9498	48.3	40.97	55.69
School session										
Morning session	100	7143	6.5	4.61	9.16	850	55253	50.4	44.83	56.05
Evening session						12	944	72.2	53.88	85.26
Morning and evening session	40	2472	5.2	3.38	7.95	394	26807	56.5	47.18	65.44
BMI-for-age status (BAZ)										
Thinness (<-2sd)	9	667	6.4	3.20	12.35	85	5901	56.6	45.84	66.75
Normal (≥-2sd - ≤+1sd)	82	5572	5.3	4.07	6.89	840	55006	52.4	47.31	57.43
Overweight (>+1sd - ≤+2sd)	27	1866	7.8	5.45	11.11	186	12367	51.9	44.09	59.52
Obese (>+2sd)	22	1510	7.9	5.02	12.20	145	9749	51.0	42.64	59.22
Height-for-age status (HAZ)										
Stunting (<-2sd)	19	1423	8.9	4.41	17.19	140	9272	58.0	51.95	63.90
Normal (≥-2sd)	121	8192	5.7	4.31	7.63	1117	73817	51.8	46.06	57.51

Table 3.4.17 : Practice of bring 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
Terengganu	1037	65757	41.5	34.79	48.54
Locality of school					
Urban	310	18978	36.1	26.03	47.57
Rural	727	46779	44.2	36.13	52.54
Sex					
Boys	543	36964	47.2	39.65	54.86
Girls	494	28793	35.9	28.97	43.54
Ethnicity					
Malay	1034	65581	41.6	34.93	48.57
Chinese	2	116	27.4	5.62	70.42
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	60	17.3	1.20	78.21
School level					
Primary school	198	15515	26.0	20.27	32.58
Secondary school	839	50242	50.9	47.02	54.80
Class					
Standard 4	83	6039	30.0	20.19	41.95
Standard 5	55	4890	24.7	16.64	34.96
Standard 6	60	4586	23.2	19.19	27.67
Form 1	132	9336	46.7	35.69	57.96
Form 2	177	9868	50.5	43.69	57.29
Form 3	221	10803	53.7	45.58	61.65
Form 4	178	11086	57.3	48.01	66.09
Form 5	131	9150	46.5	38.41	54.82
School session					
Morning session	734	47135	43.0	36.11	50.24
Evening session	6	363	27.8	14.74	46.12
Morning and evening session	295	18139	38.3	28.71	48.80
BMI-for-age status (BAZ)					
Thinness (<-2sd)	58	3861	37.0	26.66	48.74
Normal (≥-2sd - ≤+1sd)	698	44404	42.3	36.17	48.66
Overweight (>+1sd - ≤+2sd)	159	9618	40.3	31.35	50.00
Obese (>+2sd)	122	7874	41.2	31.23	51.85
Height-for-age status (HAZ)					
Stunting (<-2sd)	86	5279	33.0	26.08	40.85
Normal (≥-2sd)	951	60478	42.4	35.61	49.58

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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	
Terengganu	720	48994	54.4	47.60	60.97	204	13500	15.0	12.03	18.51
Locality of school										
Urban	248	17320	52.6	37.89	66.80	92	5699	17.3	11.87	24.51
Rural	472	31674	55.4	48.95	61.68	112	7801	13.6	10.77	17.15
Sex										
Boys	311	22695	56.9	49.13	64.28	63	4684	11.7	8.85	15.40
Girls	409	26299	52.4	44.98	59.68	141	8816	17.6	13.70	22.23
Ethnicity										
Malay	716	48663	54.4	47.47	61.08	204	13500	15.1	12.12	18.61
Chinese	1	42	13.5	1.56	60.67					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	3	289	100.0	0.00	100.00					
School level										
Primary school	285	22755	52.9	45.14	60.59	106	7773	18.1	14.24	22.68
Secondary school	435	26239	55.7	44.95	65.89	98	5727	12.2	8.89	16.39
Class										
Standard 4	100	7326	54.4	45.72	62.86	34	2328	17.3	13.11	22.47
Standard 5	88	7255	49.2	42.91	55.45	42	3323	22.5	17.22	28.87
Standard 6	97	8173	55.3	43.76	66.37	30	2123	14.4	8.75	22.71
Form 1	83	5826	57.0	41.05	71.62	16	1018	10.0	5.34	17.83
Form 2	88	4698	49.7	36.70	62.73	22	1156	12.2	6.59	21.58
Form 3	95	4754	52.7	38.97	66.01	28	1396	15.5	9.27	24.69
Form 4	72	4487	55.1	39.30	69.88	11	718	8.8	4.10	17.94
Form 5	97	6473	62.9	49.20	74.86	21	1439	14.0	7.26	25.25
School session										
Morning session	492	32958	54.4	48.62	60.14	154	9696	16.0	12.58	20.17
Evening session	5	374	49.9	12.39	87.57	3	267	35.6	8.34	77.10
Morning and evening session	222	15577	54.2	40.94	66.87	47	3537	12.3	8.25	17.96
BMI-for-age status (BAZ)										
Thinness (<-2sd)	58	3969	62.3	53.06	70.65	12	734	11.5	5.69	21.93
Normal (≥-2sd - ≤+1sd)	482	32750	55.4	48.11	62.40	134	8877	15.0	11.95	18.68
Overweight (>+1sd - ≤+2sd)	101	6790	50.4	38.81	61.91	24	1513	11.2	6.96	17.62
Obese (>+2sd)	78	5419	49.1	42.19	55.95	34	2376	21.5	16.43	27.62
Height-for-age status (HAZ)										
Stunting (<-2sd)	84	5752	54.0	43.57	64.09	23	1479	13.9	8.01	22.97
Normal (≥-2sd)	636	43242	54.4	47.78	60.89	181	12021	15.1	12.01	18.88

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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	
Terengganu	311	19834	22.0	18.95	25.41	125	8635	9.6	6.90	13.16
Locality of school										
Urban	129	7918	24.0	18.10	31.16	63	3797	11.5	6.97	18.46
Rural	182	11916	20.8	17.66	24.44	62	4839	8.5	5.59	12.62
Sex										
Boys	109	7535	18.9	14.58	24.09	58	4440	11.1	7.38	16.43
Girls	202	12299	24.5	20.61	28.85	67	4196	8.4	5.53	12.43
Ethnicity										
Malay	309	19630	21.9	18.94	25.24	124	8594	9.6	6.89	13.23
Chinese	2	204	66.1	18.04	94.53	1	42	13.5	1.56	60.67
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	116	8924	20.8	16.83	25.33	75	5557	12.9	8.80	18.58
Secondary school	195	10910	23.1	18.83	28.12	50	3079	6.5	4.70	9.02
Class										
Standard 4	37	2565	19.1	17.29	20.96	29	2042	15.2	11.04	20.48
Standard 5	27	2290	15.5	9.68	23.95	27	2229	15.1	8.92	24.43
Standard 6	52	4069	27.6	19.91	36.77	19	1286	8.7	4.39	16.53
Form 1	30	1950	19.1	14.54	24.61	11	795	7.8	4.45	13.27
Form 2	45	2191	23.2	15.02	33.97	11	568	6.0	2.99	11.71
Form 3	47	2293	25.4	17.62	35.19	7	355	3.9	1.65	9.12
Form 4	32	1895	23.3	16.35	31.96	10	590	7.2	4.36	11.82
Form 5	41	2582	25.1	17.49	34.64	11	770	7.5	4.06	13.40
School session										
Morning session	233	14681	24.3	21.19	27.60	88	5787	9.6	6.50	13.84
Evening session						2	142	18.9	6.82	42.60
Morning and evening session	78	5153	17.9	13.61	23.25	35	2706	9.4	6.32	13.80
BMI-for-age status (BAZ)										
Thinness (<-2sd)	15	1028	16.1	8.71	27.89	15	1149	18.0	9.21	32.27
Normal (\geq -2sd - \leq +1sd)	218	13508	22.8	19.39	26.69	69	4938	8.3	5.67	12.13
Overweight ($>$ +1sd - \leq +2sd)	43	2982	22.1	15.63	30.34	20	1195	8.9	5.51	13.98
Obese ($>$ +2sd)	35	2316	21.0	15.57	27.61	21	1354	12.3	7.48	19.43
Height-for-age status (HAZ)										
Stunting (<-2sd)	33	2153	20.2	14.06	28.16	13	969	9.1	5.06	15.83
Normal (\geq -2sd)	278	17681	22.2	18.73	26.21	112	7666	9.6	6.88	13.36

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	
Terengganu	199	11637	12.9	7.82	20.58	47	3106	3.4	2.42	4.88
Locality of school										
Urban	94	4937	15.0	4.78	38.22	13	859	2.6	1.91	3.55
Rural	105	6701	11.7	8.47	16.00	34	2247	3.9	2.52	6.08
Sex										
Boys	59	3782	9.5	5.58	15.64	20	1561	3.9	2.27	6.65
Girls	140	7856	15.6	9.36	25.00	27	1545	3.1	1.99	4.74
Ethnicity										
Malay	198	11575	12.9	7.83	20.61	47	3106	3.5	2.43	4.92
Chinese	1	63	20.4	1.73	78.79					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	34	2796	6.5	4.32	9.67	22	1784	4.2	2.70	6.32
Secondary school	165	8842	18.8	10.72	30.74	25	1322	2.8	1.62	4.80
Class										
Standard 4	13	1004	7.5	4.47	12.18	13	981	7.3	4.54	11.50
Standard 5	11	881	6.0	3.21	10.84	5	382	2.6	1.31	5.04
Standard 6	10	912	6.2	3.82	9.83	4	422	2.9	1.13	7.01
Form 1	28	1665	16.3	6.12	36.75	7	390	3.8	1.42	9.89
Form 2	37	1790	18.9	8.82	36.06	7	357	3.8	1.69	8.23
Form 3	39	1803	20.0	8.92	38.91	8	375	4.2	1.55	10.64
Form 4	29	1772	21.7	15.18	30.15	2	125	1.5	0.39	5.84
Form 5	32	1812	17.6	9.63	30.03	1	74	0.7	0.10	4.94
School session										
Morning session	100	6323	10.4	7.47	14.41	30	1974	3.3	2.17	4.88
Evening session	2	184	24.6	4.13	71.26					
Morning and evening session	97	5130	17.8	7.35	37.30	17	1132	3.9	2.34	6.56
BMI-for-age status (BAZ)										
Thinness (<-2sd)	9	700	11.0	5.76	19.96	3	195	3.1	0.99	9.00
Normal (≥-2sd - ≤+1sd)	144	8185	13.8	8.12	22.60	28	1752	3.0	1.63	5.33
Overweight (>+1sd - ≤+2sd)	24	1410	10.5	4.96	20.73	8	617	4.6	2.58	7.99
Obese (>+2sd)	22	1342	12.1	7.12	19.95	8	543	4.9	2.24	10.45
Height-for-age status (HAZ)										
Stunting (<-2sd)	25	1745	16.4	8.84	28.35	4	244	2.3	0.90	5.68
Normal (≥-2sd)	174	9893	12.4	7.37	20.27	43	2862	3.6	2.49	5.18

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
Terengganu	75	4967	5.5	4.42	6.86
Locality of school					
Urban	28	1703	5.2	3.35	7.88
Rural	47	3264	5.7	4.44	7.32
Sex					
Boys	35	2468	6.2	4.50	8.45
Girls	40	2499	5.0	3.47	7.09
Ethnicity					
Malay	75	4967	5.5	4.45	6.89
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	39	2823	6.6	5.19	8.27
Secondary school	36	2143	4.5	3.21	6.40
Class					
Standard 4	12	854	6.3	3.30	11.84
Standard 5	11	768	5.2	2.43	10.77
Standard 6	16	1202	8.1	5.68	11.53
Form 1	6	365	3.6	1.86	6.74
Form 2	12	682	7.2	4.15	12.24
Form 3	6	274	3.0	1.34	6.74
Form 4	6	374	4.6	2.15	9.56
Form 5	6	448	4.4	2.05	9.02
School session					
Morning session	45	2958	4.9	3.52	6.74
Evening session					
Morning and evening session	30	2009	7.0	4.65	10.38
BMI-for-age status (BAZ)					
Thinness (<-2sd)	4	346	5.4	2.40	11.85
Normal (\geq -2sd - \leq +1sd)	49	3151	5.3	4.01	7.04
Overweight ($>$ +1sd - \leq +2sd)	14	848	6.3	2.74	13.83
Obese ($>$ +2sd)	8	621	5.6	3.05	10.12
Height-for-age status (HAZ)					
Stunting (<-2sd)	8	531	5.0	2.59	9.39
Normal (\geq -2sd)	67	4435	5.6	4.49	6.93

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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	
Terengganu	800	50838	32.1	26.57	38.17	1090	72107	45.5	41.65	49.44
Locality of school										
Urban	372	22672	43.2	35.09	51.75	332	21339	40.7	35.27	46.35
Rural	428	28166	26.6	22.11	31.60	758	50768	47.9	43.63	52.23
Sex										
Boys	256	18089	23.1	17.43	29.96	494	35025	44.7	40.37	49.20
Girls	544	32750	40.9	34.40	47.69	596	37082	46.3	40.94	51.71
Ethnicity										
Malay	792	50290	31.9	26.28	38.11	1090	72107	45.7	41.83	49.71
Chinese	4	199	47.0	8.30	89.67					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	4	349	100.0	100.00	100.00					
School level										
Primary school	323	23913	40.0	31.48	49.16	345	27704	46.3	37.84	55.05
Secondary school	477	26925	27.3	22.14	33.16	745	44403	45.0	41.65	48.45
Class										
Standard 4	116	7976	39.7	31.13	48.94	116	8523	42.4	32.28	53.24
Standard 5	94	7018	35.4	25.31	47.05	109	9650	48.7	39.77	57.74
Standard 6	113	8919	44.8	32.90	57.43	120	9531	47.9	37.50	58.54
Form 1	79	5053	25.3	18.38	33.84	146	10588	53.1	45.33	60.71
Form 2	108	5502	28.2	21.11	36.47	170	8912	45.6	40.21	51.12
Form 3	105	5085	25.3	20.03	31.37	177	8697	43.2	39.41	47.15
Form 4	85	4981	25.7	18.37	34.82	131	8301	42.9	35.16	51.02
Form 5	100	6304	32.1	21.04	45.50	121	7904	40.2	32.34	48.58
School session										
Morning session	559	35791	32.7	26.22	39.90	732	48036	43.9	40.25	47.58
Evening session	5	392	30.0	12.13	57.04	7	551	42.1	19.71	68.37
Morning and evening session	236	14655	30.9	23.31	39.70	349	23374	49.3	43.17	55.44
BMI-for-age status (BAZ)										
Thinness (<-2sd)	48	3494	33.5	24.50	43.89	64	4123	39.5	32.35	47.21
Normal (\geq -2sd - \leq +1sd)	500	31110	29.6	24.07	35.91	750	49329	47.0	43.02	51.04
Overweight (>+1sd - \leq +2sd)	129	8078	33.9	26.36	42.32	166	11293	47.4	40.31	54.53
Obese (>+2sd)	123	8157	42.6	36.07	49.46	109	7296	38.1	31.53	45.22
Height-for-age status (HAZ)										
Stunting (<-2sd)	70	4748	29.7	22.16	38.59	128	8113	50.8	42.80	58.73
Normal (\geq -2sd)	730	46090	32.4	26.76	38.52	962	63994	44.9	40.94	48.99

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
Terengganu	543	35455	22.4	18.05	27.41
Locality of school					
Urban	128	8433	16.1	10.96	22.98
Rural	415	27022	25.5	20.40	31.37
Sex					
Boys	364	25166	32.1	26.72	38.10
Girls	179	10289	12.8	9.43	17.26
Ethnicity					
Malay	541	35230	22.4	18.01	27.39
Chinese	2	225	53.0	10.33	91.70
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	97	8172	13.7	10.57	17.50
Secondary school	446	27283	27.7	23.22	32.61
Class					
Standard 4	47	3594	17.9	12.45	25.02
Standard 5	33	3142	15.9	11.35	21.73
Standard 6	17	1437	7.2	4.63	11.11
Form 1	64	4302	21.6	14.94	30.10
Form 2	86	5126	26.2	19.42	34.41
Form 3	129	6331	31.5	25.47	38.18
Form 4	96	6066	31.3	21.55	43.15
Form 5	71	5459	27.8	19.61	37.71
School session					
Morning session	392	25643	23.4	18.61	29.04
Evening session	6	364	27.9	14.19	47.45
Morning and evening session	144	9389	19.8	13.91	27.39
BMI-for-age status (BAZ)					
Thinness (<-2sd)	40	2811	27.0	18.50	37.50
Normal (\geq -2sd - \leq +1sd)	369	24495	23.3	19.25	28.01
Overweight (>+1sd - \leq +2sd)	77	4470	18.7	12.65	26.89
Obese (>+2sd)	57	3680	19.2	12.92	27.65
Height-for-age status (HAZ)					
Stunting (<-2sd)	47	3114	19.5	14.44	25.77
Normal (\geq -2sd)	496	32342	22.7	18.27	27.86

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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	
Terengganu	1679	107503	87.4	83.65	90.45	237	16596	13.5	10.28	17.53
Locality of school										
Urban	633	39237	89.2	85.47	91.99	107	7010	15.9	11.75	21.23
Rural	1046	68266	86.5	80.86	90.64	130	9587	12.1	8.19	17.65
Sex										
Boys	617	43093	81.1	75.18	85.93	114	8679	16.3	11.99	21.88
Girls	1062	64410	92.2	88.68	94.74	123	7918	11.3	8.35	15.22
Ethnicity										
Malay	1671	106954	87.4	83.54	90.43	237	16596	13.6	10.31	17.64
Chinese	4	199	100.0	0.00	100.00					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	4	349	100.0	100.00	100.00					
School level										
Primary school	571	43403	84.1	77.12	89.23	108	9064	17.6	12.53	24.05
Secondary school	1108	64100	89.9	86.61	92.40	129	7532	10.6	7.62	14.45
Class										
Standard 4	191	13339	80.8	76.14	84.81	44	3446	20.9	13.50	30.87
Standard 5	180	14296	85.8	71.44	93.56	28	2672	16.0	9.53	25.72
Standard 6	200	15768	85.5	76.95	91.19	36	2945	16.0	10.46	23.61
Form 1	183	12617	80.7	68.39	88.95	33	2212	14.1	7.93	23.95
Form 2	257	13265	92.0	84.81	95.98	25	1326	9.2	5.15	15.88
Form 3	253	12372	89.8	83.05	94.02	30	1417	10.3	5.92	17.28
Form 4	207	12719	95.8	92.67	97.58	30	1763	13.3	7.82	21.63
Form 5	208	13126	92.4	84.11	96.53	11	814	5.7	2.52	12.48
School session										
Morning session	1139	72817	86.9	83.17	89.85	153	10807	12.9	9.18	17.80
Evening session	8	585	62.1	36.91	82.12	4	331	35.2	11.85	68.67
Morning and evening session	530	33954	89.3	83.08	93.40	80	5458	14.4	11.24	18.15
BMI-for-age status (BAZ)										
Thinness (<-2sd)	95	6464	84.9	74.75	91.39	15	1022	13.4	8.14	21.33
Normal (≥-2sd - ≤+1sd)	1110	70247	87.3	83.64	90.28	162	11420	14.2	10.42	19.05
Overweight (>+1sd - ≤+2sd)	263	16892	87.2	81.03	91.57	32	2229	11.5	7.66	16.93
Obese (>+2sd)	210	13834	89.5	83.17	93.67	27	1859	12.0	6.74	20.56
Height-for-age status (HAZ)										
Stunting (<-2sd)	175	11229	87.3	78.71	92.76	24	1582	12.3	6.38	22.39
Normal (≥-2sd)	1504	96274	87.5	83.84	90.35	213	15014	13.6	10.37	17.74

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	
Terengganu	21	1566	1.3	0.85	1.90	94	6187	5.0	4.03	6.26
Locality of school										
Urban	4	249	0.6	0.23	1.39	41	2300	5.2	3.90	6.97
Rural	17	1316	1.7	1.17	2.37	53	3887	4.9	3.62	6.67
Sex										
Boys	17	1328	2.5	1.60	3.88	40	2936	5.5	4.10	7.41
Girls	4	238	0.3	0.10	1.18	54	3251	4.7	3.51	6.14
Ethnicity										
Malay	21	1566	1.3	0.85	1.91	93	6127	5.0	3.98	6.27
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						1	60	17.3	1.20	78.21
School level										
Primary school	9	739	1.4	0.76	2.67	37	2826	5.5	4.22	7.08
Secondary school	12	827	1.2	0.70	1.92	57	3361	4.7	3.36	6.57
Class										
Standard 4	1	110	0.7	0.09	4.90	16	1289	7.8	5.37	11.23
Standard 5	4	407	2.4	1.18	4.98	12	940	5.6	2.74	11.26
Standard 6	4	222	1.2	0.35	4.10	9	597	3.2	1.48	6.92
Form 1						17	1074	6.9	3.70	12.41
Form 2	1	57	0.4	0.05	3.25	8	350	2.4	0.93	6.15
Form 3	5	287	2.1	0.79	5.34	15	707	5.1	2.77	9.32
Form 4	3	235	1.8	0.56	5.44	6	366	2.8	1.31	5.70
Form 5	3	248	1.7	0.54	5.52	11	864	6.1	2.77	12.82
School session										
Morning session	17	1167	1.4	0.87	2.21	65	4363	5.2	4.11	6.58
Evening session										
Morning and evening session	4	398	1.0	0.48	2.27	29	1824	4.8	3.16	7.22
BMI-for-age status (BAZ)										
Thinness (<-2sd)						8	512	6.7	2.61	16.26
Normal ($\geq -2sd$ - $\leq +1sd$)	16	1238	1.5	0.90	2.62	66	4413	5.5	4.05	7.39
Overweight ($> +1sd$ - $\leq +2sd$)	4	258	1.3	0.50	3.47	9	532	2.7	1.24	5.97
Obese ($> +2sd$)	1	70	0.5	0.06	3.26	11	730	4.7	2.27	9.57
Height-for-age status (HAZ)										
Stunting (<-2sd)	2	125	1.0	0.24	3.84	12	903	7.0	3.66	13.06
Normal ($\geq -2sd$)	19	1441	1.3	0.86	1.99	82	5284	4.8	3.85	5.97

