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. Total response rates for self administered questionnaire were 89.5% for ANS.

Based on the indicator height for age (HAZ), the prevalence of normal height (HAZ ≥-2SD) was 93.6% and stunting was 6.4%. The prevalence of stunting was higher in rural areas (6.8%) as compared to urban areas (5.2%). In terms of BMI for age (BAZ), the prevalence of thinness was 5.6%, overweight was 15.6 % and obesity was 17.2%.

Among those school-going adolescents who had actual normal weight, 53.8% correctly perceived their weight to be normal. Among those who were actually thin, 74.4% correctly perceived their weight to be thin, while among those who were actually overweight and obese, 54.0% and 14.7% correctly perceived themselves to be overweight and obese respectively. Health was the main reason among those who wanted to lose and gain weight; with 56.2% preferring exercise as an option to lose weight; 55.7% 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 32.2%. More than half (59.2%) had breakfast, one to six days per week (59.2%) and some of them did not having have breakfast in a week (8.6%). Among those who had breakfast, 73.9% had it at home. More boys (33.3%) reported having breakfast daily (seven days per week), than girls (31.1%). The two main reasons of skipping breakfast were no appetite (41.9%) and no time (33.0%).

The prevalence of having lunch seven days per week among school-going adolescents was 47.7%; 49.4% had lunch up to six days per week and 2.9% did not have lunch in a week. No appetite (48.2%) and no time (17.9%) were the two main reasons for skipping lunch. As for dinner, 54.6% of school-going adolescents had dinner seven days per week, 42.3% 1-6 days per week and 3.1% did not have dinner in a week. Only 6.4% took heavy meals after dinner. There were 2.5% who had fast food daily while 13.1% did not have fast food daily. Social media (YouTube, Facebook, Instagram, etc.) and television were reported as the main sources
which affected dietary pattern in 37.9% and 36.7% of adolescents respectively. A lower percentage of 28.7% reported that their dietary patterns were not affected by any media sources.

The prevalence of physical activity among school-going adolescents in Melaka was 44.7%. Boys and younger adolescents were more active than girls and older adolescents. The most liked 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 Melaka was 43.2% and 29.7%. 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 15.5% and 9.1% of adolescents. The most commonly consumed vitamin/minerals and food supplements were Vitamin C, 30.4% and Bee Product, 16.5%. The main reason for taking vitamin / minerals and food supplements was due to parent’s advised 43.4% and 25.7%.

Food and nutrition labelling use was assessed among secondary school-going adolescents; 32.3% always reading food and nutrition labelling. Another 47.8% reported as sometimes and only 19.9% never reading food label. They were more concerned about fat and carbohydrate compared to other nutrients. 52.6% of adolescents answered both correctly on nutrition facts and 29.9% of adolescents answered correctly questions regarding the front of pack labelling and more than half answered both correctly regarding the most and least ingredients based on the food ingredient list.
1.0 Introduction

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

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

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

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

Recently, a systematic review reported that the prevalence of overweight and obesity among adolescents worldwide is high, and obesity is higher among boys (Bibiloni, Pons, & Tur, 2013) and Malaysia is showing a similar pattern as well. The prevalence of obesity among children was only 5.7% in the year 2006 (IPH, 2008) and it drastically increased to 11.9% in the year 2015 (IPH, 2015). NHMS in the year 2011 showed that the nationwide prevalence of obesity in adolescent age 10 – 17 was 5.7% (IPH, 2011).
High-calorie intake and sedentary lifestyle are two common behavioral factors related to childhood obesity. Childhood and adolescent obesity are an epidemic and should be given attention because they are associated with various medical chronic conditions in adulthood (Sahoo et al., 2015). Reading food labelling prior to food purchasing can help adolescents in making healthier choices on packaged snacks. However, use of nutritional labelling was found to be low among adolescents (Wojcicki & Heyman, 2012). Thus, Adolescent Nutrition Survey NHMS 2017 aims age 10 – 17 years old to continue exploring issues pertaining to nutrition related component in adolescents in Malaysian such as nutritional status, body weight perception, meal pattern, habitual food intake, dietary intake, physical activity level, vitamin/mineral and food supplement intake and food and nutrition labelling.

References

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 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 adolescents (Primary 4 to Secondary 5).
1.1.2.4 To assess physical activity pattern of adolescents (Primary 4 to Secondary 5).
1.1.2.5 To determine the pattern of use of vitamins/minerals and food supplements among adolescents (Primary 4 to Secondary 5).
1.1.2.6 To determine the prevalence of reading food and nutrition labeling 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.
Advisor
Dr. Haji Tahir Bin Aris
Director, Institute for Public Health

Coordinator
Dr. Muhammad Fadhli B. Mohd Yusoff

Principal Investigators
Dr. S Maria Binti Awaluddin
Pn. Ruhaya Binti Salleh
En. Mohammad Aznuddin Bin Abd Razak

Research Officers (temporary staff)
Cik Nur Hazwani Bt. Mohd Hasri
Pn Siti Noafika Bt. Anwar
En. Muhammad Suhaimi Bin Mohamad Idrus
Cik Shahibul Bariah Bt. Mat Ghani
En. Muhammad Zuhdi Bin Khiruddin
En. Amir Jazali Bin Zaili
En. Muhammad Asyraf Bin Napiah

State Liaison Officer
Pn. Nor Shahida Bt. Abdul Hamid
Pn. Wan Shakira Bt. Rodzlan Hasani