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
Terengganu	27	1939	1.6	0.99	2.49
Locality of school					
Urban	9	674	1.5	0.69	3.38
Rural	18	1266	1.6	0.91	2.80
Sex					
Boys	21	1506	2.8	1.67	4.77
Girls	6	434	0.6	0.23	1.65
Ethnicity					
Malay	27	1939	1.6	1.00	2.51
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	12	1031	2.0	1.12	3.54
Secondary school	15	909	1.3	0.64	2.52
Class					
Standard 4	4	370	2.2	1.28	3.90
Standard 5	3	238	1.4	0.55	3.70
Standard 6	5	423	2.3	1.02	5.05
Form 1	4	290	1.9	0.53	6.28
Form 2	5	296	2.1	0.71	5.79
Form 3	3	121	0.9	0.20	3.70
Form 4	2	115	0.9	0.19	3.84
Form 5	1	87	0.6	0.08	4.57
School session					
Morning session	16	1124	1.3	0.72	2.47
Evening session	1	78	8.3	1.93	29.32
Morning and evening session	10	738	1.9	1.03	3.64
BMI-for-age status (BAZ)					
Thinness (<-2sd)					
Normal ($\geq -2sd - \leq +1sd$)	17	1178	1.5	0.78	2.74
Overweight ($> +1sd - \leq +2sd$)	5	418	2.2	0.68	6.66
Obese ($> +2sd$)	5	343	2.2	0.91	5.30
Height-for-age status (HAZ)					
Stunting (<-2sd)					
Normal ($\geq -2sd$)	27	1939	1.8	1.11	2.79

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	
Terengganu	1763	113089	72.0	69.1	74.7	70	4898	3.1	2.4	4.0
Locality of school										
Urban	615	37868	72.9	67.4	77.8	19	1394	2.7	1.6	4.4
Rural	1148	75220	71.6	68.1	74.8	51	3504	3.3	2.5	4.5
Sex										
Boys	788	55266	71.3	68.3	74.0	40	2872	3.7	2.5	5.5
Girls	975	57823	72.7	68.5	76.6	30	2026	2.5	1.8	3.6
Ethnicity										
Malay	1755	112538	72.0	69.0	74.8	70	4898	3.1	2.4	4.0
Chinese	5	262	61.8	11.6	95.2					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	3	289	82.7	21.8	98.8					
School level										
Primary school	532	40717	68.7	64.1	72.9	32	2518	4.2	3.8	4.8
Secondary school	1231	72372	74.0	70.9	76.8	38	2380	2.4	1.6	3.7
Class										
Standard 4	207	14667	74.3	67.8	79.8	4	282	1.4	0.6	3.1
Standard 5	161	13544	68.9	63.4	73.8	9	852	4.3	2.7	6.9
Standard 6	164	12507	63.0	53.4	71.6	19	1385	7.0	4.3	11.2
Form 1	197	13670	69.0	61.5	75.6	9	670	3.4	1.1	10.0
Form 2	273	14809	76.3	71.2	80.8	9	470	2.4	1.4	4.2
Form 3	309	14969	74.9	69.5	79.7	6	323	1.6	0.5	4.7
Form 4	234	14464	75.8	70.4	80.4	6	393	2.1	0.9	4.4
Form 5	218	14460	74.1	68.0	79.4	8	524	2.7	1.2	5.8
School session										
Morning session	1221	77944	71.7	68.3	74.9	52	3699	3.4	2.5	4.6
Evening session	9	605	53.3	31.8	73.6	1	63	5.6	0.8	29.9
Morning and evening session	530	34334	73.0	67.6	77.8	17	1135	2.4	1.8	3.2
BMI-for-age status (BAZ)										
Thinness (<-2sd)	119	8029	78.7	72.5	83.9	4	319	3.1	0.8	10.9
Normal (≥-2sd - ≤+1sd)	1197	76724	73.7	70.3	76.9	46	3227	3.1	2.2	4.3
Overweight (>+1sd - ≤+2sd)	264	16783	70.7	65.9	75.0	10	651	2.7	1.5	4.8
Obese (>+2sd)	182	11486	60.6	51.6	68.8	10	702	3.7	1.9	7.1
Height-for-age status (HAZ)										
Stunting (<-2sd)	171	10894	68.7	62.0	74.7	12	775	4.9	2.3	9.9
Normal (≥-2sd)	1592	102194	72.4	69.6	75.0	58	4123	2.9	2.2	3.9

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	
Terengganu	496	33552	21.4	18.4	24.6	84	5536	3.5	2.7	4.5
Locality of school										
Urban	163	10874	20.9	16.5	26.2	27	1808	3.5	2.8	4.3
Rural	333	22678	21.6	17.9	25.8	57	3727	3.5	2.5	5.1
Sex										
Boys	226	15977	20.6	17.5	24.1	50	3448	4.4	3.2	6.1
Girls	270	17574	22.1	18.4	26.3	34	2088	2.6	1.9	3.6
Ethnicity										
Malay	495	33389	21.4	18.4	24.6	83	5475	3.5	2.7	4.5
Chinese	1	162	38.2	4.8	88.4					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						1	60	17.3	1.2	78.2
School level										
Primary school	169	14154	23.9	18.7	29.9	26	1884	3.2	2.1	4.7
Secondary school	327	19398	19.8	16.8	23.2	58	3652	3.7	2.7	5.1
Class										
Standard 4	55	4316	21.9	15.9	29.2	9	481	2.4	0.7	7.7
Standard 5	57	4674	23.8	19.3	28.8	7	597	3.0	1.2	7.7
Standard 6	57	5164	26.0	16.5	38.5	10	805	4.1	1.9	8.3
Form 1	67	4574	23.1	15.9	32.2	14	905	4.6	2.5	8.1
Form 2	67	3429	17.7	14.1	21.9	12	695	3.6	2.2	5.8
Form 3	81	4055	20.3	16.1	25.2	12	630	3.2	1.8	5.5
Form 4	56	3484	18.3	15.0	22.0	12	746	3.9	1.6	9.0
Form 5	56	3856	19.8	15.1	25.5	8	676	3.5	1.5	7.8
School session										
Morning session	344	23419	21.5	18.4	25.0	54	3632	3.3	2.4	4.6
Evening session	3	263	23.1	7.6	52.4	3	205	18.0	7.7	36.7
Morning and evening session	149	9870	21.0	16.1	26.9	27	1699	3.6	2.2	5.8
BMI-for-age status (BAZ)										
Thinness (<-2sd)	22	1469	14.4	9.8	20.7	5	380	3.7	1.4	9.3
Normal (≥-2sd - ≤+1sd)	311	20791	20.0	17.1	23.2	52	3350	3.2	2.4	4.3
Overweight (>+1sd - ≤+2sd)	83	5511	23.2	18.7	28.4	13	809	3.4	2.0	5.8
Obese (>+2sd)	80	5781	30.5	22.2	40.2	14	996	5.3	2.8	9.7
Height-for-age status (HAZ)										
Stunting (<-2sd)	57	3941	24.8	18.2	32.9	4	249	1.6	0.6	4.0
Normal (≥-2sd)	439	29611	21.0	18.3	24.0	80	5286	3.7	2.8	4.9

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	
Terengganu	88	6022	3.8	2.84	5.08	303	20836	13.2	10.89	15.84
Locality of school										
Urban	32	1929	3.7	2.25	5.95	113	7551	14.4	10.71	19.04
Rural	56	4093	3.9	2.70	5.54	190	13284	12.6	9.86	15.89
Sex										
Boys	53	3771	4.8	3.53	6.58	166	12146	15.6	12.52	19.19
Girls	35	2252	2.8	1.85	4.25	137	8690	10.8	8.44	13.83
Ethnicity										
Malay	87	5899	3.7	2.84	4.93	301	20670	13.1	10.87	15.78
Chinese						1	42	9.8	1.47	44.25
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	124	35.4	14.22	64.43	1	124	35.4	14.22	64.43
School level										
Primary school	45	3315	5.5	3.88	7.87	133	10378	17.4	15.47	19.45
Secondary school	43	2708	2.8	2.08	3.64	170	10458	10.6	8.24	13.59
Class										
Standard 4	30	1877	9.4	4.13	19.97	59	4098	20.5	14.11	28.83
Standard 5	8	837	4.2	2.28	7.65	36	3274	16.5	11.62	22.82
Standard 6	7	601	3.0	1.45	6.20	38	3007	15.1	11.49	19.64
Form 1	9	697	3.5	1.79	6.72	28	2032	10.2	6.43	15.81
Form 2	9	478	2.5	1.10	5.36	39	2083	10.7	6.55	16.93
Form 3	14	692	3.4	2.30	5.13	34	1694	8.4	5.18	13.47
Form 4	3	175	0.9	0.30	2.66	34	2050	10.6	7.11	15.58
Form 5	8	666	3.4	1.25	8.88	35	2599	13.2	8.65	19.67
School session										
Morning session	59	3829	3.5	2.56	4.77	228	15039	13.7	11.19	16.76
Evening session	1	70	5.3	1.19	20.78	2	122	9.4	3.04	25.38
Morning and evening session	28	2124	4.5	2.88	6.96	73	5675	12.0	8.92	16.01
BMI-for-age status (BAZ)										
Thinness (<-2sd)	4	355	3.4	1.39	8.10	17	1201	11.5	7.07	18.22
Normal (≥-2sd - ≤+1sd)	72	4954	4.7	3.33	6.69	203	13805	13.2	10.49	16.45
Overweight (>+1sd - ≤+2sd)	7	430	1.8	0.83	3.85	36	2748	11.5	7.47	17.29
Obese (>+2sd)	5	284	1.5	0.54	3.98	47	3082	16.1	11.43	22.30
Height-for-age status (HAZ)										
Stunting (<-2sd)	8	640	4.0	1.52	10.23	33	2231	14.0	9.81	19.63
Normal (≥-2sd)	80	5382	3.8	2.87	4.97	270	18604	13.1	10.79	15.76

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	
Terengganu	1757	113929	72.0	70.16	73.80	282	17408	11.0	8.76	13.73
Locality of school										
Urban	608	38175	72.7	70.39	74.88	80	4860	9.3	6.08	13.84
Rural	1149	75754	71.7	69.15	74.08	202	12548	11.9	9.13	15.30
Sex										
Boys	792	55444	71.0	67.48	74.37	100	6678	8.6	6.43	11.30
Girls	965	58485	73.0	71.34	74.53	182	10730	13.4	10.45	17.00
Ethnicity										
Malay	1751	113505	72.1	70.27	73.87	281	17347	11.0	8.78	13.75
Chinese	5	383	90.2	55.75	98.53					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	42	11.9	0.83	68.70	1	60	17.3	1.20	78.21
School level										
Primary school	534	41874	70.1	67.90	72.18	53	4183	7.0	5.40	9.03
Secondary school	1223	72054	73.2	70.83	75.43	229	13225	13.4	10.80	16.59
Class										
Standard 4	163	12017	60.1	52.78	67.06	26	1992	10.0	6.33	15.37
Standard 5	175	14310	72.0	63.53	79.12	18	1458	7.3	4.31	12.21
Standard 6	196	15547	78.2	74.65	81.34	9	732	3.7	2.96	4.57
Form 1	203	13859	69.6	63.61	74.95	49	3332	16.7	11.97	22.88
Form 2	280	15126	77.5	69.62	83.88	35	1819	9.3	6.04	14.13
Form 3	301	14690	73.2	68.08	77.80	61	2987	14.9	10.66	20.41
Form 4	230	14450	74.9	67.22	81.31	44	2615	13.6	9.49	19.00
Form 5	209	13929	70.8	64.27	76.62	40	2473	12.6	8.41	18.38
School session										
Morning session	1212	79041	72.2	70.15	74.16	184	11567	10.6	8.30	13.36
Evening session	12	865	66.2	40.09	85.19	3	249	19.1	6.26	45.47
Morning and evening session	530	33817	71.6	68.01	75.00	95	5591	11.8	8.42	16.41
BMI-for-age status (BAZ)										
Thinness (<-2sd)	115	7829	75.1	68.52	80.65	16	1044	10.0	6.44	15.24
Normal (≥-2sd - ≤+1sd)	1152	74515	71.2	68.56	73.66	189	11418	10.9	8.39	14.06
Overweight (>+1sd - ≤+2sd)	286	17922	75.0	66.57	81.81	44	2811	11.8	7.81	17.32
Obese (>+2sd)	203	13597	71.2	64.53	77.06	33	2135	11.2	7.05	17.27
Height-for-age status (HAZ)										
Stunting (<-2sd)	165	10805	67.9	62.00	73.26	38	2240	14.1	9.25	20.83
Normal (≥-2sd)	1592	103124	72.5	70.49	74.39	244	15168	10.7	8.51	13.28

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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
Terengganu	175	11625	7.3	5.85	9.19	758	47594	30.1	26.99	33.37
Locality of school										
Urban	66	4065	7.8	4.50	13.03	247	14207	27.1	20.46	34.91
Rural	109	7560	7.1	5.88	8.66	511	33387	31.6	29.17	34.08
Sex										
Boys	92	6582	8.4	6.63	10.62	342	23258	29.7	26.05	33.66
Girls	83	5043	6.3	4.79	8.27	416	24336	30.4	26.37	34.86
Ethnicity										
Malay	173	11523	7.3	5.81	9.19	755	47366	30.1	27.01	33.35
Chinese	1	42	9.8	1.47	44.25	2	104	24.6	5.19	66.09
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	60	17.3	1.20	78.21	1	124	35.4	14.22	64.43
School level										
Primary school	52	4545	7.6	5.09	11.20	203	15316	25.6	21.51	30.20
Secondary school	123	7080	7.2	5.49	9.37	555	32278	32.8	29.64	36.13
Class										
Standard 4	28	2507	12.5	6.54	22.74	77	5103	25.5	15.66	38.79
Standard 5	14	1207	6.1	3.65	9.95	58	4874	24.5	19.68	30.09
Standard 6	10	830	4.2	2.46	6.96	68	5339	26.8	23.05	30.87
Form 1	24	1612	8.1	5.32	12.02	75	5151	25.7	18.45	34.69
Form 2	21	1095	5.6	3.96	7.87	134	7116	36.4	31.08	42.11
Form 3	32	1489	7.5	5.29	10.42	129	6289	31.5	27.28	36.04
Form 4	25	1450	7.5	4.83	11.60	115	6965	36.2	30.60	42.26
Form 5	21	1434	7.3	4.93	10.67	102	6757	34.4	28.47	40.77
School session										
Morning session	118	7952	7.3	5.44	9.66	506	31975	29.2	25.75	32.97
Evening session	1	80	6.1	1.35	23.46	7	534	40.9	22.66	61.98
Morning and evening session	56	3593	7.6	5.48	10.44	244	15026	31.8	26.77	37.23
BMI-for-age status (BAZ)										
Thinness (<-2sd)	12	933	8.9	4.97	15.56	41	2660	25.5	18.93	33.43
Normal (≥-2sd - ≤+1sd)	132	8686	8.3	6.40	10.67	530	33218	31.7	27.96	35.67
Overweight (>+1sd - ≤+2sd)	16	971	4.1	2.40	6.80	116	7081	29.6	24.08	35.82
Obese (>+2sd)	15	1035	5.5	3.19	9.16	71	4636	24.4	18.11	32.06
Height-for-age status (HAZ)										
Stunting (<-2sd)	18	1210	7.6	4.54	12.55	67	4308	27.2	22.49	32.45
Normal (≥-2sd)	157	10415	7.3	5.88	9.07	691	43287	30.4	26.98	34.07

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	
Terengganu	1457	96233	60.8	56.94	64.59	40	2751	1.7	1.31	2.31
Locality of school										
Urban	510	33381	63.6	53.94	72.35	10	798	1.5	0.80	2.87
Rural	947	62852	59.4	56.55	62.25	30	1953	1.8	1.36	2.50
Sex										
Boys	654	46636	59.6	54.64	64.34	26	1796	2.3	1.49	3.52
Girls	803	49597	62.0	57.52	66.37	14	956	1.2	0.59	2.41
Ethnicity										
Malay	1452	95789	60.8	56.99	64.58	40	2751	1.7	1.31	2.32
Chinese	3	278	65.6	22.38	92.63					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	2	165	47.3	26.68	68.90					
School level										
Primary school	496	38826	64.9	59.82	69.72	15	1110	1.9	1.23	2.79
Secondary school	961	57407	58.3	53.60	62.92	25	1642	1.7	1.13	2.45
Class										
Standard 4	162	11658	58.4	46.33	69.46	11	710	3.6	1.74	7.12
Standard 5	164	13636	68.6	64.60	72.33	1	162	0.8	0.11	5.72
Standard 6	170	13532	67.9	62.45	72.84	3	237	1.2	0.42	3.29
Form 1	187	12972	64.8	55.45	73.19	4	274	1.4	0.57	3.25
Form 2	205	11065	56.6	51.27	61.83	4	264	1.4	0.43	4.14
Form 3	237	11670	58.4	52.25	64.37	10	521	2.6	1.43	4.71
Form 4	168	10672	55.5	48.10	62.69	2	136	0.7	0.18	2.70
Form 5	164	11029	56.1	48.12	63.74	5	446	2.3	0.88	5.72
School session										
Morning session	1029	67467	61.7	57.21	65.95	29	1999	1.8	1.41	2.37
Evening session	10	693	53.0	32.82	72.31					
Morning and evening session	416	27927	59.0	52.37	65.40	11	753	1.6	0.89	2.82
BMI-for-age status (BAZ)										
Thinness (<-2sd)	96	6641	63.7	55.51	71.14	3	195	1.9	0.61	5.54
Normal (≥-2sd - ≤+1sd)	930	61120	58.3	53.75	62.75	26	1786	1.7	1.23	2.35
Overweight (>+1sd - ≤+2sd)	234	15422	64.5	57.28	71.12	7	437	1.8	0.67	4.85
Obese (>+2sd)	196	12984	68.4	60.51	75.32	4	333	1.8	0.66	4.55
Height-for-age status (HAZ)										
Stunting (<-2sd)	151	9844	62.1	55.38	68.42	7	485	3.1	1.60	5.77
Normal (≥-2sd)	1306	86389	60.7	56.42	64.80	33	2266	1.6	1.18	2.15

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	
Terengganu	814	52245	33.1	28.35	38.14	346	23024	14.6	11.72	17.97
Locality of school										
Urban	287	18880	36.0	29.34	43.31	123	7670	14.6	9.26	22.37
Rural	527	33364	31.6	25.77	38.04	223	15354	14.5	11.48	18.24
Sex										
Boys	373	25749	32.9	27.16	39.28	145	10855	13.9	10.88	17.55
Girls	441	26496	33.2	28.35	38.39	201	12169	15.2	12.10	19.01
Ethnicity										
Malay	811	52080	33.1	28.40	38.20	345	22961	14.6	11.72	18.04
Chinese	2	104	24.6	5.19	66.09	1	63	14.8	1.40	68.07
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	60	17.3	1.20	78.21					
School level										
Primary school	195	16002	26.8	18.32	37.37	154	11507	19.3	14.50	25.12
Secondary school	619	36242	36.9	33.06	40.87	192	11517	11.7	9.29	14.68
Class										
Standard 4	66	5700	28.3	12.87	51.41	65	4233	21.0	11.68	34.93
Standard 5	60	4660	23.7	16.26	33.11	42	3565	18.1	14.58	22.27
Standard 6	69	5642	28.3	21.55	36.18	47	3708	18.6	15.07	22.73
Form 1	79	5477	27.7	21.92	34.32	40	2908	14.7	10.01	21.08
Form 2	133	6973	35.9	29.58	42.71	36	1971	10.1	7.10	14.29
Form 3	163	7966	39.6	33.29	46.29	37	1833	9.1	6.93	11.90
Form 4	127	7936	41.1	35.50	47.04	41	2370	12.3	8.89	16.74
Form 5	117	7890	40.1	29.11	52.22	38	2436	12.4	6.78	21.55
School session										
Morning session	597	38577	35.3	30.14	40.75	244	15768	14.4	11.65	17.69
Evening session	2	103	7.9	1.65	30.49	6	507	38.8	21.07	60.09
Morning and evening session	214	13505	28.7	23.28	34.73	96	6749	14.3	10.21	19.74
BMI-for-age status (BAZ)										
Thinness (<-2sd)	53	3684	35.5	29.73	41.71	26	1886	18.2	13.97	23.30
Normal (≥-2sd - ≤+1sd)	563	36068	34.4	29.31	39.88	206	13529	12.9	9.97	16.53
Overweight (>+1sd - ≤+2sd)	108	6789	28.4	21.63	36.41	59	3769	15.8	11.09	22.00
Obese (>+2sd)	90	5704	30.2	24.39	36.78	54	3773	20.0	15.68	25.15
Height-for-age status (HAZ)										
Stunting (<-2sd)	71	4734	29.7	22.78	37.75	38	2537	15.9	10.02	24.36
Normal (≥-2sd)	743	47511	33.4	28.84	38.36	308	20487	14.4	11.81	17.48

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
Terengganu	563	34599	21.9	18.12	26.20	407	26963	17.1	15.11	19.21
Locality of school										
Urban	198	11203	21.4	13.05	33.00	145	9654	18.4	15.13	22.25
Rural	365	23395	22.1	18.92	25.75	262	17308	16.4	14.13	18.93
Sex										
Boys	214	14564	18.6	15.21	22.61	168	11585	14.8	12.33	17.71
Girls	349	20035	25.1	19.98	30.99	239	15378	19.3	15.96	23.06
Ethnicity										
Malay	561	34313	21.8	18.00	26.19	402	26736	17.0	15.02	19.19
Chinese	1	162	38.2	4.79	88.37	3	125	29.4	3.19	84.10
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	124	12.5	2.02	41.51	2	102	29.2	2.85	85.31
School level										
Primary school	132	10582	17.7	13.73	22.55	130	10669	17.9	14.58	21.68
Secondary school	431	24016	24.4	19.54	30.11	277	16294	16.6	14.29	19.16
Class										
Standard 4	44	3585	17.8	11.44	26.69	48	3742	18.6	13.79	24.60
Standard 5	40	3432	17.4	11.94	24.74	40	3312	16.8	14.66	19.23
Standard 6	48	3565	17.9	12.11	25.59	42	3615	18.1	14.22	22.83
Form 1	64	4030	20.4	14.32	28.13	53	3410	17.2	13.08	22.38
Form 2	93	4735	24.4	19.75	29.65	54	2812	14.5	11.39	18.20
Form 3	105	5158	25.6	19.07	33.54	66	3178	15.8	12.40	19.91
Form 4	86	5061	26.2	18.57	35.69	53	3286	17.0	13.27	21.62
Form 5	83	5033	25.6	18.28	34.59	51	3609	18.4	13.95	23.75
School session										
Morning session	368	23189	21.2	17.91	24.90	266	17631	16.1	13.77	18.77
Evening session	2	145	11.1	4.81	23.47	7	525	40.2	22.81	60.36
Morning and evening session	192	11203	23.8	16.70	32.69	133	8722	18.5	15.70	21.70
BMI-for-age status (BAZ)										
Thinness (<-2sd)	33	2307	22.2	16.44	29.34	20	1444	13.9	9.55	19.82
Normal (≥-2sd - ≤+1sd)	396	24285	23.2	19.26	27.59	271	17603	16.8	14.62	19.20
Overweight (>+1sd - ≤+2sd)	83	4919	20.6	14.53	28.38	66	4459	18.7	13.89	24.66
Obese (>+2sd)	51	3088	16.4	11.20	23.28	50	3457	18.3	12.63	25.83
Height-for-age status (HAZ)										
Stunting (<-2sd)	52	3113	19.5	13.41	27.61	43	2962	18.6	14.45	23.60
Normal (≥-2sd)	511	31485	22.2	18.42	26.40	364	24001	16.9	15.00	18.96

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	
Terengganu	94	6294	4.0	2.77	5.70	423	28528	18.1	15.87	20.47
Locality of school										
Urban	23	1455	2.8	1.21	6.25	142	9397	17.9	14.36	22.17
Rural	71	4839	4.6	3.17	6.58	281	19131	18.1	15.44	21.13
Sex										
Boys	50	3606	4.6	3.03	6.95	219	15814	20.2	16.89	24.03
Girls	44	2687	3.4	2.17	5.18	204	12713	15.9	13.93	18.14
Ethnicity										
Malay	94	6294	4.0	2.78	5.73	421	28362	18.0	15.79	20.52
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						2	165	47.3	26.68	68.90
School level										
Primary school	23	1972	3.3	1.45	7.36	130	10493	17.6	14.48	21.14
Secondary school	71	4321	4.4	3.09	6.22	293	18035	18.4	15.46	21.65
Class										
Standard 4	8	532	2.6	1.20	5.71	45	3333	16.6	12.27	21.99
Standard 5	7	696	3.5	1.45	8.38	42	3491	17.7	14.70	21.23
Standard 6	8	745	3.7	1.29	10.33	43	3668	18.4	11.90	27.35
Form 1	15	1000	5.1	2.80	8.96	53	3875	19.6	14.07	26.60
Form 2	10	539	2.8	1.60	4.76	60	3365	17.3	12.36	23.71
Form 3	18	981	4.9	2.53	9.20	71	3474	17.3	12.09	24.07
Form 4	10	599	3.1	1.51	6.28	50	3165	16.4	13.44	19.89
Form 5	18	1202	6.1	3.64	10.08	59	4157	21.1	15.57	28.04
School session										
Morning session	50	3299	3.0	1.77	5.10	297	20101	18.4	15.74	21.33
Evening session						3	214	16.4	3.73	49.82
Morning and evening session	44	2995	6.4	4.86	8.28	123	8212	17.4	13.81	21.76
BMI-for-age status (BAZ)										
Thinness (<-2sd)	4	254	2.4	0.97	6.05	32	2187	21.1	13.57	31.21
Normal (≥-2sd - ≤+1sd)	68	4607	4.4	2.96	6.48	274	18379	17.5	15.05	20.32
Overweight (>+1sd - ≤+2sd)	10	629	2.6	1.03	6.55	68	4781	20.0	15.58	25.37
Obese (>+2sd)	12	804	4.3	2.38	7.51	49	3181	16.9	12.12	22.97
Height-for-age status (HAZ)										
Stunting (<-2sd)	13	962	6.0	3.05	11.60	43	2832	17.8	13.35	23.30
Normal (≥-2sd)	81	5331	3.8	2.60	5.38	380	25695	18.1	15.85	20.55

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	Ice cream Percentage (%)	95% CI	
				Lower	Upper
Terengganu	496	31315	19.8	16.34	23.82
Locality of school					
Urban	201	11860	22.6	16.14	30.79
Rural	295	19455	18.4	14.77	22.72
Sex					
Boys	201	14035	18.0	15.20	21.07
Girls	295	17280	21.6	16.82	27.39
Ethnicity					
Malay	495	31274	19.9	16.41	23.89
Chinese	1	42	9.8	1.47	44.25
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	171	12498	20.9	15.88	27.04
Secondary school	325	18817	19.1	14.72	24.52
Class					
Standard 4	61	3921	19.5	12.70	28.70
Standard 5	54	4612	23.4	16.81	31.65
Standard 6	56	3965	19.9	12.32	30.48
Form 1	59	3954	20.0	14.94	26.22
Form 2	81	4210	21.7	16.96	27.25
Form 3	81	3949	19.6	13.19	28.21
Form 4	50	3146	16.3	10.11	25.25
Form 5	54	3558	18.1	12.15	26.07
School session					
Morning session	323	20617	18.8	14.65	23.91
Evening session	1	53	4.0	0.39	30.90
Morning and evening session	171	10586	22.5	17.99	27.69
BMI-for-age status (BAZ)					
Thinness (<-2sd)	26	1850	17.8	11.75	26.11
Normal ($\geq -2sd - \leq +1sd$)	335	21057	20.1	16.26	24.54
Overweight ($>+1sd - \leq +2sd$)	75	4474	18.7	13.34	25.70
Obese ($>+2sd$)	60	3934	20.8	16.77	25.62
Height-for-age status (HAZ)					
Stunting (<-2sd)	59	3751	23.6	17.48	30.95
Normal ($\geq -2sd$)	437	27564	19.4	15.96	23.37

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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	
Terengganu	526	37415	23.7	16.37	32.93	1481	95404	60.3	55.82	64.71
Locality of school										
Urban	243	17030	32.4	20.83	46.60	468	29396	55.9	48.81	62.80
Rural	283	20385	19.3	11.59	30.42	1013	66008	62.6	57.20	67.62
Sex										
Boys	269	19993	25.6	18.44	34.43	672	46742	59.9	55.16	64.49
Girls	257	17422	21.8	14.13	31.97	809	48662	60.8	55.57	65.74
Ethnicity										
Malay	523	37126	23.6	16.34	32.82	1475	94980	60.4	55.84	64.74
Chinese	1	42	9.8	1.47	44.25	5	383	90.2	55.75	98.53
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	2	247	70.8	14.69	97.15	1	42	11.9	0.83	68.70
School level										
Primary school	320	25352	42.5	39.04	46.03	420	32597	54.6	51.48	57.76
Secondary school	206	12063	12.3	7.72	18.92	1061	62807	63.8	57.77	69.44
Class										
Standard 4	116	8592	42.6	35.83	49.68	150	10699	53.1	48.07	57.99
Standard 5	71	6015	30.5	27.29	33.88	156	13008	65.9	64.67	67.15
Standard 6	133	10745	54.4	49.28	59.38	114	8890	45.0	39.40	50.71
Form 1	50	3243	16.3	9.30	26.88	174	12317	61.8	53.17	69.68
Form 2	56	3042	15.6	7.88	28.57	230	12322	63.2	52.43	72.83
Form 3	49	2353	11.7	7.12	18.72	272	13497	67.3	58.44	75.04
Form 4	27	1579	8.2	4.07	15.82	192	11791	61.2	54.73	67.29
Form 5	24	1847	9.4	5.00	16.94	193	12880	65.5	56.74	73.30
School session										
Morning session	390	26611	24.3	16.76	33.94	1024	65897	60.3	55.82	64.54
Evening session	3	186	14.2	6.57	28.06	15	1121	85.8	71.94	93.43
Morning and evening session	133	10618	22.5	12.39	37.31	440	28242	59.8	52.05	67.10
BMI-for-age status (BAZ)										
Thinness (<-2sd)	47	3318	31.8	23.45	41.54	93	6310	60.5	52.47	68.02
Normal (≥-2sd - ≤+1sd)	335	24101	23.0	15.33	33.03	992	63487	60.6	55.30	65.68
Overweight (>+1sd - ≤+2sd)	84	5799	24.4	15.96	35.43	224	14282	60.1	53.95	65.95
Obese (>+2sd)	59	4132	21.7	15.47	29.45	172	11325	59.3	52.67	65.70
Height-for-age status (HAZ)										
Stunting (<-2sd)	45	2905	18.2	12.09	26.42	159	10500	65.7	57.24	73.32
Normal (≥-2sd)	481	34510	24.3	16.59	34.08	1322	84904	59.7	54.92	64.39

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
Terengganu	422	25269	16.0	10.03	24.51
Locality of school					
Urban	123	6141	11.7	3.17	34.86
Rural	299	19129	18.1	11.75	26.92
Sex					
Boys	170	11277	14.5	8.83	22.77
Girls	252	13992	17.5	10.76	27.10
Ethnicity					
Malay	421	25209	16.0	10.06	24.57
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	60	17.3	1.20	78.21
School level					
Primary school	24	1709	2.9	2.26	3.62
Secondary school	398	23560	23.9	16.88	32.77
Class					
Standard 4	14	873	4.3	2.50	7.40
Standard 5	9	710	3.6	1.53	8.23
Standard 6	1	126	0.6	0.09	4.40
Form 1	65	4384	22.0	13.52	33.67
Form 2	77	4126	21.2	12.97	32.62
Form 3	89	4213	21.0	12.69	32.70
Form 4	92	5897	30.6	22.45	40.20
Form 5	75	4940	25.1	17.78	34.23
School session					
Morning session	267	16847	15.4	9.70	23.59
Evening session					
Morning and evening session	154	8362	17.7	8.71	32.67
BMI-for-age status (BAZ)					
Thinness (<-2sd)	12	800	7.7	4.03	14.13
Normal (≥-2sd - ≤+1sd)	289	17160	16.4	10.24	25.17
Overweight (>+1sd - ≤+2sd)	64	3684	15.5	8.52	26.55
Obese (>+2sd)	57	3626	19.0	12.29	28.19
Height-for-age status (HAZ)					
Stunting (<-2sd)	41	2571	16.1	8.96	27.20
Normal (≥-2sd)	381	22699	16.0	10.04	24.46

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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	
Terengganu	425	30668	19.4	14.14	25.94	511	33270	21.0	16.57	26.26
Locality of school										
Urban	135	10223	19.4	10.98	32.10	216	14130	26.9	21.79	32.66
Rural	290	20445	19.3	13.19	27.42	295	19141	18.1	12.96	24.68
Sex										
Boys	195	14408	18.4	13.54	24.53	199	14883	19.0	14.08	25.18
Girls	230	16260	20.3	14.18	28.19	312	18388	23.0	17.58	29.39
Ethnicity										
Malay	423	30481	19.3	14.11	25.94	504	32755	20.8	16.41	25.96
Chinese	1	63	14.8	1.40	68.07	5	350	82.5	27.48	98.31
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	124	35.4	14.22	64.43	2	165	47.3	26.68	68.90
School level										
Primary school	239	19076	31.8	25.88	38.45	185	14551	24.3	19.87	29.31
Secondary school	186	11592	11.8	8.59	15.93	326	18719	19.0	13.06	26.85
Class										
Standard 4	110	8264	41.0	33.60	48.79	68	5323	26.4	17.03	38.52
Standard 5	67	5844	29.4	17.95	44.21	57	4523	22.8	15.54	32.05
Standard 6	62	4969	25.0	18.76	32.48	60	4706	23.7	20.98	26.59
Form 1	34	2302	11.5	7.10	18.11	62	4288	21.4	13.67	31.96
Form 2	44	2694	13.8	7.50	24.09	71	3638	18.7	11.58	28.68
Form 3	48	2400	12.0	8.50	16.58	80	3933	19.6	12.92	28.64
Form 4	24	1508	7.8	4.89	12.30	50	2832	14.7	9.25	22.55
Form 5	36	2688	13.7	8.28	21.83	63	4029	20.5	12.63	31.62
School session										
Morning session	286	20266	18.5	13.29	25.21	359	23141	21.1	16.37	26.87
Evening session	5	326	25.0	13.07	42.40	4	238	18.2	8.73	34.04
Morning and evening session	134	10076	21.2	13.84	31.19	148	9892	20.9	14.73	28.68
BMI-for-age status (BAZ)										
Thinness (<-2sd)	25	1860	17.8	11.29	27.02	47	3144	30.2	22.86	38.61
Normal (≥-2sd - ≤+1sd)	293	20983	20.0	14.58	26.82	325	21131	20.2	15.62	25.59
Overweight (>+1sd - ≤+2sd)	62	4488	18.8	12.13	28.00	77	5094	21.4	15.20	29.13
Obese (>+2sd)	45	3337	17.4	10.23	28.13	61	3835	20.0	14.29	27.38
Height-for-age status (HAZ)										
Stunting (<-2sd)	46	3275	20.5	14.44	28.27	61	3754	23.5	15.87	33.34
Normal (≥-2sd)	379	27393	19.2	14.01	25.83	450	29516	20.7	16.28	26.02

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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	
Terengganu	732	46882	29.6	25.64	33.90	59	4080	2.6	1.64	4.02
Locality of school										
Urban	235	14731	28.0	20.02	37.72	9	565	1.1	0.66	1.73
Rural	497	32151	30.4	26.34	34.77	50	3516	3.3	2.10	5.21
Sex										
Boys	359	24763	31.6	27.48	36.11	27	1973	2.5	1.52	4.16
Girls	373	22119	27.6	22.96	32.82	32	2108	2.6	1.37	4.99
Ethnicity										
Malay	729	46757	29.7	25.75	33.92	59	4080	2.6	1.65	4.04
Chinese	3	125	29.4	3.19	84.10					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	198	15319	25.6	22.09	29.38	18	1476	2.5	1.29	4.65
Secondary school	534	31563	32.1	26.65	38.01	41	2605	2.6	1.45	4.79
Class										
Standard 4	52	3900	19.3	14.21	25.78	4	348	1.7	0.90	3.28
Standard 5	55	4478	22.5	16.51	29.95	7	648	3.3	1.57	6.64
Standard 6	91	6940	34.9	28.76	41.61	7	480	2.4	0.67	8.28
Form 1	84	5903	29.5	20.92	39.83	10	715	3.6	1.60	7.80
Form 2	125	6736	34.6	28.60	41.04	5	303	1.6	0.60	4.00
Form 3	136	6781	33.8	26.54	41.94	13	656	3.3	1.52	6.88
Form 4	109	6697	34.8	26.13	44.52	8	533	2.8	1.04	7.12
Form 5	80	5446	27.8	21.49	35.05	5	398	2.0	0.87	4.64
School session										
Morning session	535	34041	31.1	26.98	35.56	41	2698	2.5	1.37	4.40
Evening session	7	622	47.6	26.82	69.23	1	53	4.0	0.53	24.75
Morning and evening session	189	12134	25.6	19.55	32.73	17	1330	2.8	1.72	4.55
BMI-for-age status (BAZ)										
Thinness (<-2sd)	49	3290	31.5	23.79	40.49	1	126	1.2	0.14	9.92
Normal (≥-2sd - ≤+1sd)	487	31278	29.8	25.78	34.22	42	2845	2.7	1.80	4.07
Overweight (>+1sd - ≤+2sd)	113	6980	29.3	23.10	36.27	7	532	2.2	0.65	7.40
Obese (>+2sd)	83	5333	27.9	22.02	34.61	9	577	3.0	1.45	6.16
Height-for-age status (HAZ)										
Stunting (<-2sd)	72	4586	28.7	21.07	37.78	5	389	2.4	1.00	5.81
Normal (≥-2sd)	660	42296	29.7	25.70	34.05	54	3692	2.6	1.60	4.18

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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	
Terengganu	261	17121	10.8	8.75	13.29	301	19061	12.0	9.48	15.16
Locality of school										
Urban	67	4660	8.9	6.73	11.59	127	7988	15.2	10.43	21.62
Rural	194	12461	11.8	9.08	15.15	174	11073	10.5	8.05	13.50
Sex										
Boys	141	9674	12.4	9.95	15.25	138	9307	11.9	9.50	14.78
Girls	120	7447	9.3	7.04	12.19	163	9753	12.2	9.17	16.00
Ethnicity										
Malay	261	17121	10.9	8.78	13.38	299	18824	11.9	9.43	15.03
Chinese						2	236	55.8	11.46	92.46
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
School level										
Primary school	91	7017	11.7	8.09	16.67	78	6168	10.3	6.91	15.06
Secondary school	170	10104	10.3	8.02	13.05	223	12893	13.1	9.80	17.29
Class										
Standard 4	44	2833	14.0	5.59	31.07	29	2149	10.7	8.48	13.31
Standard 5	17	1536	7.7	4.65	12.57	27	2220	11.2	6.99	17.38
Standard 6	30	2648	13.3	8.40	20.49	22	1799	9.0	4.94	16.01
Form 1	29	2019	10.1	6.56	15.22	36	2322	11.6	7.29	17.97
Form 2	27	1428	7.3	5.25	10.14	54	2764	14.2	10.16	19.45
Form 3	39	1870	9.3	6.51	13.19	45	2218	11.1	7.14	16.74
Form 4	35	2101	10.9	6.78	17.07	33	2104	10.9	7.61	15.43
Form 5	40	2686	13.7	10.40	17.82	55	3486	17.8	11.24	26.95
School session										
Morning session	176	11527	10.5	8.12	13.57	211	13581	12.4	9.50	16.06
Evening session	2	145	11.1	3.71	28.77	2	162	12.4	1.94	50.19
Morning and evening session	83	5450	11.5	8.57	15.25	88	5317	11.2	8.43	14.76
BMI-for-age status (BAZ)										
Thinness (<-2sd)	16	1105	10.6	5.77	18.64	25	1559	15.0	8.84	24.17
Normal (≥-2sd - ≤+1sd)	182	11973	11.4	9.41	13.79	195	12449	11.9	9.44	14.82
Overweight (>+1sd - ≤+2sd)	37	2254	9.4	5.85	14.90	45	2682	11.2	7.53	16.45
Obese (>+2sd)	26	1789	9.4	5.36	15.81	36	2371	12.4	8.83	17.13
Height-for-age status (HAZ)										
Stunting (<-2sd)	19	1168	7.3	4.50	11.68	24	1635	10.2	6.74	15.24
Normal (≥-2sd)	242	15953	11.2	9.01	13.85	277	17426	12.2	9.59	15.49

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	Ice cream	95% CI	
			Percentage (%)	Lower	Upper
Terengganu	235	15460	9.8	7.22	13.07
Locality of school					
Urban	83	5307	10.1	4.96	19.45
Rural	152	10152	9.6	7.29	12.53
Sex					
Boys	92	6567	8.4	6.22	11.24
Girls	143	8892	11.1	7.72	15.71
Ethnicity					
Malay	235	15460	9.8	7.26	13.13
Chinese					
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	107	7651	12.8	8.73	18.30
Secondary school	128	7809	7.9	5.30	11.71
Class					
Standard 4	42	2508	12.4	6.41	22.75
Standard 5	28	2314	11.6	9.33	14.43
Standard 6	37	2829	14.2	8.62	22.58
Form 1	20	1447	7.2	3.58	14.07
Form 2	31	1633	8.4	6.19	11.25
Form 3	25	1309	6.5	3.20	12.87
Form 4	28	1679	8.7	4.86	15.14
Form 5	24	1741	8.9	5.55	13.90
School session					
Morning session	166	10716	9.8	6.64	14.22
Evening session					
Morning and evening session	69	4744	10.0	7.09	13.94
BMI-for-age status (BAZ)					
Thinness (<-2sd)	14	1033	9.9	6.66	14.51
Normal (≥-2sd - ≤+1sd)	157	10141	9.7	6.83	13.52
Overweight (>+1sd - ≤+2sd)	32	2139	9.0	5.57	14.12
Obese (>+2sd)	32	2146	11.2	7.53	16.39
Height-for-age status (HAZ)					
Stunting (<-2sd)	27	1845	11.6	7.76	16.86
Normal (≥-2sd)	208	13615	9.6	7.06	12.83

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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	
Terengganu	973	62577	39.6	35.39	43.93	1033	68519	43.3	39.25	47.51
Locality of school										
Urban	356	22516	42.9	35.75	50.44	378	24962	47.6	40.52	54.78
Rural	617	40061	37.9	33.19	42.87	655	43557	41.2	36.99	45.58
Sex										
Boys	407	28272	36.2	31.88	40.72	463	33392	42.7	36.84	48.84
Girls	566	34305	42.9	38.02	47.92	570	35126	43.9	40.02	47.91
Ethnicity										
Malay	968	62183	39.5	35.27	43.91	1031	68294	43.4	39.36	47.52
Chinese	3	146	34.4	7.37	77.62	2	225	53.0	10.33	91.70
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	2	247	80.4	16.43	98.84					
School level										
Primary school	254	20892	35.1	26.40	44.84	372	29231	49.1	41.92	56.23
Secondary school	719	41685	42.3	39.24	45.43	661	39288	39.9	36.56	43.28
Class										
Standard 4	100	7731	38.5	27.56	50.69	133	10034	49.9	39.75	60.13
Standard 5	78	6561	33.5	25.62	42.32	123	10475	53.4	43.94	62.64
Standard 6	76	6600	33.2	21.92	46.80	116	8722	43.9	30.62	58.06
Form 1	95	6312	31.5	25.41	38.40	133	9196	46.0	36.47	55.75
Form 2	139	7412	38.1	30.81	45.99	149	7989	41.1	35.49	46.92
Form 3	179	8688	43.2	37.05	49.56	145	7155	35.6	31.03	40.39
Form 4	148	8946	46.4	40.68	52.17	113	6954	36.1	30.12	42.44
Form 5	158	10328	52.5	46.15	58.80	121	7993	40.6	31.75	50.19
School session										
Morning session	680	43899	40.1	35.42	45.03	709	47288	43.2	38.63	47.95
Evening session	4	249	19.0	8.93	36.07	9	717	54.8	36.30	72.13
Morning and evening session	289	18429	39.0	32.89	45.56	313	20367	43.2	36.12	50.46
BMI-for-age status (BAZ)										
Thinness (<-2sd)	64	4621	44.3	32.59	56.71	71	4688	45.0	37.14	53.03
Normal (≥-2sd - ≤+1sd)	638	40752	38.9	34.65	43.26	688	45723	43.6	39.51	47.80
Overweight (>+1sd - ≤+2sd)	149	9219	38.9	33.10	45.06	154	10135	42.8	36.97	48.78
Obese (>+2sd)	121	7918	41.5	34.38	49.03	120	7972	41.8	33.05	51.11
Height-for-age status (HAZ)										
Stunting (<-2sd)	91	5783	36.3	29.02	44.34	114	7592	47.7	40.63	54.87
Normal (≥-2sd)	882	56794	39.9	35.39	44.67	919	60926	42.8	38.65	47.15

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	
Terengganu	62	4293	2.7	1.75	4.18	175	10929	6.9	5.65	8.43
Locality of school										
Urban	14	884	1.7	1.02	2.77	54	3009	5.7	3.67	8.86
Rural	48	3409	3.2	1.96	5.27	121	7919	7.5	6.17	9.07
Sex										
Boys	50	3463	4.4	2.72	7.15	78	5146	6.6	5.05	8.54
Girls	12	830	1.0	0.61	1.75	97	5782	7.2	5.58	9.32
Ethnicity										
Malay	62	4293	2.7	1.76	4.20	174	10868	6.9	5.63	8.45
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						1	60	19.6	1.16	83.57
School level										
Primary school	31	2352	3.9	2.20	6.99	47	3517	5.9	4.35	7.97
Secondary school	31	1941	2.0	1.13	3.42	128	7411	7.5	5.91	9.53
Class										
Standard 4	8	603	3.0	1.37	6.45	14	948	4.7	2.83	7.77
Standard 5	11	856	4.4	2.53	7.44	13	1012	5.2	2.56	10.11
Standard 6	12	893	4.5	2.15	9.14	20	1557	7.8	6.03	10.11
Form 1	11	760	3.8	1.35	10.22	25	1721	8.6	5.33	13.59
Form 2	7	402	2.1	0.64	6.48	21	1060	5.5	3.65	8.06
Form 3	7	347	1.7	0.62	4.75	33	1567	7.8	5.53	10.87
Form 4	4	242	1.3	0.36	4.31	29	1834	9.5	5.67	15.50
Form 5	2	190	1.0	0.24	3.87	20	1229	6.2	3.40	11.20
School session										
Morning session	45	3020	2.8	1.66	4.57	114	7047	6.4	4.99	8.28
Evening session	1	70	5.3	1.19	20.78	3	208	15.9	5.97	36.13
Morning and evening session	16	1203	2.5	1.38	4.66	58	3673	7.8	5.67	10.59
BMI-for-age status (BAZ)										
Thinness (<-2sd)	5	372	3.6	1.55	8.01	5	348	3.3	0.91	11.47
Normal (≥-2sd - ≤+1sd)	43	2915	2.8	1.74	4.40	124	7700	7.3	5.95	9.03
Overweight (>+1sd - ≤+2sd)	4	288	1.2	0.46	3.18	25	1415	6.0	3.29	10.61
Obese (>+2sd)	10	718	3.8	1.88	7.40	21	1465	7.7	4.57	12.62
Height-for-age status (HAZ)										
Stunting (<-2sd)	6	416	2.6	1.06	6.34	22	1496	9.4	5.94	14.55
Normal (≥-2sd)	56	3877	2.7	1.78	4.16	153	9433	6.6	5.39	8.13

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
Terengganu	560	35466	22.4	19.09	26.17
Locality of school					
Urban	168	9593	18.3	13.52	24.28
Rural	392	25873	24.5	20.87	28.50
Sex					
Boys	264	18176	23.3	18.75	28.47
Girls	296	17290	21.6	18.54	25.06
Ethnicity					
Malay	558	35350	22.5	19.16	26.15
Chinese	2	116	27.4	5.62	70.42
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others					
School level					
Primary school	149	10871	18.2	13.65	23.96
Secondary school	411	24595	25.0	21.36	28.95
Class					
Standard 4	62	4113	20.5	12.75	31.19
Standard 5	36	2746	14.0	8.58	22.02
Standard 6	51	4012	20.2	12.51	30.90
Form 1	66	4528	22.6	16.21	30.66
Form 2	100	5485	28.2	21.94	35.44
Form 3	109	5350	26.6	21.09	32.94
Form 4	71	4510	23.4	17.41	30.64
Form 5	65	4722	24.0	17.31	32.30
School session					
Morning session	378	23780	21.7	18.02	25.97
Evening session	3	162	12.4	2.68	42.29
Morning and evening session	178	11464	24.3	20.21	28.89
BMI-for-age status (BAZ)					
Thinness (<-2sd)	30	1932	18.5	11.36	28.75
Normal (≥-2sd - ≤+1sd)	386	24516	23.4	19.38	27.92
Overweight (>+1sd - ≤+2sd)	80	4955	20.9	16.21	26.54
Obese (>+2sd)	64	4063	21.3	16.77	26.67
Height-for-age status (HAZ)					
Stunting (<-2sd)	50	3204	20.1	16.34	24.55
Normal (≥-2sd)	510	32262	22.7	19.16	26.66

3.5 Physical activity among adolescents (Primary 4 To Secondary 5) In Terengganu

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3.5.1 Introduction

Physical activity is defined as any bodily movement produced by skeletal muscle that requires energy expenditure. According to World Health Organization (2010) and Malaysian Dietary Guidelines for Children and Adolescents (NCCFN, 2013), children and adolescents should accumulate 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 the physical activity patterns of Malaysian adolescents and the specific objectives as follows:

- To determine their physical activity level.
- To evaluate the five most preferred physical activities during their 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 PAQ-C mean score for the physical activity level for adolescent in Terengganu was 2.38 (95% CI: 2.28, 2.47) (**Table 3.5.1**). Overall, a total of 49.2% (95% CI: 42.17, 56.26) adolescents were physically active and 50.8% (95% CI: 43.74, 57.83) of them were not active. In terms of school locality, the prevalence of students who are active in urban areas were 58.4% (95% CI: 45.91, 69.86) and from rural areas were 44.8% (95% CI: 37.98, 51.73). The prevalence of being physically active was significantly higher among boys 64.1% (95% CI: 57.12, 70.74) compared to girls, 35.2% (95% CI: 27.18, 44.11). By school level, primary students [64.1% (95% CI: 56.19, 71.38)] showed a higher prevalence of being physically active than secondary students [40.8% (95% CI: 36.29, 45.46)]. In term of BMI-for-age status, there is no significant difference of being physically active among students who are thin [52.4% (95% CI: 39.50, 65.00)], normal [49.6% (95% CI: 42.36, 56.85)], overweight [51.4% (95% CI: 41.78, 60.82)] and obese [42.8% (95% CI: 35.33, 50.52)] (**Table 3.5.2**).

The most popular spare-time physical activity according to percentage of adolescents in Terengganu were walking for exercise [85.4% (95% CI: 83.54, 87.01)] (**Table 3.5.3**). The prevalence of students who do not attend/participated very rarely in PE class were 18.0% [95% (CI: 14.96, 21.53)] (**Table 3.5.4**). During school days, 26.2% (95% CI: 22.76, 29.98) of adolescents watched television, used the computer and played video games more than 2 hours per day (**Table 3.5.6**). Meanwhile, 40.0% (95% CI: 34.17, 46.04) of the adolescents engaged in these activities more than 2 hours during weekends (**Table 3.5.5**).

3.5.5 Discussion

The prevalence of being physically active among adolescents in Terengganu (49.2%) was higher than the national prevalence (44.6%). Boys and primary students had significantly higher prevalence of being physically active than girls and secondary 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 for more than 2 hours was higher during weekends than school days.

3.5.6 Conclusion

Based on the National Health and Morbidity Survey (2017), 50.8% of children and adolescents in Terengganu were physically inactive. The prevalence of physically inactive Malaysian adolescents was slightly lower compared to the Malaysian School-Based Nutrition Survey (2012), but 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, such as health promotion events, to promote physical activity among children and adolescents should be enhanced. A comprehensive surveillance system for monitoring physical activity should be developed to ensure compliance among children and adolescents.

Parents should be encouraged to be good role models; be active, limit the amount of sedentary and screen time behaviours; and monitor their children's activity and behaviours as well. Interviewing technique for physical activity assessment should be applied in future studies. Adolescents should be encouraged to get physically active in their daily life. Formulating a specific program 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 an active lifestyle, limit the amount of sedentary and screen time behaviors for their children. Improving techniques for physical activity assessment is necessary.

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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
TERENGGANU	2.38	2.28	2.47
Locality of school			
Urban	2.50	2.33	2.68
Rural	2.31	2.22	2.41
Sex			
Boys	2.61	2.51	2.70
Girls	2.16	2.03	2.28
Class			
Standard 4	2.62	2.43	2.81
Standard 5	2.54	2.49	2.59
Standard 6	2.59	2.45	2.73
Form 1	2.37	2.28	2.46
Form 2	2.33	2.24	2.42
Form 3	2.24	2.11	2.38
Form 4	2.22	2.06	2.37
Form 5	2.13	2.01	2.26
Ethnicity			
Malay	2.38	2.28	2.47
Chinese	2.28	1.93	2.64
Indian	-	-	-
Bumiputera Sabah	-	-	-
Bumiputera Sarawak	-	-	-
Others	2.29	1.89	2.70
School Category			
Primary	2.58	2.47	2.69
Secondary	2.26	2.20	2.32
BMI-for-age status (BAZ)			
Thinness (<-2sd)	2.46	2.33	2.59
Normal (≥-2sd - ≤+1sd)	2.38	2.28	2.49
Overweight (>+1sd - ≤+2sd)	2.36	2.24	2.47
Obese (>+2sd)	2.32	2.23	2.41
Height-for-age status (HAZ)			
Stunting (<-2sd)	2.27	2.15	2.39
Normal (≥-2sd)	2.39	2.29	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)

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
TERENGGANU	1040	71951	49.2	42.17	56.26	1216	74292	50.8	43.74	57.83
Locality of School										
Urban	404	27856	58.4	45.91	69.86	357	19860	41.6	30.14	54.09
Rural	636	44094	44.8	37.98	51.73	859	54432	55.2	48.27	62.02
Sex										
Boys	637	45467	64.1	57.12	70.47	376	25500	35.9	29.53	42.88
Girls	403	26484	35.2	27.18	44.11	840	48792	64.8	55.89	72.82
Class										
Standard 4	151	11309	65.9	54.65	75.58	88	5855	34.1	24.42	45.35
Standard 5	128	11102	64.3	54.71	72.89	76	6161	35.7	27.11	45.29
Standard 6	140	11359	62.3	55.05	69.07	88	6869	37.7	30.93	44.95
Form 1	125	8859	48.0	42.03	53.96	142	9610	52.0	46.04	57.97
Form 2	142	8041	43.2	35.77	50.86	206	10590	56.8	49.14	64.23
Form 3	153	7384	38.0	29.44	47.29	244	12067	62.0	52.71	70.56
Form 4	114	7264	40.1	31.13	49.73	180	10863	59.9	50.27	68.87
Form 5	87	6633	35.1	27.18	43.88	192	12276	64.9	56.12	72.82
Ethnicity										
Malay	1036	71582	49.2	42.21	56.19	1211	73951	50.8	43.81	57.79
Chinese	2	204	56.4	13.60	91.38	3	158	43.6	8.62	86.40
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	2	165	47.3	26.68	68.90	2	184	52.7	31.10	73.32
School Category										
Primary	419	33770	64.1	56.19	71.38	252	18885	35.9	28.62	43.81
Secondary	621	38180	40.8	36.29	45.46	964	55407	59.2	54.54	63.71
BMI-for-age status (BAZ)										
Thinness (<-2sd)	71	5218	52.4	39.50	65.00	74	4739	47.6	35.00	60.50
Normal (≥-2sd - ≤+1sd)	697	47931	49.6	42.36	56.85	805	48710	50.4	43.15	57.64
Overweight (>+1sd - ≤+2sd)	166	11230	51.4	41.78	60.82	176	10640	48.6	39.18	58.22
Obese (>+2sd)	106	7572	42.8	35.33	50.52	160	10137	57.2	49.48	64.67
Height-for-age status (HAZ)										
Stunting (<-2sd)	85	6244	42.6	31.94	53.91	140	8427	57.4	46.09	68.06
Normal (≥-2sd)	955	65707	49.9	43.05	56.84	1076	65865	50.1	43.16	56.95

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	2073	85.4	83.54	87.01
Jogging/Running	1961	81.9	78.21	85.03
Tagging	1804	75.5	68.12	81.63
Badminton	1726	73.2	66.98	78.58
Cycling	1480	63.6	53.16	72.97

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
TERENGGANU	453	28459	18.0	14.96	21.53	1508	97343	61.6	58.79	64.36
Locality of school										
Urban	126	7155	13.6	10.16	18.01	517	32481	61.8	58.13	65.33
Rural	327	21304	20.2	16.71	24.22	991	64862	61.5	57.69	65.22
Sex										
Boys	196	13493	17.3	13.44	21.99	652	45941	58.9	55.36	62.35
Girls	257	14967	18.7	14.86	23.28	856	51402	64.3	60.34	67.99
Class										
Standard 4	76	4979	24.8	13.76	40.47	128	9174	45.6	38.94	52.52
Standard 5	34	2681	13.7	10.72	17.32	147	12482	63.7	58.61	68.55
Standard 6	30	2133	10.8	7.06	16.15	160	12778	64.7	59.88	69.16
Form 1	38	2752	13.8	10.39	18.11	190	12826	64.3	59.18	69.18
Form 2	52	2872	14.7	10.62	19.99	251	13302	68.1	62.91	72.83
Form 3	74	3731	18.6	12.95	25.98	266	13063	65.1	59.89	70.04
Form 4	57	3575	18.5	11.38	28.58	197	12190	63.0	57.48	68.20
Form 5	92	5736	29.2	18.70	42.44	169	11529	58.6	48.73	67.86
Ethnicity										
Malay	450	28283	18.0	14.96	21.48	1502	96809	61.6	58.69	64.39
Chinese	2	116	27.4	5.62	70.42	3	245	57.8	17.70	89.74
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	60	17.3	1.20	78.21	3	289	82.7	21.79	98.80
School level										
Primary	140	9793	16.5	11.67	22.74	435	34433	57.9	54.89	60.90
Secondary	313	18666	18.9	15.33	23.17	1073	62910	63.8	60.38	67.16
BMI-for-age status (BAZ)										
Thinness (<-2sd)	34	2373	22.8	16.89	29.91	91	6059	58.1	46.13	69.19
Normal (≥-2sd - ≤+1sd)	299	18645	17.8	14.46	21.79	989	63479	60.7	57.63	63.70
Overweight (>+1sd - ≤+2sd)	63	3656	15.3	11.10	20.79	236	15171	63.6	57.52	69.29
Obese (>+2sd)	57	3785	19.8	14.67	26.28	191	12569	65.9	57.88	73.10
Height-for-age status (HAZ)										
Stunting (<-2sd)	65	4115	25.9	19.89	32.93	139	8981	56.5	49.44	63.25
Normal (≥-2sd)	388	24344	17.1	14.21	20.51	1369	88362	62.2	59.44	64.86

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
TERENGGANU	468	32190	20.4	17.44	23.66
Locality of school					
Urban	191	12930	24.6	20.09	29.75
Rural	277	19260	18.3	15.34	21.62
Sex					
Boys	264	18564	23.8	20.62	27.30
Girls	204	13627	17.0	12.75	22.39
Class					
Standard 4	75	5945	29.6	19.01	42.92
Standard 5	54	4424	22.6	19.27	26.29
Standard 6	58	4851	24.5	18.99	31.10
Form 1	61	4358	21.9	17.50	26.96
Form 2	61	3367	17.2	12.11	23.92
Form 3	70	3261	16.3	11.28	22.87
Form 4	58	3583	18.5	11.41	28.63
Form 5	31	2401	12.2	9.15	16.11
Ethnicity					
Malay	467	32127	20.4	17.44	23.80
Chinese	1	63	14.8	1.40	68.07
Indian	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-
Others	-	-	-	-	-
School level					
Primary	187	15220	25.6	21.99	29.58
Secondary	281	16970	17.2	14.62	20.17
BMI-for-age status (BAZ)					
Thinness (<-2sd)	27	1997	19.1	12.04	29.07
Normal (≥-2sd - ≤+1sd)	328	22450	21.5	17.91	25.51
Overweight (>+1sd - ≤+2sd)	73	5024	21.1	16.69	26.22
Obese (>+2sd)	40	2720	14.3	11.26	17.89
Height-for-age status (HAZ)					
Stunting (<-2sd)	40	2807	17.6	12.96	23.57
Normal (≥-2sd)	428	29383	20.7	17.79	23.91

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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
TERENGGANU	1426	95035	60.0	53.96	65.83	1006	63247	40.0	34.17	46.04
Locality of school	508	33838	64.4	52.24	75.01	325	18676	35.6	24.99	47.76
Urban	918	61197	57.9	51.56	63.92	681	44571	42.1	36.08	48.44
Rural										
Sex										
Boys	669	47325	60.6	55.28	65.61	444	30819	39.4	34.39	44.72
Girls	757	47710	59.5	51.10	67.44	562	32428	40.5	32.56	48.90
Class										
Standard 4	224	15960	79.2	72.51	84.54	56	4203	20.8	15.46	27.49
Standard 5	180	14865	75.5	70.09	80.26	55	4816	24.5	19.74	29.91
Standard 6	165	13035	65.6	59.85	70.87	85	6844	34.4	29.13	40.15
Form 1	176	11988	60.1	54.32	65.68	113	7946	39.9	34.32	45.68
Form 2	187	10225	52.4	41.14	63.51	176	9270	47.6	36.49	58.86
Form 3	194	9411	46.8	39.58	54.14	217	10701	53.2	45.86	60.42
Form 4	152	9597	49.6	42.64	56.58	160	9751	50.4	43.42	57.36
Form 5	148	9953	50.6	42.93	58.25	144	9714	49.4	41.75	57.07
Ethnicity										
Malay	1422	94651	60.1	53.98	65.91	1000	62858	39.9	34.09	46.02
Chinese	2	137	32.4	5.23	80.58	4	287	67.6	19.42	94.77
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	2	247	70.8	14.69	97.15	2	102	29.2	2.85	85.31
School level										
Primary	569	43860	73.4	70.68	76.02	196	15863	26.6	23.98	29.32
Secondary	857	51175	51.9	48.05	55.77	810	47383	48.1	44.23	51.95
BMI-for-age status (BAZ)										
Thinness (<-2sd)	102	7257	70.1	59.63	78.80	49	3097	29.9	21.20	40.37
Normal (≥-2sd - ≤+1sd)	936	62190	59.3	52.50	65.70	684	42741	40.7	34.30	47.50
Overweight (>+1sd - ≤+2sd)	223	14630	61.5	53.91	68.52	148	9169	38.5	31.48	46.09
Obese (>+2sd)	164	10892	56.9	49.95	63.65	125	8240	43.1	36.35	50.05
Height-for-age status (HAZ)										
Stunting (<-2sd)	143	9525	59.6	50.12	68.46	102	6450	40.4	31.54	49.88
Normal (≥-2sd)	1283	85511	60.1	54.18	65.72	904	56796	39.9	34.28	45.82

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
TERENGGANU	1804	116366	73.8	70.02	77.24	619	41333	26.2	22.76	29.98
Locality of school										
Urban	639	39792	76.3	68.64	82.55	189	12366	23.7	17.45	31.36
Rural	1165	76573	72.6	68.35	76.39	430	28967	27.4	23.61	31.65
Sex										
Boys	783	54396	69.8	65.86	73.54	327	23493	30.2	26.46	34.14
Girls	1021	61970	77.6	72.37	82.16	292	17840	22.4	17.84	27.63
Class										
Standard 4	215	14535	72.5	59.04	82.86	64	5506	27.5	17.14	40.96
Standard 5	186	15576	79.1	73.01	84.19	49	4104	20.9	15.81	26.99
Standard 6	196	15517	78.6	72.66	83.55	52	4224	21.4	16.45	27.34
Form 1	214	14691	73.6	64.71	80.94	75	5265	26.4	19.06	35.29
Form 2	257	13557	69.6	60.78	77.19	106	5920	30.4	22.81	39.22
Form 3	295	14271	71.1	62.02	78.82	115	5788	28.9	21.18	37.98
Form 4	213	13147	68.6	59.08	76.85	95	6005	31.4	23.15	40.92
Form 5	228	15072	76.9	69.52	82.97	63	4521	23.1	17.03	30.48
Ethnicity										
Malay	1796	115675	73.7	69.92	77.19	617	41250	26.3	22.81	30.08
Chinese	4	341	80.4	30.58	97.44	2	83	19.6	2.56	69.42
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	4	349	100.0	100.00	100.00	-	-	-	-	-
School level										
Primary	597	45628	76.7	72.37	80.59	165	13835	23.3	19.41	27.63
Secondary	1207	70737	72.0	66.83	76.66	454	27498	28.0	23.34	33.17
BMI-for-age status (BAZ)										
Thinness (<-2sd)	116	7882	75.6	64.71	83.94	36	2546	24.4	16.06	35.29
Normal (≥-2sd - ≤+1sd)	1190	76301	73.0	68.36	77.20	424	28207	27.0	22.80	31.64
Overweight (>+1sd - ≤+2sd)	287	18267	76.9	70.44	82.35	83	5479	23.1	17.65	29.56
Obese (>+2sd)	210	13850	73.1	65.40	79.59	76	5102	26.9	20.41	34.60
Height-for-age status (HAZ)										
Stunting (<-2sd)	176	11365	71.4	64.66	77.29	68	4555	28.6	22.71	35.34
Normal (≥-2sd)	1628	105001	74.1	70.32	77.48	551	36779	25.9	22.52	29.68

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

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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 supplements intake among adolescence in Terengganu was 44.9% (95% CI: 35.85, 54.25) (**Table 3.6.1**) and 29.3% (95% CI: 23.94, 35.25) (**Table 3.6.5**). There was no significant difference of vitamin/mineral and food supplement intakes between boys and girls, ethnicity, school classes and localities (**Table 3.6.1 and 3.6.5**). In average, the vitamin/mineral and food supplements were consumed everyday by 14.6% (95% CI 10.99, 19.03) and 8.5% (6.01, 11.79) by adolescents respectively (**Table 3.6.4 and Table 3.6.8**). The most commonly consumed vitamin/minerals and food supplements were Vitamin C 37.4% (95% CI: 29.26, 46.34) (**Table 3.6.2**) and bee product 20.7% (95% CI: 15.99, 26.29) (**Table 3.6.6**). The main reason for taking vitamin/minerals and food supplements was due to parent's advised 42.7% (95% CI: 35.7, 50.0) (**Table 3.6.3**) and 27.5% (95% CI: 22.4, 33.2) (**Table 3.6.7**).

3.6.4 Discussions

The prevalence of taking vitamin/mineral and food supplements among adolescents in Terengganu was lower than national prevalence, which was 44.7% (95% CI: 42.49, 46.91) and 30.6% (95% CI: 28.90, 32.43). The consumption of Vitamin C and Bee Product were significantly higher compared with the other types of vitamin/mineral and food supplement and this result were consistent with the national finding. Finding from the survey in Terengganu showed that parent's advised was the main and significant reason for taking vitamin/mineral and food supplements among adolescents. It suggests the parents as strong influencer for food supplement and vitamin intake of the children.

3.6.5 Conclusions

Overall findings from this survey showed that approximate four and three of ten adolescents in Terengganu took vitamin / mineral and food supplements. Every four and three of ten parents influenced children's intake of vitamin/ mineral and food supplements. Vitamin C and Bee product remain as the main type of vitamin and food supplement consumed by adolescents in Terengganu.

3.6.6 Recommendation

Advocating adolescents to eat balanced and healthy meals is the main priority in designing health policy. However, the Ministry of Health should also establish guidelines, regulations, and policy of food supplements and vitamin/mineral 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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Table 3.6.1: Prevalence of adolescents taking vitamin/ mineral supplements by socio-demographic characteristic

Characteristic	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
Terengganu	1019	71024	44.9	35.85	54.25	1411	87240	55.1	45.75	64.15
Locality of School										
Urban	414	28949	55.2	37.52	71.67	417	23484	44.8	28.33	62.48
Rural	605	42075	39.8	31.53	48.61	994	63756	60.2	51.39	68.47
Sex										
Boys	495	36859	47.0	37.59	56.66	621	41538	53.0	43.34	62.41
Girls	524	34164	42.8	33.57	52.51	790	45702	57.2	47.49	66.43
Class										
Standard 4	181	13857	68.9	53.93	80.70	98	6263	31.1	19.30	46.07
Standard 5	152	12776	64.9	59.33	70.03	82	6921	35.1	29.97	40.67
Standard 6	161	12888	64.6	56.69	71.85	90	7051	35.4	28.15	43.31
Remove class										
Form 1	117	7977	40.0	31.23	49.49	172	11960	60.0	50.51	68.77
Form 2	109	6111	31.3	25.72	37.41	255	13429	68.7	62.59	74.28
Form 3	129	6362	31.8	25.68	38.59	280	13654	68.2	61.41	74.32
Form 4	88	5359	27.7	20.57	36.17	224	13989	72.3	63.83	79.43
Form 5	82	5694	29.0	20.24	39.57	210	13973	71.0	60.43	79.76
Ethnicity										
Malay	1014	70498	44.8	35.81	54.07	1406	86992	55.2	45.93	64.19
Chinese	2	236	55.8	11.46	92.46	4	188	44.2	7.54	88.54
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	3	289	82.7	21.79	98.80	1	60	17.3	1.20	78.21
BMI-for age status (BAZ)										
Thinness (<-2sd)	75	5321	51.0	39.79	62.15	77	5107	49.0	37.85	60.21
Normal (≥-2sd - ≤+1sd)	687	47777	45.6	35.93	55.54	930	57078	54.4	44.46	64.07
Overweight (>+1sd - ≤+2sd)	141	9918	41.6	31.86	52.04	231	13923	58.4	47.96	68.14
Obese (>+2sd)	115	7942	41.6	33.20	50.60	173	11131	58.4	49.40	66.80
Height-for-age status (HAZ)										
Stunting (<-2sd)	107	7324	46.2	34.68	58.18	136	8523	53.8	41.82	65.32
Normal (≥-2sd)	912	63700	44.7	35.76	54.05	1275	78717	55.3	45.95	64.24

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

Characteristic	Multivitamin					Vitamin C				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	75	5059	3.2	2.49	4.09	844	59210	37.4	29.26	46.34
Locality of School										
Urban	33	2238	4.3	3.23	5.62	328	22889	43.7	27.97	60.81
Rural	42	2821	2.7	1.92	3.68	516	36321	34.3	26.10	43.55
Sex										
Boys	39	2594	3.3	2.47	4.43	378	28847	36.9	28.40	46.20
Girls	36	2465	3.1	2.11	4.48	466	30363	38.0	29.61	47.08
Class										
Standard 4	6	532	2.7	1.36	5.15	157	11883	59.5	47.47	70.47
Standard 5	8	737	3.7	2.22	6.17	137	11459	57.8	53.26	62.30
Standard 6	12	1009	5.1	3.59	7.10	136	10871	54.5	44.07	64.59
Remove class										
Form 1	9	601	3.0	1.32	6.72	94	6396	32.1	25.13	39.93
Form 2	13	781	4.0	2.94	5.44	80	4417	22.7	18.29	27.71
Form 3	11	513	2.6	1.20	5.36	108	5364	26.7	21.43	32.66
Form 4	10	520	2.7	0.90	7.76	69	4258	22.0	16.42	28.83
Form 5	6	366	1.9	0.81	4.22	63	4562	23.2	15.44	33.32
Ethnicity										
Malay	75	5059	3.2	2.50	4.12	840	58726	37.3	29.22	46.12
Chinese						2	236	55.8	11.46	92.46
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						2	247	70.8	14.69	97.15
BMI-for age status (BAZ)										
Thinness (<-2sd)	9	504	4.9	2.87	8.19	62	4464	43.3	32.66	54.58
Normal (≥ -2sd - ≤+1sd)	50	3364	3.2	2.43	4.22	578	40300	38.4	30.05	47.50
Overweight (> +1sd - ≤+2sd)	8	552	2.3	0.84	6.23	111	8045	33.7	25.12	43.60
Obese (> +2sd)	8	640	3.3	1.55	7.09	92	6335	33.1	23.67	44.14
Height-for - age status (HAZ)										
Stunting (<-2sd)	9	512	3.2	1.74	5.97	99	6657	42.2	31.71	53.36
Normal (≥-2sd)	66	4547	3.2	2.40	4.23	745	52553	36.9	28.79	45.78

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

Characteristic	Iron					Others				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	120	8429	5.3	4.18	6.76	157	10577	6.7	5.38	8.27
Locality of School										
Urban	50	3576	6.8	4.87	9.49	59	4112	7.9	5.92	10.33
Rural	70	4853	4.6	3.49	6.00	98	6465	6.1	4.63	8.01
Sex										
Boys	83	5955	7.6	5.97	9.64	88	6209	7.9	5.83	10.70
Girls	37	2474	3.1	2.05	4.65	69	4368	5.5	3.72	7.94
Class										
Standard 4	25	1745	8.7	6.42	11.80	14	941	4.7	3.04	7.22
Standard 5	15	1290	6.5	3.41	12.07	20	1738	8.8	3.96	18.34
Standard 6	18	1507	7.6	5.03	11.20	24	1760	8.8	4.48	16.68
Remove class										
Form 1	16	1150	5.8	2.52	12.66	16	1169	5.9	3.53	9.59
Form 2	18	1001	5.1	2.52	10.16	21	1182	6.1	3.84	9.45
Form 3	12	583	2.9	1.21	6.77	20	992	4.9	3.22	7.47
Form 4	7	504	2.6	1.09	6.11	19	1268	6.6	3.54	11.83
Form 5	9	650	3.3	0.96	10.74	23	1527	7.8	4.98	11.90
Ethnicity										
Malay	120	8429	5.4	4.20	6.80	156	10535	6.7	5.38	8.28
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	42	11.9	0.83	68.70					
BMI-for age status (BAZ)										
Thinness (<-2sd)	7	491	4.8	1.94	11.18	15	1077	10.4	7.09	15.12
Normal ($\geq -2sd - \leq +1sd$)	76	5339	5.1	3.64	7.07	95	6380	6.1	4.86	7.58
Overweight ($> +1sd - \leq +2sd$)	22	1468	6.2	3.15	11.70	28	1917	8.0	5.20	12.24
Obese ($> +2sd$)	15	1131	5.9	3.44	9.96	19	1203	6.3	4.12	9.48
Height-for - age status (HAZ)										
Stunting (<-2sd)	10	875	5.5	2.94	10.19	15	1103	7.0	3.94	12.10
Normal ($\geq -2sd$)	110	7554	5.3	4.13	6.79	142	9473	6.6	5.36	8.22

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

Characteristic	Doctor's Instruction					Parents' advice				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	176	12844	18.2	14.39	22.67	423	30184	42.7	35.69	49.98
Locality of School										
Urban	72	5376	18.6	15.16	22.69	205	14467	50.1	43.68	56.61
Rural	104	7469	17.8	12.26	25.23	218	15717	37.5	28.23	47.87
Sex										
Boys	87	6889	18.8	13.95	24.96	185	14341	39.2	31.71	47.31
Girls	89	5956	17.4	13.97	21.54	238	15844	46.4	38.86	54.06
Class										
Standard 4	45	3497	25.2	19.31	32.25	93	7304	52.7	45.96	59.36
Standard 5	32	2687	21.5	13.57	32.26	72	6356	50.8	38.13	63.34
Standard 6	23	1911	14.8	9.16	23.12	87	6761	52.5	42.01	62.70
Remove class	-	-	-	-	-	-	-	-	-	-
Form 1	34	2401	30.1	21.20	40.81	35	2324	29.1	19.69	40.81
Form 2	11	631	10.4	5.57	18.61	43	2369	39.1	28.62	50.59
Form 3	16	765	12.0	7.31	19.18	43	2017	31.7	22.88	42.09
Form 4	9	547	10.2	5.35	18.64	31	1859	34.7	24.94	45.90
Form 5	6	404	7.1	2.36	19.45	19	1195	21.0	12.95	32.16
Ethnicity										
Malay	176	12844	18.3	14.51	22.81	421	30019	42.8	35.72	50.12
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	2	165	57.2	38.36	74.16
BMI-for age status (BAZ)										
Thinness (<-2sd)	11	712	13.6	6.49	26.41	37	2654	50.8	39.69	61.88
Normal (≥ - 2sd - ≤+ 1sd)	117	8587	18.0	13.36	23.86	289	20418	42.9	35.22	50.85
Overweight (> +1sd - ≤+ 2sd)	24	1695	17.1	11.97	23.80	59	4376	44.1	32.91	55.96
Obese (> + 2sd)	23	1786	22.7	16.76	29.96	38	2737	34.8	24.54	46.62
Height-for - age status (HAZ)										
Stunting (<-2sd)	24	1823	24.9	16.58	35.58	48	3365	45.9	35.80	56.44
Normal (≥-2sd)	152	11022	17.4	13.70	21.82	375	26820	42.3	35.21	49.74

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

Characteristic	Self awareness					Influences by friends				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	282	18821	26.6	21.53	32.41	19	1336	1.9	1.07	3.32
Locality of School										
Urban	97	6539	22.7	17.49	28.83	3	152	0.5	0.08	3.19
Rural	185	12282	29.3	22.21	37.63	16	1184	2.8	1.82	4.38
Sex										
Boys	156	10935	29.9	23.66	37.01	13	921	2.5	1.37	4.60
Girls	126	7886	23.1	17.47	29.84	6	415	1.2	0.47	3.12
Class										
Standard 4	33	2215	16.0	10.67	23.26	2	156	1.1	0.25	4.97
Standard 5	35	2870	22.9	16.22	31.38	2	123	1.0	0.31	3.05
Standard 6	31	2573	20.0	16.58	23.84	4	317	2.5	1.05	5.63
Remove class	-	-	-	-	-	-	-	-	-	-
Form 1	33	2237	28.0	20.12	37.61	4	296	3.7	1.34	9.87
Form 2	37	2081	34.3	22.82	47.98	-	-	-	-	-
Form 3	44	2229	35.0	25.85	45.47	3	160	2.5	0.70	8.64
Form 4	32	1966	36.7	30.84	42.93	1	63	1.2	0.13	10.06
Form 5	37	2651	46.6	33.87	59.71	3	222	3.9	1.44	10.09
Ethnicity										
Malay	281	18659	26.6	21.42	32.48	19	1336	1.9	1.07	3.35
Chinese	1	162	68.5	9.46	97.84	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-
BMI-for age status (BAZ)										
Thinness (<-2sd)	17	1136	21.8	10.46	39.84	1	52	1.0	0.12	7.96
Normal (≥ - 2sd - ≤+ 1sd)	189	12665	26.6	21.49	32.39	14	1034	2.2	1.12	4.18
Overweight (> +1sd - ≤+ 2sd)	40	2718	27.4	17.42	40.32	3	176	1.8	0.46	6.60
Obese (> + 2sd)	36	2302	29.2	19.19	41.84	1	75	1.0	0.11	7.51
Height-for - age status (HAZ)										
Stunting (<-2sd)	24	1488	20.3	11.71	32.90	1	53	0.7	0.10	5.11
Normal (≥-2sd)	258	17333	27.3	22.14	33.24	18	1283	2.0	1.12	3.64

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

Characteristic	Count	Estimated population	Prevalence (%)	Others	
				95% CI Lower	Upper
Terengganu	81	5225	7.4	5.21	10.37
Locality of School					
Urban	25	1512	5.2	3.12	8.68
Rural	56	3713	8.9	5.97	12.98
Sex					
Boys	33	2272	6.2	4.10	9.31
Girls	48	2953	8.6	5.48	13.38
Class					
Standard 4	5	332	2.4	1.35	4.23
Standard 5	6	365	2.9	0.84	9.60
Standard 6	12	1036	8.0	4.70	13.41
Remove class	-	-	-	-	-
Form 1	7	483	6.0	2.75	12.78
Form 2	10	589	9.7	4.50	19.72
Form 3	16	810	12.7	6.33	23.99
Form 4	13	804	15.0	10.20	21.52
Form 5	12	806	14.2	8.32	23.07
Ethnicity					
Malay	80	5101	7.3	5.06	10.33
Chinese	-	-	-	-	-
Indian	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-
Others	1	124	42.8	25.84	61.64
BMI-for age status (BAZ)					
Thinness (<-2sd)	6	501	9.6	4.14	20.65
Normal ($\geq -2sd - \leq +1sd$)	55	3511	7.4	4.64	11.51
Overweight ($> +1sd - \leq +2sd$)	10	607	6.1	3.07	11.81
Obese ($> +2sd$)	10	607	7.7	3.40	16.51
Height-for - age status (HAZ)					
Stunting (<-2sd)	7	433	5.9	2.69	12.49
Normal ($\geq -2sd$)	74	4792	7.6	5.23	10.80

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

Characteristic	Everyday					5 to 6 times per week				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	324	22954	14.6	10.99	19.03	141	9904	6.3	4.44	8.82
Locality of School										
Urban	131	9289	17.7	12.16	25.12	46	3094	5.9	3.33	10.26
Rural	193	13665	13.0	8.98	18.39	95	6810	6.5	4.18	9.87
Sex										
Boys	139	10203	13.1	10.15	16.80	90	6733	8.7	5.87	12.59
Girls	185	12751	16.0	11.55	21.62	51	3171	4.0	2.65	5.90
Class										
Standard 4	72	5591	28.1	20.10	37.86	31	2266	11.4	6.94	18.17
Standard 5	53	4457	22.8	21.12	24.48	16	1445	7.4	5.41	9.99
Standard 6	54	4166	20.9	14.56	29.05	32	2513	12.6	9.07	17.25
Remove class										
Form 1	34	2281	11.4	8.39	15.42	14	999	5.0	2.38	10.26
Form 2	26	1460	7.5	4.80	11.63	17	896	4.6	2.67	7.89
Form 3	27	1274	6.3	4.12	9.66	17	851	4.2	2.39	7.43
Form 4	27	1659	8.6	5.23	13.74	10	625	3.2	1.61	6.38
Form 5	31	2066	10.5	7.68	14.32	4	310	1.6	0.64	3.84
Ethnicity										
Malay	323	22912	14.6	11.00	19.13	140	9780	6.2	4.43	8.69
Chinese										
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others	1	42	11.9	0.83	68.70	1	124	35.4	14.22	64.43
BMI-for age status (BAZ)										
Thinness (<-2sd)	30	2207	21.3	15.29	28.86	9	621	6.0	2.35	14.44
Normal (≥ - 2sd - ≤+ 1sd)	215	14947	14.3	10.42	19.29	103	7285	7.0	4.65	10.30
Overweight (> +1sd - ≤+ 2sd)	41	3203	13.6	9.30	19.34	17	1199	5.1	2.68	9.40
Obese (> + 2sd)	37	2531	13.3	9.70	17.97	12	799	4.2	2.17	7.97
Height-for - age status (HAZ)										
Stunting (<-2sd)	42	2810	17.7	12.40	24.72	14	951	6.0	3.37	10.48
Normal (≥-2sd)	282	20144	14.2	10.67	18.66	127	8953	6.3	4.36	9.05

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

Characteristic	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
Terengganu	248	17062	10.8	8.69	13.40	406	28143	17.8	14.37	21.95
Locality of School										
Urban	106	7297	13.9	10.15	18.82	164	11538	22.0	15.27	30.68
Rural	142	9765	9.3	7.46	11.47	242	16605	15.8	12.87	19.17
Sex										
Boys	136	10158	13.1	10.41	16.27	189	14024	18.0	14.29	22.51
Girls	112	6905	8.6	6.30	11.73	217	14120	17.7	13.54	22.71
Class										
Standard 4	37	2794	14.1	8.76	21.81	55	3840	19.3	12.68	28.34
Standard 5	34	2690	13.7	10.81	17.30	63	5391	27.5	18.25	39.26
Standard 6	39	3384	17.0	11.49	24.35	61	4852	24.3	19.62	29.77
Remove class										
Form 1	28	1879	9.4	5.95	14.62	52	3701	18.6	14.44	23.54
Form 2	33	1876	9.7	6.48	14.22	47	2651	13.7	10.12	18.26
Form 3	36	1732	8.6	5.18	14.06	53	2674	13.3	9.66	18.11
Form 4	25	1553	8.0	5.76	11.09	36	2281	11.8	8.03	16.97
Form 5	16	1153	5.9	3.24	10.48	39	2753	14.1	8.27	22.89
Ethnicity										
Malay	248	17062	10.9	8.72	13.49	404	27858	17.8	14.32	21.80
Chinese						1	162	38.2	4.79	88.37
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						1	124	35.4	14.22	64.43
BMI-for age status (BAZ)										
Thinness (<-2sd)	18	1371	13.2	8.82	19.36	32	2152	20.8	15.24	27.64
Normal (≥ - 2sd - ≤+ 1sd)	167	11478	11.0	8.39	14.23	261	18201	17.4	13.80	21.69
Overweight (> +1sd - ≤+ 2sd)	38	2404	10.2	6.90	14.76	65	4412	18.7	13.84	24.71
Obese (> + 2sd)	25	1810	9.5	6.64	13.45	48	3378	17.8	11.67	26.09
Height-for - age status (HAZ)										
Stunting (<-2sd)	23	1646	10.4	5.52	18.71	41	2906	18.3	13.47	24.48
Normal (≥-2sd)	225	15416	10.9	8.96	13.12	365	25237	17.8	14.12	22.16

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

Characteristic	Taking food supplement					Not taking food supplement				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	659	46110	29.3	23.94	35.25	1761	111393	70.7	64.75	76.06
Locality of School										
Urban	256	17759	34.2	25.39	44.16	570	34227	65.8	55.84	74.61
Rural	403	28351	26.9	20.95	33.74	1191	77166	73.1	66.26	79.05
Sex										
Boys	347	25571	32.9	27.58	38.75	760	52097	67.1	61.25	72.42
Girls	312	20539	25.7	19.90	32.57	1001	59296	74.3	67.43	80.10
Class										
Standard 4	116	8711	43.8	36.01	51.97	160	11163	56.2	48.03	63.99
Standard 5	88	7733	39.3	32.54	46.41	146	11963	60.7	53.59	67.46
Standard 6	102	8296	42.4	35.97	49.08	144	11275	57.6	50.92	64.03
Remove class										
Form 1	80	5479	27.5	20.39	35.93	209	14458	72.5	64.07	79.61
Form 2	81	4519	23.1	19.11	27.70	283	15021	76.9	72.30	80.89
Form 3	90	4485	22.3	18.60	26.59	320	15590	77.7	73.41	81.40
Form 4	46	2819	14.6	10.61	19.76	265	16489	85.4	80.24	89.39
Form 5	56	4068	20.9	14.44	29.16	234	15435	79.1	70.84	85.56
Ethnicity										
Malay	655	45790	29.2	23.88	35.20	1755	110939	70.8	64.80	76.12
Chinese	4	320	75.4	33.91	94.81	2	104	24.6	5.19	66.09
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
BMI-for age status (BAZ)										
Thinness (<-2sd)	44	3334	32.5	22.25	44.85	106	6911	67.5	55.15	77.75
Normal (≥ -2sd - ≤+ 1sd)	434	30263	29.0	22.89	35.88	1179	74253	71.0	64.12	77.11
Overweight (> +1sd - ≤+ 2sd)	102	7021	29.6	23.92	36.03	268	16686	70.4	63.97	76.08
Obese (> +2sd)	78	5426	28.6	21.36	37.15	208	13542	71.4	62.85	78.64
Height-for - age status (HAZ)										
Stunting (<-2sd)	69	4709	29.9	22.49	38.46	174	11058	70.1	61.54	77.51
Normal (≥-2sd)	590	41400	29.2	23.85	35.22	1587	100334	70.8	64.78	76.15

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

Characteristic	Spirulina					Fish oil				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	81	5653	3.6	2.39	5.36	143	9342	5.9	4.39	7.97
Locality of School										
Urban	27	1696	3.2	2.12	4.95	54	2931	5.6	3.03	10.17
Rural	54	3956	3.8	2.16	6.45	89	6411	6.1	4.37	8.43
Sex										
Boys	45	3238	4.2	2.70	6.37	80	5673	7.3	4.97	10.57
Girls	36	2415	3.0	1.81	5.02	63	3669	4.6	3.20	6.57
Class										
Standard 4	16	1120	5.6	4.50	6.96	28	1949	9.8	4.59	19.55
Standard 5	13	1147	5.8	2.63	12.35	17	1397	7.1	4.11	11.91
Standard 6	15	1313	6.6	3.66	11.58	17	1159	5.8	3.39	9.80
Remove class										
Form 1	10	650	3.3	1.59	6.66	17	1155	5.8	3.40	9.83
Form 2	11	637	3.3	1.40	7.49	20	1111	5.7	3.51	9.17
Form 3	9	399	2.0	0.93	4.26	18	883	4.4	2.33	8.29
Form 4	4	184	1.0	0.38	2.38	14	903	4.7	2.73	7.96
Form 5	3	202	1.0	0.32	3.33	12	785	4.0	2.15	7.39
Ethnicity										
Malay	80	5611	3.6	2.37	5.38	143	9342	6.0	4.41	8.00
Chinese	1	42	9.8	1.47	44.25					
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
BMI-for age status (BAZ)										
Thinness (<-2sd)	5	363	3.5	1.37	8.68	9	523	5.0	2.44	10.16
Normal ($\geq -2sd - \leq +1sd$)	59	3965	3.8	2.52	5.72	98	6539	6.3	4.32	9.02
Overweight (> +1sd - \leq + 2sd)	11	775	3.3	1.99	5.27	21	1246	5.2	3.38	8.00
Obese (> + 2sd)	6	549	2.9	1.26	6.44	15	1034	5.4	3.22	8.97
Height-for - age status (HAZ)										
Stunting (<-2sd)	12	757	4.8	2.53	8.86	18	1121	7.1	4.50	10.95
Normal ($\geq -2sd$)	69	4895	3.5	2.32	5.11	125	8221	5.8	4.20	7.97

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

Characteristic	Bee Product					Chicken essence				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	454	32565	20.7	15.99	26.29	80	6023	3.8	2.74	5.32
Locality of School										
Urban	180	13165	25.2	16.08	37.21	26	1941	3.7	2.23	6.11
Rural	274	19400	18.4	14.17	23.60	54	4083	3.9	2.52	5.93
Sex										
Boys	236	17641	22.7	17.82	28.40	56	4369	5.6	4.00	7.83
Girls	218	14924	18.7	13.33	25.62	24	1654	2.1	1.21	3.55
Class										
Standard 4	88	6619	33.1	28.90	37.67	17	1254	6.3	4.30	9.08
Standard 5	70	5469	27.7	19.25	38.12	12	1338	6.8	3.23	13.68
Standard 6	77	6501	32.6	24.94	41.33	9	791	4.0	2.31	6.71
Remove class										
Form 1	65	4644	23.4	16.79	31.73	9	684	3.5	1.32	8.76
Form 2	45	2486	12.8	9.55	16.90	15	846	4.4	2.46	7.58
Form 3	53	2695	13.5	10.36	17.50	8	380	1.9	0.94	3.84
Form 4	29	1961	10.2	5.86	17.15	5	315	1.6	0.67	3.94
Form 5	27	2190	11.2	6.98	17.55	5	414	2.1	1.02	4.38
Ethnicity										
Malay	452	32329	20.6	16.01	26.15	79	5982	3.8	2.71	5.34
Chinese	2	236	55.8	11.46	92.46	1	42	9.8	1.47	44.25
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
BMI-for age status (BAZ)										
Thinness (<-2sd)	33	2458	23.7	16.00	33.70	9	756	7.3	4.27	12.18
Normal (≥ - 2sd - ≤+ 1sd)	288	20458	19.6	14.99	25.28	53	4017	3.9	2.65	5.57
Overweight (> +1sd - ≤+ 2sd)	67	4943	20.7	14.48	28.78	8	514	2.2	1.18	3.92
Obese (> + 2sd)	65	4640	24.3	18.48	31.24	10	736	3.9	2.05	7.15
Height-for - age status (HAZ)										
Stunting (<-2sd)	41	2943	18.6	12.13	27.34	7	500	3.2	1.48	6.59
Normal (≥-2sd)	413	29622	20.9	16.27	26.44	73	5524	3.9	2.72	5.55

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

Characteristic	Others				
	Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
Terengganu	204	13431	8.5	7.30	9.93
Locality of School					
Urban	74	4774	9.1	6.84	12.10
Rural	130	8657	8.2	6.92	9.74
Sex					
Boys	104	7052	9.1	7.28	11.24
Girls	100	6379	8.0	6.25	10.17
Class					
Standard 4	20	1351	6.8	5.30	8.59
Standard 5	22	1761	8.9	7.01	11.28
Standard 6	32	2394	12.0	8.79	16.18
Remove class					
Form 1	21	1436	7.2	5.16	10.10
Form 2	28	1558	8.0	5.04	12.51
Form 3	30	1503	7.5	5.08	11.07
Form 4	24	1514	7.9	5.09	11.98
Form 5	27	1915	9.8	5.37	17.27
Ethnicity					
Malay	202	13245	8.4	7.20	9.88
Chinese	1	63	14.8	1.40	68.07
Indian					
Bumiputera Sabah					
Bumiputera Sarawak					
Others	1	124	35.4	14.22	64.43
BMI-for age status (BAZ)					
Thinness (<-2sd)	13	914	8.8	4.97	15.19
Normal ($\geq -2sd - \leq +1sd$)	131	8734	8.4	6.65	10.51
Overweight (> +1sd - $\leq +2sd$)	37	2347	9.8	6.67	14.29
Obese (> +2sd)	23	1436	7.5	5.03	11.10
Height-for - age status (HAZ)					
Stunting (<-2sd)	21	1457	9.2	5.95	13.93
Normal ($\geq -2sd$)	183	11974	8.5	6.99	10.19

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

Characteristic	Doctor's Instruction					Parents' advice				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	112	8232	11.7	9.18	14.76	272	19353	27.5	22.39	33.20
Locality of School										
Urban	46	3544	12.4	8.58	17.61	123	8911	31.2	26.23	36.63
Rural	66	4688	11.2	8.13	15.21	149	10442	24.9	17.87	33.63
Sex										
Boys	55	4251	11.6	8.52	15.63	139	10722	29.3	23.11	36.35
Girls	57	3981	11.8	8.78	15.57	133	8631	25.5	19.88	32.05
Class										
Standard 4	35	2799	20.6	13.59	30.06	65	4725	34.8	25.97	44.85
Standard 5	24	1999	15.7	10.66	22.57	50	4360	34.3	27.76	41.49
Standard 6	11	900	7.0	3.70	12.78	63	4901	38.0	33.59	42.68
Remove class	-	-	-	-	-	-	-	-	-	-
Form 1	15	1009	12.6	7.08	21.57	24	1574	19.7	14.11	26.88
Form 2	8	410	6.7	2.92	14.82	18	1028	16.9	10.09	27.03
Form 3	9	455	7.2	4.20	12.14	30	1432	22.7	15.69	31.68
Form 4	7	440	8.3	4.86	13.73	13	744	14.0	8.30	22.65
Form 5	3	221	3.9	1.21	12.07	9	588	10.5	4.95	20.80
Ethnicity										
Malay	112	8232	11.8	9.24	14.88	271	19191	27.4	22.39	33.14
Chinese	-	-	-	-	-	1	162	68.5	9.46	97.84
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-
BMI-for age status (BAZ)										
Thinness (<-2sd)	9	715	13.4	6.43	25.95	16	1199	22.5	14.62	33.10
Normal ($\geq -2sd - \leq +1sd$)	75	5332	11.3	9.03	13.95	190	13375	28.2	22.36	34.96
Overweight ($> +1sd - \leq +2sd$)	15	1093	11.1	7.57	15.95	35	2516	25.5	17.35	35.87
Obese ($> +2sd$)	12	1026	13.1	7.25	22.47	31	2263	28.9	22.94	35.59
Height-for - age status (HAZ)										
Stunting (<-2sd)	19	1510	20.9	13.93	30.19	26	1680	23.3	15.06	34.17
Normal ($\geq -2sd$)	93	6722	10.6	8.39	13.37	246	17673	27.9	22.66	33.92

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

Characteristic	Self awareness					Influences by friends				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	196	13362	19.0	15.80	22.59	15	1019	1.4	0.89	2.35
Locality of School										
Urban	67	4484	15.7	12.48	19.55	7	409	1.4	0.54	3.73
Rural	129	8878	21.2	16.95	26.16	8	610	1.5	0.89	2.36
Sex										
Boys	116	8084	22.1	16.71	28.59	10	654	1.8	0.93	3.41
Girls	80	5278	15.6	11.76	20.38	5	365	1.1	0.44	2.62
Class										
Standard 4	28	1870	13.8	9.33	19.88	2	121	0.9	0.22	3.58
Standard 5	22	2062	16.2	8.50	28.73	2	138	1.1	0.28	4.16
Standard 6	21	1794	13.9	9.85	19.33	5	367	2.8	1.35	5.92
Remove class	-	-	-	-	-	-	-	-	-	-
Form 1	28	1909	23.9	16.58	33.25	2	175	2.2	0.59	7.84
Form 2	33	1872	30.8	20.83	43.01	-	-	-	-	-
Form 3	32	1613	25.6	20.49	31.44	1	47	0.7	0.09	5.89
Form 4	14	850	16.0	9.01	26.79	2	120	2.3	0.49	9.73
Form 5	18	1391	24.8	17.01	34.57	1	52	0.9	0.13	6.25
Ethnicity										
Malay	195	13287	19.0	15.85	22.60	15	1019	1.5	0.90	2.36
Chinese	1	74	31.5	2.16	90.54	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-
BMI-for age status (BAZ)										
Thinness (<-2sd)	16	923	17.3	8.03	33.52	1	52	1.0	0.11	7.84
Normal (≥ - 2sd - ≤+ 1sd)	127	8931	18.9	14.87	23.61	10	628	1.3	0.70	2.50
Overweight (> +1sd - ≤+ 2sd)	31	2109	21.4	13.40	32.37	3	265	2.7	0.92	7.59
Obese (> + 2sd)	22	1399	17.8	12.48	24.84	1	74	0.9	0.12	7.04
Height-for - age status (HAZ)										
Stunting (<-2sd)	17	1105	15.3	8.26	26.62	1	53	0.7	0.10	5.17
Normal (≥-2sd)	179	12257	19.4	16.35	22.82	14	966.630	1.5283916	0.95	2.45

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

Characteristic	Others				
	Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
Terengganu	77	5437	7.7	5.80	10.19
Locality of School					
Urban	26	1698	5.9	3.80	9.19
Rural	51	3739	8.9	6.36	12.39
Sex					
Boys	40	2986	8.2	5.78	11.39
Girls	37	2451	7.2	4.97	10.43
Class					
Standard 4	8	553	4.1	2.44	6.74
Standard 5	8	527	4.1	1.67	9.91
Standard 6	15	1361	10.6	6.10	17.68
Remove class	-	-	-	-	-
Form 1	9	613	7.7	4.48	12.87
Form 2	13	761	12.5	6.45	22.96
Form 3	5	254	4.0	1.39	11.13
Form 4	8	562	10.6	4.98	21.01
Form 5	11	806	14.3	5.63	31.97
Ethnicity					
Malay	76	5313	7.6	5.66	10.13
Chinese	-	-	-	-	-
Indian	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-
Others	1	124	42.8	25.84	61.64
BMI-for age status (BAZ)					
Thinness (<-2sd)	6	540	10.1	4.10	22.98
Normal ($\geq -2sd - \leq +1sd$)	51	3499	7.4	5.02	10.73
Overweight (> +1sd - $\leq +2sd$)	13	911	9.2	5.73	14.56
Obese (> +2sd)	7	487	6.2	2.80	13.23
Height-for - age status (HAZ)					
Stunting (<-2sd)	8	582	8.1	3.73	16.55
Normal ($\geq -2sd$)	69	4855	7.7	5.71	10.25

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

Characteristic	Everyday					5 to 6 times per week				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Terengganu	192	13352	8.5	6.01	11.79	137	9993	6.3	4.86	8.22
Locality of School										
Urban	75	5381	10.3	6.49	16.01	37	2657	5.1	3.49	7.38
Rural	117	7971	7.5	4.77	11.74	100	7336	6.9	5.03	9.51
Sex										
Boys	87	5989	7.7	5.57	10.54	92	6972	9.0	6.80	11.71
Girls	105	7363	9.2	6.02	13.85	45	3021	3.8	2.71	5.26
Class										
Standard 4	57	4067	20.4	17.28	23.98	27	2049	10.3	6.66	15.58
Standard 5	27	2169	11.0	9.17	13.03	26	2370	12.0	8.60	16.41
Standard 6	36	2892	14.6	10.72	19.59	12	997	5.0	3.02	8.28
Remove class										
Form 1	19	1241	6.2	3.82	9.99	18	1346	6.8	3.92	11.39
Form 2	13	723	3.7	2.07	6.57	17	928	4.8	3.51	6.47
Form 3	20	991	4.9	3.21	7.50	15	737	3.7	2.18	6.09
Form 4	6	346	1.8	0.66	4.78	16	1079	5.6	3.10	9.91
Form 5	14	923	4.7	2.50	8.76	6	487	2.5	1.31	4.69
Ethnicity										
Malay	192	13352	8.5	6.03	11.86	135	9828	6.3	4.85	8.05
Chinese						1	42	9.8	1.47	44.25
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others						1	124	35.4	14.22	64.43
BMI-for age status (BAZ)										
Thinness (< -2sd)	14	1127	10.8	6.12	18.37	11	714	6.8	3.50	12.97
Normal ($\geq -2sd - \leq +1sd$)	134	9014	8.6	5.90	12.47	96	7218	6.9	5.02	9.45
Overweight ($> +1sd - \leq +2sd$)	25	1893	7.9	4.60	13.37	17	1172	4.9	3.05	7.83
Obese ($> +2sd$)	18	1252	6.6	4.11	10.36	13	889	4.7	2.90	7.44
Height-for - age status (HAZ)										
Stunting (< -2sd)	31	2126	13.4	8.68	20.02	12	834	5.2	3.00	9.01
Normal ($\geq -2sd$)	161	11226	7.9	5.45	11.35	125	9159	6.5	4.83	8.58

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

Characteristic	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
Terengganu	192	13479	8.5	7.04	10.33	383	26640	16.9	13.58	20.80
Locality of School										
Urban	75	5288	10.1	6.98	14.52	155	10603	20.3	14.91	27.10
Rural	117	8192	7.8	6.64	9.04	228	16037	15.2	11.68	19.50
Sex										
Boys	116	8616	11.1	8.95	13.62	185	13918	17.9	14.94	21.25
Girls	76	4863	6.1	4.60	8.01	198	12722	15.9	11.69	21.30
Class										
Standard 4	23	1679	8.4	5.12	13.57	54	3711	18.6	11.07	29.65
Standard 5	27	2020	10.2	6.07	16.62	57	5288	26.7	17.42	38.59
Standard 6	35	3088	15.6	8.74	26.28	54	4238	21.4	14.40	30.60
Remove class										
Form 1	14	947	4.7	2.31	9.51	60	4123	20.7	13.57	30.21
Form 2	25	1537	7.9	4.92	12.45	53	2911	15.0	10.34	21.17
Form 3	32	1572	7.8	5.56	10.89	47	2369	11.8	8.68	15.79
Form 4	13	844	4.4	1.83	10.13	31	2006	10.4	6.50	16.29
Form 5	23	1793	9.2	5.75	14.38	27	1995	10.2	5.28	18.89
Ethnicity										
Malay	192	13479	8.6	7.07	10.39	380	26362	16.8	13.53	20.64
Chinese						3	278	65.6	22.38	92.63
Indian										
Bumiputera Sabah										
Bumiputera Sarawak										
Others										
BMI-for age status (BAZ)										
Thinness (<-2sd)	12	762	7.3	4.40	11.89	32	2448	23.5	16.14	32.83
Normal ($\geq -2sd - \leq +1sd$)	130	9175	8.8	6.78	11.32	232	16034	15.4	12.04	19.38
Overweight (> +1sd - $\leq +2sd$)	33	2126	8.9	5.51	14.12	60	4177	17.5	12.51	23.98
Obese (> +2sd)	17	1417	7.4	4.50	12.08	59	3981	20.9	16.14	26.64
Height-for - age status (HAZ)										
Stunting (<-2sd)	25	1600	10.1	7.46	13.43	27	2023	12.7	8.29	19.03
Normal ($\geq -2sd$)	167	11879	8.4	6.80	10.28	356	24617	17.4	13.97	21.35

3.7 Food and nutrition labeling Among Adolescents (Secondary 1 To Secondary 5) In Terengganu

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3.7.1 Introduction

Recognizing the need for more effective regulation of the nutrition labels and claims on food packages, the Ministry of Health Malaysia (MOH) gazetted amendments to 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 to assist food choices and 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 on 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 no national data in Malaysia on 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

3.7.2.1 General objective

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

3.7.2.2 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, 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 Terengganu

The results in **Table 3.7.1** showed 30.9 (95%CI: 27.61,34.49) of adolescents reported as always reading food labels when buying or receiving food. Another 59.1% (95%CI: 55.69,62.34) of adolescents reported as sometimes, while only 10.0% (95%CI: 8.58,11.62) reported as never. Among those reported as always reading food labels, girls [31.9% (95%CI: 26.36,38.06)] showed slightly higher percentage compared to boys [29.9% (95%CI: 26.44,33.65)].

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

Among those who do not read food labels, the findings showed significantly that the main reasons for not reading food labels were the food labels were not interesting [26.3% (95%CI: 17.06,38.36)], followed by do not understand food labels [17.6% (95%CI: 11.31, 26.23)] and time constraint [33.6% (95%CI: 24.03,44.64)]. The results also revealed that 16.1% (95%CI: 9.62,25.63) do not know the importance of food label, 15.9% (95%CI: 11.33,21.77) already aware of the food label information and 12.9% (95%CI: 7.30,21.73) felt that size of the print too small (**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 being read were fat content [37.2% (95%CI: 30.79,44.05)], carbohydrate content (including sugar) [35.9% (95%CI: 31.75,40.21)], total energy content [38.6% (95%CI: 36.40, 40.81)] and protein content [23.3% (95%CI: 20.76, 26.14)]. It was followed by vitamin content [24.4% (95%CI: 21.47,27.53)], sodium content [9.5% (95%CI: 7.23,12.44)], mineral content [8.1% (95%CI: 6.26,10.36)] and the least were fiber [7.1% (95%CI: 5.16, 9.62)] (**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 types of information (expiry date, dietary declaration (nutrition claim), nutrition facts, halal logo, food ingredients, storage instruction) that read on the food label, most of the adolescents read expiry date [77.3% (95%CI: 72.16,81.74)], followed by halal logo [56.6% (95%CI: 49.27, 63.60)], food ingredients 30.0%(95%CI: 24.57,36.00) [nutrition fact 21.8% (95%CI: 18.87,25.04)], [, storage instruction [16.5% (95%CI: 13.05, 20.76)] and dietary declaration (nutrition claim) 14.8% (95%CI: 11.90, 18.33)] (**Table 3.7.4**).

3.7.4.5 Understanding of nutrition facts among adolescents in Terengganu

Overall, more than half of the adolescents [54.1% (95%CI: 46.00, 61.99) and [50.1% (95%CI: 43.47, 56.75)] of the adolescents had given a correct response to the question assessing interpretation of the energy content and sugar content based on the nutrition facts given. While 39.1% (95%CI: 31.59,47.10)] correct responses for both energy and sugar (**Table 3.7.5**).

3.7.4.6 Understanding of front of pack labelling among adolescents in Terengganu

Overall, less than half of the adolescents [33.4% (95%CI : 28.50, 38.65)] had given the correct response to question assessing interpretation of the energy content based on the front of pack labeling given and [43.0% (95%CI: 37.34,48.75)] had given correct response to question assessing interpretation of the percentage of energy content based on the front of pack labeling given. However, the results showed a correct responses only [21.2% (95%CI: 17.41, 25.61)] to questions assessing interpretations of both the energy content and the percentage of energy content based on the front of pack labeling 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 Terengganu

Overall, [47.3% (95%CI: 52.9863.50)] of the adolescents 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. Girls [52.8% (95%CI: 47.03,58.55)] reported a higher prevalence of interpreting correctly as compared to the boys [41.4% (95%CI: 36.34,46.62)]. While, 16.8% (95%CI: 14.18, 19.83) of adolescents had given correct response to the question assessing interpretation of the least used ingredient in the food based on the list of ingredients given. However, the results showed a low level of correct responses [7.8% (95%CI: 6.21,9.64)] to questions assessing interpretations of both the mostly 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 Terengganu. Adolescents reported a lower prevalence of not reading food label. Continuous education regarding understanding 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 fact is necessary. Boys had a higher prevalence of not reading food label. Thus, we need to be creative in education and promotion to ensure that adolescents know how to interpret the overall information that is stated at the food and nutrition labelling before choosing packaged food and drinks. In this survey, low prevalence of the adolescents know how to determine the highest and lowest ingredients content based on the food ingredient list given.

Reference

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.

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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
TERENGGANU	514	30435	30.9	27.61	34.49	985	58088	59.1	55.69	62.34
Locality of School										
Urban	126	6378	30.6	19.92	43.86	258	12490	59.9	47.86	70.86
Rural	388	24056	31.0	28.21	34.01	727	45598	58.8	56.01	61.59
Sex										
Boys	226	14416	29.9	26.44	33.65	432	27987	58.1	54.74	61.35
Girls	288	16018	31.9	26.36	38.06	553	30101	60.0	54.37	65.37
Class										
Form 1	124	8290	41.6	31.89	51.97	142	10133	50.8	40.90	60.69
Form 2	111	6038	31.1	23.29	40.15	218	11639	59.9	51.99	67.40
Form 3	124	6135	30.5	25.37	36.17	242	11728	58.3	49.65	66.49
Form 4	105	6519	33.8	29.09	38.86	174	10649	55.2	49.93	60.38
Form 5	50	3453	17.6	13.42	22.77	209	13938	71.1	63.99	77.30
Ethnicity										
Malay	511	30291	30.9	27.56	34.48	982	57930	59.1	55.72	62.43
Chinese	2	83	31.8	5.34	79.32	2	116	44.3	11.66	82.71
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	60	59.2	5.74	97.19	1	42	40.8	2.81	94.26
BMI-for-age status (BAZ)										
Thinness (<-2sd)	30	1811	31.4	24.39	39.32	52	3171	54.9	46.30	63.28
Normal (≥-2sd - ≤+1sd)	348	20283	30.4	26.47	34.64	688	40597	60.9	56.84	64.72
Overweight (>+1sd - ≤+2sd)	72	4356	29.9	22.27	38.95	152	8559	58.8	50.01	67.12
Obese (>+2sd)	64	3984	35.2	28.75	42.21	93	5760	50.9	41.75	59.94
Height-for-age status (HAZ)										
Stunting (<-2sd)	52	3032	30.5	21.99	40.48	93	5611	56.4	47.59	64.74
Normal (≥-2sd)	462	27403	31.0	27.82	34.37	892	52477	59.4	55.85	62.78

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
TERENGGANU	165	9834	10.0	8.58	11.62
Locality of School					
Urban	40	1981	9.5	8.61	10.47
Rural	125	7853	10.1	8.39	12.19
Sex					
Boys	89	5780	12.0	9.51	15.03
Girls	76	4055	8.1	6.84	9.52
Class					
Form 1	23	1514	7.6	3.78	14.67
Form 2	33	1740	9.0	5.59	14.06
Form 3	45	2249	11.2	7.02	17.35
Form 4	32	2118	11.0	7.93	15.01
Form 5	32	2213	11.3	8.25	15.25
Ethnicity					
Malay	164	9771	10.0	8.56	11.59
Chinese	1	63	24.0	1.93	83.48
Indian	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-
Others	-	-	-	-	-
BMI-for-age status (BAZ)					
Thinness (<-2sd)	13	791	13.7	6.62	26.21
Normal (≥-2sd - ≤+1sd)	95	5833	8.7	7.00	10.87
Overweight (>+1sd - ≤+2sd)	30	1632	11.2	7.04	17.42
Obese (>+2sd)	27	1578	13.9	7.60	24.17
Height-for-age status (HAZ)					
Stunting (<-2sd)	22	1314	13.2	8.19	20.58
Normal (≥-2sd)	143	8520	9.6	8.17	11.33

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
TERENGGANU	18	1266	12.9	7.30	21.73	30	1727	17.6	11.31	26.23
Locality of School										
Urban	5	308	15.5	8.51	26.68	5	243	12.2	4.03	31.67
Rural	13	959	12.2	5.96	23.38	25	1484	18.9	11.70	29.06
Sex										
Boys	9	735	12.7	6.33	23.89	11	648	11.2	5.79	20.62
Girls	9	531	13.1	6.14	25.80	19	1078	26.6	15.84	41.07
Class										
Form 1	2	139	9.2	2.12	31.94	5	301	19.9	6.61	46.56
Form 2	2	147	8.5	1.81	31.59	8	460	26.4	18.16	36.74
Form 3	3	155	6.9	1.19	31.43	7	335	14.9	5.10	36.24
Form 4	4	283	13.4	5.07	30.84	6	354	16.7	5.97	38.89
Form 5	7	542	24.5	11.49	44.77	4	277	12.5	4.03	32.76
Ethnicity										
Malay	18	1266	13.0	7.37	21.78	30	1727	17.7	11.35	26.45
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-
BMI-for-age status (BAZ)										
Thinness (<-2sd)	1	90	11.3	1.03	61.15	1	69	8.8	1.69	34.92
Normal (≥-2sd - ≤+1sd)	10	709	12.2	5.54	24.61	20	1181	20.3	12.02	32.06
Overweight (>+1sd - ≤+2sd)	1	42	2.6	0.29	19.43	2	94	5.8	1.37	21.38
Obese (>+2sd)	6	426	27.0	12.33	49.26	7	382	24.2	8.98	50.76
Height-for-age status (HAZ)										
Stunting (<-2sd)	4	235	17.9	4.50	50.23	2	104	7.9	1.49	32.63
Normal (≥-2sd)	14	1031	12.1	6.23	22.19	28	1623	19.0	12.16	28.56

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
TERENGGANU	43	2591	26.3	17.06	38.36	28.000	1581	16.1	9.62	25.63
Locality of School										
Urban	14	730	36.8	28.51	46.05	10	500	25.3	10.75	48.66
Rural	29	1861	23.7	13.20	38.82	18	1081	13.8	7.79	23.15
Sex										
Boys	24	1622	28.1	16.15	44.16	11	667	11.5	4.68	25.73
Girls	19	969	23.9	15.97	34.16	17	914	22.5	12.25	37.75
Class										
Form 1	2	103	6.8	1.57	25.09	3	192	12.7	3.89	34.31
Form 2	9	445	25.6	13.60	42.81	12	624	35.9	20.83	54.32
Form 3	8	391	17.4	9.50	29.70	5	248	11.0	3.44	30.04
Form 4	11	751	35.4	17.81	58.18	2	102	4.8	0.51	33.21
Form 5	13	901	40.7	17.52	68.99	6	415	18.7	6.76	42.34
Ethnicity										
Malay	43	2591	26.5	17.30	38.37	28	1581	16.2	9.68	25.79
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-
BMI-for-age status (BAZ)										
Thinness (<-2sd)	6	360	45.5	25.86	66.62	1	47	5.9	0.52	43.17
Normal (≥-2sd - ≤+1sd)	21	1246	21.4	11.79	35.57	18	1036	17.8	10.01	29.53
Overweight (>+1sd - ≤+2sd)	11	624	38.2	23.40	55.63	5	265	16.2	5.62	38.69
Obese (>+2sd)	5	362	22.9	6.00	58.07	4	233	14.8	6.42	30.53
Height-for-age status (HAZ)										
Stunting (<-2sd)	9	565	43.0	22.67	66.02	6	332	25.2	8.20	56.05
Normal (≥-2sd)	34	2026	23.8	14.84	35.83	22	1249	14.7	8.38	24.39

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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
TERENGGANU	55.000	3300	33.6	24.03	44.64	27.000	1561	15.9	11.33	21.77
Locality of School										
Urban	15	745	37.6	29.12	46.91	6	258	13.0	4.66	31.41
Rural	40	2555	32.5	21.17	46.43	21	1303	16.6	11.78	22.85
Sex										
Boys	32	2100	36.3	26.22	47.81	19	1175	20.3	14.41	27.88
Girls	23	1201	29.6	19.15	42.76	8	386	9.5	3.83	21.73
Class										
Form 1	9	597	39.4	18.20	65.56	5	343	22.6	10.05	43.35
Form 2	6	304	17.5	10.34	27.96	3	117	6.7	1.42	26.40
Form 3	20	1016	45.2	35.42	55.36	11	554	24.6	13.70	40.18
Form 4	12	808	38.2	15.19	68.02	3	181	8.6	1.69	33.76
Form 5	8	575	26.0	11.45	48.76	5	366	16.6	6.38	36.64
Ethnicity										
Malay	55	3300	33.8	24.16	44.94	26	1498	15.3	11.09	20.81
Chinese	-	-	-	-	-	1	63	100.0	100.00	100.00
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-
BMI-for-age status (BAZ)										
Thinness (<-2sd)	6	400	50.6	29.83	71.22	2	118	15.0	2.47	55.04
Normal (≥-2sd - ≤+1sd)	31	1881	32.2	19.34	48.56	11	684	11.7	6.27	20.85
Overweight (>+1sd - ≤+2sd)	8	477	29.2	11.21	57.41	8	434	26.6	14.76	43.06
Obese (>+2sd)	10	542	34.4	22.83	48.10	6	325	20.6	8.97	40.52
Height-for-age status (HAZ)										
Stunting (<-2sd)	8	440	33.5	16.78	55.75	3	141	10.7	2.01	41.20
Normal (≥-2sd)	47	2860	33.6	23.66	45.17	24	1420	16.7	11.43	23.66

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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	
TERENGGANU	570	34153	38.6	36.40	40.81	546	31751	35.9	31.75	40.21
Locality of School										
Urban	146	7140	37.8	34.36	41.46	167	7988	42.3	33.43	51.77
Rural	424	27013	38.8	36.20	41.43	379	23763	34.1	30.21	38.25
Sex										
Boys	286	18636	44.0	40.57	47.38	202	12616	29.8	25.20	34.74
Girls	284	15517	33.6	30.80	36.62	344	19134	41.5	35.80	47.41
Class										
Form 1	74	5253	28.5	23.76	33.80	92	6361	34.5	25.33	45.05
Form 2	129	7012	39.7	35.13	44.38	106	5503	31.1	23.89	39.43
Form 3	150	7384	41.3	36.58	46.25	134	6502	36.4	28.94	44.57
Form 4	106	6756	39.4	33.39	45.66	99	5983	34.9	28.02	42.36
Form 5	111	7749	44.6	38.13	51.17	115	7402	42.6	33.12	52.57
Ethnicity										
Malay	568	34051	38.6	36.40	40.84	544	31667	35.9	31.75	40.26
Chinese	1	42	20.9	5.58	54.11	1	42	20.9	5.58	54.11
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	60	59.2	5.74	97.19	1	42	40.8	2.81	94.26
BMI-for-age status (BAZ)										
Thinness (<-2sd)	32	2010	40.3	29.15	52.64	31	1821	36.5	23.66	51.69
Normal (≥-2sd - ≤+1sd)	421	25043	41.1	38.78	43.53	365	21137	34.7	30.50	39.19
Overweight (>+1sd - ≤+2sd)	67	3988	30.9	21.21	42.58	96	5578	43.2	32.12	55.00
Obese (>+2sd)	50	3111	31.9	24.53	40.37	54	3215	33.0	27.39	39.12
Height-for-age status (HAZ)										
Stunting (<-2sd)	45	2833	32.8	24.19	42.70	48	2891	33.4	26.76	40.87
Normal (≥-2sd)	525	31320	39.2	36.52	41.96	498	28860	36.1	31.67	40.85

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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									
	Fat					Protein				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
			Lower	Upper				Lower	Upper	
TERENGGANU	590	32907	37.2	30.79	44.05	345	20665	23.3	20.76	26.14
Locality of School										
Urban	206	9695	51.4	38.02	64.55	95	4638	24.6	21.02	28.53
Rural	384	23213	33.3	28.34	38.71	250	16027	23.0	19.94	26.40
Sex										
Boys	195	12152	28.7	23.92	33.92	163	10653	25.1	21.34	29.33
Girls	395	20755	45.0	36.80	53.49	182	10011	21.7	18.95	24.74
Class										
Form 1	85	5604	30.4	22.89	39.16	57	3778	20.5	15.38	26.79
Form 2	134	6730	38.1	29.70	47.22	59	3072	17.4	13.54	22.01
Form 3	146	6834	38.3	28.25	49.37	86	4222	23.6	17.81	30.66
Form 4	107	6405	37.3	27.85	47.85	71	4641	27.0	21.33	33.60
Form 5	118	7335	42.2	33.53	51.32	72	4952	28.5	21.65	36.45
Ethnicity										
Malay	587	32750	37.1	30.72	44.01	344	20604	23.4	20.70	26.24
Chinese	3	158	79.1	45.89	94.42	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	1	60	59.2	5.74	97.19
BMI-for-age status (BAZ)										
Thinness (<-2sd)	23	1310	26.3	17.15	38.07	15	966	19.4	11.89	29.99
Normal (≥-2sd - ≤+1sd)	384	21154	34.7	28.36	41.73	252	15036	24.7	21.66	28.01
Overweight (>+1sd - ≤+2sd)	109	5982	46.3	36.65	56.27	41	2374	18.4	12.67	25.92
Obese (>+2sd)	74	4461	45.8	33.12	59.03	37	2288	23.5	15.75	33.49
Height-for-age status (HAZ)										
Stunting (<-2sd)	45	2488	28.8	20.19	39.24	28	1707	19.7	13.19	28.49
Normal (≥-2sd)	545	30420	38.1	31.57	45.05	317	18958	23.7	20.63	27.14

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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
TERENGGANU	147	8426	9.5	7.23	12.44	361	21576	24.4	21.47	27.53
Locality of School										
Urban	52	2461	13.0	8.19	20.15	88	4373	23.2	18.01	29.29
Rural	95	5964	8.6	6.36	11.44	273	17203	24.7	21.36	28.37
Sex										
Boys	55	3497	8.2	6.10	11.05	143	9047	21.3	17.59	25.63
Girls	92	4928	10.7	7.75	14.56	218	12529	27.2	22.34	32.59
Class										
Form 1	23	1452	7.9	4.21	14.27	76	5023	27.3	19.80	36.26
Form 2	30	1550	8.8	5.21	14.40	76	4188	23.7	16.70	32.47
Form 3	39	1846	10.3	7.68	13.76	83	4153	23.2	17.72	29.87
Form 4	23	1499	8.7	5.21	14.27	61	3875	22.6	16.75	29.69
Form 5	32	2079	12.0	8.55	16.46	65	4337	24.9	17.35	34.46
Ethnicity										
Malay	147	8426	9.6	7.24	12.49	360	21515	24.4	21.42	27.62
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	1	60	59.2	5.74	97.19
BMI-for-age status (BAZ)										
Thinness (<-2sd)	6	404	8.1	2.99	20.17	16	958	19.2	13.38	26.81
Normal (≥-2sd - ≤+1sd)	107	6084	10.0	7.11	13.87	268	15941	26.2	23.29	29.30
Overweight (>+1sd - ≤+2sd)	18	1014	7.9	3.98	14.90	42	2458	19.0	13.09	26.84
Obese (>+2sd)	16	924	9.5	5.75	15.23	35	2219	22.8	17.89	28.53
Height-for-age status (HAZ)										
Stunting (<-2sd)	8	500	5.8	2.52	12.73	36	2362	27.3	17.25	40.41
Normal (≥-2sd)	139	7925	9.9	7.54	12.95	325	19214	24.1	21.08	27.30

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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
TERENGGANU	126	7150	8.1	6.26	10.36	109	6263	7.1	5.16	9.62
Locality of School										
Urban	39	1885	10.0	6.55	14.96	34	1610	8.5	3.40	19.81
Rural	87	5264	7.6	5.63	10.08	75	4652	6.7	5.07	8.74
Sex										
Boys	52	3158	7.4	5.03	10.89	51	3177	7.5	5.54	10.06
Girls	74	3991	8.7	6.37	11.66	58	3085	6.7	4.20	10.50
Class										
Form 1	23	1505	8.2	4.84	13.48	26	1634	8.9	5.17	14.79
Form 2	25	1264	7.1	4.88	10.35	21	1077	6.1	3.27	11.06
Form 3	29	1356	7.6	5.29	10.78	25	1190	6.7	3.84	11.32
Form 4	24	1478	8.6	6.33	11.60	20	1357	7.9	5.03	12.21
Form 5	25	1547	8.9	4.95	15.48	17	1005	5.8	2.64	12.17
Ethnicity										
Malay	125	7089	8.0	6.20	10.35	109	6263	7.1	5.17	9.67
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	60	59.2	5.74	97.19	-	-	-	-	-
BMI-for-age status (BAZ)										
Thinness (<-2sd)	5	274	5.5	2.64	11.11	2	114	2.3	0.55	8.96
Normal (≥-2sd - ≤+1sd)	90	5128	8.4	6.38	11.04	82	4727	7.8	5.57	10.73
Overweight (>+1sd - ≤+2sd)	17	956	7.4	4.21	12.69	12	696	5.4	2.67	10.57
Obese (>+2sd)	14	792	8.1	4.37	14.63	13	725	7.4	3.69	14.44
Height-for-age status (HAZ)										
Stunting (<-2sd)	7	382	4.4	1.47	12.52	7	462	5.3	2.31	11.87
Normal (≥-2sd)	119	6768	8.5	6.64	10.75	102	5801	7.3	5.20	10.06

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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
TERENGGANU	1166	68432	77.3	72.16	81.74	229	13130	14.8	11.90	18.33
Locality of School										
Urban	320	15675	83.1	77.75	87.34	81	3818	20.2	12.18	31.69
Rural	846	52757	75.7	69.84	80.81	148	9312	13.4	11.27	15.80
Sex										
Boys	458	29504	69.6	62.67	75.70	99	6324	14.9	12.27	18.02
Girls	708	38928	84.4	80.39	87.72	130	6806	14.8	10.43	20.47
Class										
Form 1	195	13379	72.6	60.30	82.24	33	2182	11.8	7.36	18.52
Form 2	248	13270	75.1	65.13	82.92	54	2806	15.9	11.31	21.82
Form 3	283	13768	77.1	68.67	83.76	50	2288	12.8	8.23	19.39
Form 4	223	13668	79.6	72.84	85.04	45	2847	16.6	11.74	22.91
Form 5	217	14347	82.5	69.39	90.74	47	3008	17.3	12.40	23.60
Ethnicity										
Malay	1162	68214	77.3	72.15	81.78	228	13089	14.8	11.90	18.34
Chinese	2	116	58.2	15.43	91.42	1	42	20.9	5.58	54.11
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	2	102	100.0	100.00	100.00	-	-	-	-	-
BMI-for-age status (BAZ)										
Thinness (<-2sd)	59	3547	71.2	59.10	80.87	13	723	14.5	9.22	22.07
Normal (≥-2sd - ≤+1sd)	808	47201	77.5	71.75	82.42	158	9029	14.8	11.43	19.02
Overweight (>+1sd - ≤+2sd)	183	10529	81.5	72.69	87.98	39	2127	16.5	10.52	24.86
Obese (>+2sd)	116	7154	73.4	64.10	81.04	19	1252	12.8	9.36	17.38
Height-for-age status (HAZ)										
Stunting (<-2sd)	114	6819	78.9	72.52	84.11	23	1325	15.3	8.69	25.62
Normal (≥-2sd)	1052	61613	77.1	71.69	81.80	206	11806	14.8	11.81	18.35

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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
TERENGGANU	333	19296	21.8	18.87	25.04	863	50078	56.6	49.27	63.60
Locality of School										
Urban	107	5157	27.3	22.65	32.57	257	12427	65.9	52.87	76.84
Rural	226	14139	20.3	17.50	23.42	606	37652	54.1	46.28	61.64
Sex										
Boys	146	9350	22.1	18.31	26.30	344	21550	50.8	43.78	57.83
Girls	187	9946	21.6	18.17	25.40	519	28528	61.9	53.40	69.65
Class										
Form 1	56	3754	20.4	15.06	26.98	140	9396	51.0	39.00	62.89
Form 2	80	4387	24.8	18.66	32.19	190	10127	57.3	46.98	67.00
Form 3	85	4028	22.5	17.40	28.69	215	10452	58.5	45.23	70.66
Form 4	61	3860	22.5	17.71	28.12	165	10052	58.5	48.90	67.59
Form 5	51	3267	18.8	12.84	26.65	153	10052	57.8	45.93	68.82
Ethnicity										
Malay	331	19194	21.8	18.80	25.03	862	50018	56.7	49.29	63.82
Chinese	1	42	20.9	5.58	54.11	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	60	59.2	5.74	97.19	1	60	59.2	5.74	97.19
BMI-for-age status (BAZ)										
Thinness (<-2sd)	19	1198	24.0	16.87	33.07	44	2615	52.5	41.62	63.11
Normal (≥-2sd - ≤+1sd)	225	12808	21.0	17.63	24.90	596	34483	56.6	49.11	63.88
Overweight (>+1sd - ≤+2sd)	52	2898	22.4	15.54	31.27	132	7355	57.0	45.66	67.56
Obese (>+2sd)	37	2392	24.5	17.11	33.90	91	5625	57.7	48.79	66.19
Height-for-age status (HAZ)										
Stunting (<-2sd)	27	1572	18.2	13.11	24.67	90	5473	63.3	49.84	74.99
Normal (≥-2sd)	306	17724	22.2	19.37	25.29	773	44606	55.8	48.66	62.79

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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
TERENGGANU	452	26535	30.0	24.57	36.00	253	14649	16.5	13.05	20.76
Locality of School										
Urban	145	6873	36.4	21.84	54.02	88	4068	21.6	13.19	33.22
Rural	307	19662	28.2	23.38	33.64	165	10581	15.2	11.96	19.11
Sex										
Boys	166	10630	25.1	19.99	30.94	102	6352	15.0	11.43	19.40
Girls	286	15905	34.5	27.45	42.28	151	8297	18.0	13.70	23.27
Class										
Form 1	66	4436	24.1	16.52	33.69	38	2505	13.6	8.31	21.45
Form 2	96	5047	28.5	21.43	36.92	56	3013	17.0	11.14	25.20
Form 3	109	5246	29.4	20.26	40.50	64	2997	16.8	11.09	24.58
Form 4	67	4280	24.9	17.50	34.22	40	2564	14.9	10.00	21.72
Form 5	114	7526	43.3	36.53	50.28	55	3570	20.5	14.69	27.91
Ethnicity										
Malay	450	26433	30.0	24.55	36.00	252	14589	16.5	13.00	20.80
Chinese	1	42	20.9	5.58	54.11	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	60	59.2	5.74	97.19	1	60	59.2	5.74	97.19
BMI-for-age status (BAZ)										
Thinness (<-2sd)	22	1250	25.1	17.27	34.94	16	878	17.6	10.23	28.64
Normal (≥-2sd - ≤+1sd)	310	18136	29.8	24.68	35.46	178	10325	17.0	13.62	20.92
Overweight (>+1sd - ≤+2sd)	68	3936	30.5	18.87	45.23	36	1921	14.9	7.89	26.28
Obese (>+2sd)	52	3214	33.0	27.12	39.43	23	1525	15.7	10.01	23.65
Height-for-age status (HAZ)										
Stunting (<-2sd)	41	2526	29.2	20.10	40.40	24	1463	16.9	9.65	27.98
Normal (≥-2sd)	411	24009	30.1	24.69	36.03	229	13187	16.5	12.84	20.98

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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
TERENGGANU	663	38553	39.1	31.59	47.10	909	53387	54.1	46.00	61.99
Locality of School										
Urban	239	11774	56.2	38.39	72.50	304	14986	71.5	60.04	80.72
Rural	424	26778	34.5	29.19	40.13	605	38401	49.4	42.40	56.45
Sex										
Boys	284	18017	37.3	29.65	45.53	408	26165	54.1	46.19	61.80
Girls	379	20536	40.8	32.29	49.94	501	27222	54.1	44.93	63.02
Class										
Form 1	109	7336	36.7	26.45	48.24	147	10065	50.3	38.46	62.11
Form 2	147	7668	39.2	30.20	49.08	194	10343	52.9	44.45	61.25
Form 3	173	8567	42.6	30.81	55.29	246	12176	60.5	48.63	71.31
Form 4	124	7703	39.8	30.89	49.46	169	10596	54.8	43.61	65.46
Form 5	110	7279	37.0	23.03	53.57	153	10207	51.9	37.62	65.87
Ethnicity										
Malay	662	38492	39.2	31.67	47.18	908	53326	54.2	46.14	62.12
Chinese	-	-	-	-	-	-	-	-	-	-
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	60	59.2	5.74	97.19	1	60	59.2	5.74	97.19
BMI-for-age status (BAZ)										
Thinness (<-2sd)	31	1839	31.9	19.66	47.17	55	3350	58.0	44.30	70.60
Normal (≥-2sd - ≤+1sd)	455	26353	39.3	31.95	47.27	618	36178	54.0	45.82	62.01
Overweight (>+1sd - ≤+2sd)	98	5471	37.6	29.04	47.04	128	7209	49.6	40.28	58.87
Obese (>+2sd)	79	4890	43.0	32.48	54.11	108	6650	58.4	47.45	68.60
Height-for-age status (HAZ)										
Stunting (<-2sd)	69	4065	40.8	31.72	50.62	90	5398	54.2	45.56	62.62
Normal (≥-2sd)	594	34487	38.9	31.26	47.07	819	47989	54.1	45.87	62.09

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
TERENGGANU	850	49452	50.1	43.47	56.75
Locality of School					
Urban	277	13642	65.1	48.36	78.77
Rural	573	35809	46.1	41.71	50.50
Sex					
Boys	372	23617	48.8	41.76	55.95
Girls	478	25835	51.4	42.93	59.70
Class					
Form 1	142	9638	48.2	39.78	56.66
Form 2	186	9782	50.1	40.82	59.30
Form 3	228	11331	56.3	46.66	65.56
Form 4	150	9246	47.8	38.19	57.55
Form 5	144	9454	48.1	33.77	62.70
Ethnicity					
Malay	848	49317	50.2	43.56	56.77
Chinese	1	74	28.4	2.37	86.65
Indian	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-
Others	1	60	59.2	5.74	97.19
BMI-for-age status (BAZ)					
Thinness (<-2sd)	44	2583	44.7	32.97	57.12
Normal (≥-2sd - ≤+1sd)	589	34134	51.0	44.56	57.35
Overweight (>+1sd - ≤+2sd)	123	6951	47.8	37.30	58.46
Obese (>+2sd)	94	5784	50.8	40.97	60.57
Height-for-age status (HAZ)					
Stunting (<-2sd)	94	5410	54.3	43.17	65.09
Normal (≥-2sd)	756	44041	49.6	42.79	56.50

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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
TERENGGANU	353	20942	21.2	17.41	25.61	557	32939	33.4	28.50	38.65
Locality of School										
Urban	118	5747	27.4	23.18	32.10	190	9369	44.7	37.61	52.01
Rural	235	15195	19.6	15.49	24.37	367	23570	30.3	26.25	34.74
Sex										
Boys	149	9715	20.1	16.94	23.65	247	15985	33.0	28.86	37.53
Girls	204	11227	22.3	16.80	29.02	310	16954	33.7	26.57	41.66
Class										
Form 1	56	3950	19.7	15.34	25.02	93	6508	32.5	26.63	39.02
Form 2	81	4379	22.4	15.77	30.83	133	7190	36.8	27.89	46.69
Form 3	92	4567	22.7	14.88	33.05	132	6488	32.3	24.15	41.60
Form 4	53	3155	16.3	10.23	24.99	88	5129	26.5	17.50	38.01
Form 5	71	4891	24.9	17.19	34.56	111	7625	38.8	28.36	50.32
Ethnicity										
Malay	352	20882	21.2	17.39	25.67	555	32804	33.4	28.52	38.59
Chinese	-	-	-	-	-	1	74	28.4	2.37	86.65
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	1	60	59.2	5.74	97.19	1	60	59.2	5.74	97.19
BMI-for-age status (BAZ)										
Thinness (<-2sd)	25	1539	26.6	18.04	37.49	35	2099	36.4	23.19	51.96
Normal (≥-2sd - ≤+1sd)	239	14038	21.0	16.88	25.72	377	22080	33.0	27.47	38.98
Overweight (>+1sd - ≤+2sd)	53	2978	20.5	15.90	25.94	89	5120	35.2	30.05	40.71
Obese (>+2sd)	36	2388	21.0	14.34	29.61	56	3640	32.0	23.33	42.05
Height-for-age status (HAZ)										
Stunting (<-2sd)	40	2256	22.7	15.91	31.21	53	2940	29.5	20.40	40.65
Normal (≥-2sd)	313	18686	21.1	17.07	25.69	504	29999	33.8	28.92	39.08

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
TERENGGANU	711	42385	43.0	37.34	48.75
Locality of School					
Urban	206	10209	48.7	42.33	55.12
Rural	505	32176	41.4	34.90	48.22
Sex					
Boys	314	20449	42.3	36.48	48.29
Girls	397	21936	43.6	36.18	51.33
Class					
Form 1	121	8461	42.3	34.45	50.53
Form 2	154	8319	42.6	35.85	49.58
Form 3	191	9506	47.3	36.38	58.42
Form 4	119	7562	39.1	32.23	46.39
Form 5	126	8537	43.4	32.88	54.56
Ethnicity					
Malay	710	42324	43.1	37.40	48.89
Chinese	-	-	-	-	-
Indian	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-
Others	1	60	59.2	5.74	97.19
BMI-for-age status (BAZ)					
Thinness (<-2sd)	47	2900	50.2	39.28	61.14
Normal (≥-2sd - ≤+1sd)	492	29024	43.3	37.45	49.42
Overweight (>+1sd - ≤+2sd)	97	5660	38.9	32.11	46.17
Obese (>+2sd)	75	4801	42.2	34.22	50.56
Height-for-age status (HAZ)					
Stunting (<-2sd)	84	5091	51.1	42.47	59.72
Normal (≥-2sd)	627	37294	42.0	36.17	48.14

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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
TERENGGANU	111	6861	7.8	6.21	9.64	730	41914	47.3	42.13	52.63
Locality of School										
Urban	20	1023	5.4	4.28	6.85	227	10909	57.8	48.09	66.98
Rural	91	5838	8.4	6.64	10.53	503	31005	44.5	39.96	49.16
Sex										
Boys	44	2992	7.1	4.93	10.01	281	17549	41.4	36.34	46.62
Girls	67	3869	8.4	6.40	10.93	449	24365	52.8	47.03	58.55
Class										
Form 1	29	2185	11.9	7.50	18.25	119	8156	44.3	37.77	50.97
Form 2	15	787	4.5	3.04	6.47	158	8345	47.2	42.88	51.58
Form 3	28	1487	8.3	4.57	14.69	191	9270	51.9	42.70	60.96
Form 4	23	1415	8.2	5.18	12.85	140	8493	49.5	42.21	56.75
Form 5	16	988	5.7	2.87	10.93	122	7651	44.0	32.83	55.79
Ethnicity										
Malay	111	6861	7.8	6.21	9.70	729	41872	47.5	42.22	52.76
Chinese	-	-	-	-	-	1	42	20.9	5.58	54.11
Indian	-	-	-	-	-	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-
BMI-for-age status (BAZ)										
Thinness (<-2sd)	3	148	3.0	0.92	9.21	45	2707	54.3	42.48	65.72
Normal (≥-2sd - ≤+1sd)	76	4423	7.3	6.00	8.77	494	28025	46.0	40.49	51.67
Overweight (>+1sd - ≤+2sd)	18	1260	9.8	4.87	18.59	116	6470	50.1	40.88	59.31
Obese (>+2sd)	14	1030	10.6	5.28	20.03	75	4711	48.4	37.61	59.25
Height-for-age status (HAZ)										
Stunting (<-2sd)	14	772	8.9	4.31	17.57	79	4582	53.0	42.46	63.31
Normal (≥-2sd)	97	6090	7.6	5.99	9.66	651	37332	46.7	41.42	52.12

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
TERENGGANU	243	14890	16.8	14.18	19.83
Locality of School					
Urban	51	2576	13.7	9.18	19.82
Rural	192	12314	17.7	14.84	20.93
Sex					
Boys	104	6857	16.2	12.32	20.94
Girls	139	8032	17.4	14.24	21.12
Class					
Form 1	54	3911	21.2	15.27	28.73
Form 2	41	2186	12.4	8.85	17.02
Form 3	55	2816	15.8	11.63	21.03
Form 4	50	3242	18.9	13.39	25.96
Form 5	43	2735	15.7	11.02	21.93
Ethnicity					
Malay	242	14848	16.8	14.17	19.88
Chinese	-	-	-	-	-
Indian	-	-	-	-	-
Bumiputera Sabah	-	-	-	-	-
Bumiputera Sarawak	-	-	-	-	-
Others	1	42	40.8	2.81	94.26
BMI-for-age status (BAZ)					
Thinness (<-2sd)	11	580	11.6	6.12	21.02
Normal (≥-2sd - ≤+1sd)	167	10008	16.4	13.97	19.24
Overweight (>+1sd - ≤+2sd)	36	2358	18.3	12.75	25.47
Obese (>+2sd)	29	1943	19.9	12.18	30.91
Height-for-age status (HAZ)					
Stunting (<-2sd)	24	1417	16.4	10.32	25.05
Normal (≥-2sd)	219	13472	16.9	14.13	20.01

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

TERENGGANU

Liaison Officer

Ms. Noorsyahmun binti Muhd Noor

Field Supervisor

Mr. Mohd Azza Bin Azlan

Nutritionist

1. Ms. Sam Azura binti Ahmad
2. Ms. Zamilah Hasniah binti Abd. Hamid
3. Ms. Nurnadia binti Abd. Aziz
4. Ms. Nur Ili binti Mohamad Tarmizi
5. Ms. Noorsyahmun binti Muhd Noor
6. Ms. Salihah binti Brahim
7. Ms. Nur Amalina binti Othman
8. Ms. Nurul Fatimah Hanim binti Ghani

Research Assistants

1. Siti Aminah binti Hamdan
2. Norfatin Najiehan binti Kassim
3. Nur Hazwani binti Mat Sulong
4. Muhamad Zawahir bin Ismail
5. Ahmad Taufik bin Yusof
6. Safrial bin Ridwan
7. Nor Shahirrah binti Ibrahim
8. Nur Hashima binti Mat Sulong
9. Nuraqilah binti Kamaruddin
10. Ihsanuddin bin Adnan

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
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"/> Negeri மாநில	<input type="text"/> Strata நிலை	<input type="text"/> Kategori Sekolah பள்ளி பிரிவு	<input type="text"/> Kod Sekolah பள்ளி குறியீடு	<input type="text"/> Kelas வகுப்பு	<input type="text"/> Pelajar மாணவர்
A2	Tarikh lahir பிறந்த திகதி	<input type="text"/> Hari நாள்	<input type="text"/> Bulan மாதம்	<input type="text"/> Tahun ஆண்டு			
A3	Jantina பால்	A. Lelaki -ன் B. Perempuan பெண்					
A4	Bangsa மனம்	A. Melayu மலாய் B. Cina சீனர் C. India இந்தியர்		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 ÀÀÀ	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	<p>Apakah sesi persekolahan anda? உங்கள்பள்ளி எச்சமயத்தில் நடைபெறும் ?</p> <p>A Sesi pagi sahaja / காஸலயில் மட்டும் B Sesi petang sahaja / மதியத்தில் மட்டும் C Sesi pagi sampai petang / காஸல் முதல் மாஸல் வரை</p>
B2	<p>Kebiasaannya, dalam seminggu berapa hari anda mengambil sarapan (dari pukul 6.00 pagi hingga 8.00 pagi)? ஒரு வாரத்தில் எத்தனை முறை காஸல் சிற்றுண்டி உட்கொள்வீர்கள்? (காஸல் மணி 6.00- லிருந்துகாஸல் மணி 8.00 வரை)?</p> <p>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 /காஸல் உணவு உட்கொள்வதில்லை</p>
B3	<p>Kebiasaannya, dari mana anda dapat makanan itu? வழக்கமாக எங்கு காஸல் உணவை உட்கொள்வீர்கள்?</p> <p>A Disediakan di rumah / வீடு B Beli di kantin sekolah / பள்ளி சிற்றுண்டிச்சாஸல் C Beli di restoran atau warung / கடை D Disediakan di asrama / பள்ளி விடுதி E Lain-lain / மற்றது F Tidak ambil sarapan / காஸல் உணவு உட்கொள்வதில்லை</p>
B4	<p>Sekiranya anda tidak mengambil sarapan, apakah sebabnya? ஏன் காஸல் உணவை உட்கொள்வதில்லை?</p> <p>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 காஸல் சிற்றுண்டி உட்கொள்வேன்.</p>

Tamil and Peranakan Malay

- 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 அவ்வுணவை 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 அவ்வுணவை 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

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- 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

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- B21** Apakah bekalan minuman yang biasa dibawa ke sekolah? (Boleh pilih **SATU** atau **DUA** jawapan sahaja)
வழக்கமாக எவ்வகை நீரை பள்ளிக்கு எடுத்துச் செல்வீர்கள்? (ஒன்று அல்லது டிரண்டு 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 மற்றும்பள்ளி விடுதியில் உண்பது டிதில் 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 டிரண்டு 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 குறிப்பிடப்பட்டுள்ள 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 பேல்பாஸ்போல்	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 ஹோகி	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 (English)

- 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

Tinjauan Persekolahan (Guru)

- 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

MODUL D : PERSEPSI PENGURUSAN BERAT BADAN	
தொகுதி D : உடல் எடை கட்டுப்பாடு	
Arahan : Pilih jawapan dan hitamkan pada kertas jawapan yang disediakan.	
கட்டளை : சரியான விடையைத் தெர்வு செய்து கொடுக்கப்பட்டுள்ள விடைத்தாளில்	
D1	<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>
D2	<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>
D3	<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 Perseorangan (English)

- 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 எண்ணை
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. எதனால் நீங்கள் அவ்வடையாள அட்டையை படிக்கமாதிர்கள்? ஒரு விடைக்கு மேல் தேர்வு செய்யலாம்.</p> <table border="1"> <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"> <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.**

கீழ்க்காட்டுக்கப்பட்டிருள்ள 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 தகவல்கள்கொடுக்கப்பட்டுள்ளது. அதை படித்தப்பின் கொடுக்கப்பட்டுள்ளகூற்றுக்கள் சரி அல்லது பிழை என அடையாளம் காணுக.

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

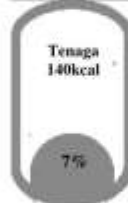
- F5** Jika saya minum 100ml minuman ini, ia membekalkan 56 kcal tenaga.
நான் 100ml குளிர்பானம் குடித்தால், எனக்கு 56 கலோரிச் சத்துகள் கிடைக்கும்.
- A Betul / சரி
B Salah / பிழை
C Tidak tahu / தெரியவில்லை
- F6** Jika saya minum satu kotak minuman ini, bermaksud saya telah mengambil 26.5 gram gula.
ஓர் 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 டீய்வுண்டவை 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 <table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">G2a</td> <td style="width: 20%;">Berat 1 எடை 1</td> <td style="width: 20%;"> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> kg </td> <td style="width: 40%;"></td> </tr> <tr> <td>G2b</td> <td>Berat 2 எடை 2</td> <td> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> kg </td> <td></td> </tr> <tr> <td colspan="2">Enggan diukur அளக்கவில்லை</td> <td><input type="checkbox"/></td> <td></td> </tr> </table>	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"/>	
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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像你一样的年轻一代。

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**

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/沙巴士著 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

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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

MODULE D : PERCEPTION OF WEIGHT MANAGEMENT**D 组 : 体重管理的自我观点****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**

- D1** At the present time, you think you are:
目前, 你觉得你:
- 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
- D2** What are you doing to your body weight?
你对你的体重做了些什么?
- 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
- D3** 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?
- 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
- D4** 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?
- 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
- D5** 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?
- 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
- D6** 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?
- 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

MODULE E: SUPPLEMENT INTAKE**E 组：食用营养补助品****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**

- E1** Are you taking any vitamin supplement/ minerals?
 你有在食用维生素/矿物质的补助品吗？
 A Yes/有
 B No/没有
 (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))
- E2** 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？
 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
- E3** 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？
 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
- E4** How often do you take vitamin supplement / minerals?
 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
- E5** Are you taking any **food supplement**?
 你有在食用食物补助品吗？
 A Yes/有
 B No/没有
 (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)

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）****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****F1** 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？

A. Yes, every time/每次都会

B. Yes, sometimes/偶尔会

C. No/不会

} **(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)****(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)****F2** 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

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

F3 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

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

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

English Version Only

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> </tr> <tr> <td>Day/日期</td> <td>Month/月份</td> <td colspan="3">Year/年份</td> </tr> </table>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Day/日期	Month/月份	Year/年份		
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
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										
	Refuse to be measured 不愿被测量 <input type="text"/>										



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Jalan Bangsar
50590 Kuala Lumpur



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 berbahaya 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 berkekeluargaan, 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 <input type="checkbox"/> 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 2017 sepertimana yang telah dimaklumkan. **(*Potong yang tidak berkenaan)**

(Tandatangan)

Nama Ibubapa/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 Perseetujuan Responden (Bawah 18 Tahun) NHMS 2017

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 berkecualan, 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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