1. State Education Department
2. District Education Department
3. School Head/Principal
4. State Liaison Officer

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.

\[ n_{SRS} \geq \frac{Z_{\alpha/2}^2 \cdot (p)(1-p)}{\sigma^2} \]

The sample size calculation was based on a few criteria as below:
1. Variance of proportion of the variable of interest (Based on Malaysia School-Based Nutrition Survey 2012)
2. Margin of error (e) (Between 0.01 to 0.05)
3. Confidence Interval of 95%

To ensure optimum sample size, a few adjustments were made as follows:
1. Adjusted \( n(srs) \) for the total number of target population (\( N \)) (based on the population size for schoolchildren in 2016)

\[ n \geq \frac{n_{SRS}}{1 + \frac{n_{SRS}}{N}} \]

2. Adjusted for the design effect (deff) (based on previous survey: MSNS 2012), \( n(\text{complex}) = n * \text{deff} \)
3. Adjusted the \( n(\text{complex}) \) taking into account expected non-response rate of 25%, \( n(\text{adj}) = n(\text{complex}) * (1 + \text{non-response rate}) \)
4. The sample size was then adjusted according to the need of the analysis, whether the estimate was going to be done at the national or the state level.

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

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

<table>
<thead>
<tr>
<th>No.</th>
<th>State</th>
<th>Total Number of Schools</th>
<th>Number of Schools Sampled</th>
<th>Number of students sampled</th>
<th>Total Number of Schools</th>
<th>Number of Schools Sampled</th>
<th>Number of students sampled</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Johor</td>
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<td>921</td>
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<td>Melaka</td>
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<td>14</td>
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</tr>
<tr>
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<td>WP Kuala Lumpur</td>
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<td>14</td>
<td>1906</td>
<td>227</td>
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<td>875</td>
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<td>15</td>
<td>WP Labuan</td>
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<td>12</td>
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<td>875</td>
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<tr>
<td>16</td>
<td>WP Putrajaya</td>
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<td>8</td>
<td>1906</td>
<td>14</td>
<td>6</td>
<td>875</td>
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<tr>
<td></td>
<td>Total</td>
<td>2,738</td>
<td>212</td>
<td>30,496</td>
<td>7,925</td>
<td>99</td>
<td>14,000</td>
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2.4 Sampling Design
This survey implemented a multistage stratified cluster sampling design to ensure nationally representative sample of Standard 4 to 6 (10-12 years of age) and Form 1 to 5 (13-17 years of age). Malaysia was stratified into 16 states (including Federal Territory of Kuala Lumpur, Putrajaya and Labuan). The first stage of sampling involved a random selection of schools from the list of eligible schools provided by the Ministry of Education. Schools were selected randomly with probability proportional to school enrolment size. A total of 311 schools were selected to participate in this survey. The second stage of sampling was selection of classes. All classes in each selected school were included in the sampling frame. Systematic random
sampling was used to select classes from each selected school. All students in the selected classes were eligible to participate in the survey. The third stage of sampling was applied for Habitual food intake module and Dietary Intake. Students were selected randomly from each selected class.

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

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

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

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

2.7.1 Data Operation Centre
An operation centre with several stations was set up to receive data “bundles” from the field:
Station 1: Respondent ID checking
Station 2: Scanning
Station 3: Verification
Station 4: Storage
Received bundles via courier or by-hand

Bundle receiving forms were filled-up

School ID were checked and verified

Student ID were checked for each OMR

Status

Correct

OMR forms were scanned

Data Verification

Questionnaires Storage

Incorrect

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 was normally in CSV form or excel form. The analysis was done according to the objectives, and tables prepared. Complex samples analysis procedures were used in the analysis and was carried out at 95% confidence interval. The final data was 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:

\[ W = W_1 \times W_2 \times W_3 \times F \times PS \]

Where;
\[ W_1 = \text{the inverse of the probability of selecting the school} \]
\[ W_2 = \text{the inverse of the probability of selecting the class within the school} \]
\[ W_3 = \text{the inverse of the probability of selecting the student within the class} \]
\[ F = \text{the inverse of a school, class and student level non-response adjustment factor} \]
\[ PS = \text{a post stratification adjustment factor calculated by class and gender} \]

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

The ANS questionnaire contained sub-topics which are nutritional status, body weight perception, meal pattern, physical activity level, Vitamin/Mineral 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

<table>
<thead>
<tr>
<th>State</th>
<th>Selected School</th>
<th>Eligible Student</th>
<th>Interviewed Student</th>
<th>Response Rate (%)</th>
</tr>
</thead>
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<tr>
<td>Malaysia</td>
<td>311</td>
<td>44,773</td>
<td>40,087</td>
<td>89.5</td>
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<tr>
<td>Johor</td>
<td>20</td>
<td>2,829</td>
<td>2,565</td>
<td>90.7</td>
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<tr>
<td>Kedah</td>
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<td>2,790</td>
<td>2,490</td>
<td>89.2</td>
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<tr>
<td>Kelantan</td>
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<td>2,776</td>
<td>2,464</td>
<td>88.8</td>
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<tr>
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<td>20</td>
<td>2,862</td>
<td>2,685</td>
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<td>2,823</td>
<td>2,431</td>
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<tr>
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<td>2,832</td>
<td>2,527</td>
<td>89.2</td>
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<td>2,869</td>
<td>2,496</td>
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<td>2,721</td>
<td>2,503</td>
<td>92.0</td>
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<td>2,738</td>
<td>2,437</td>
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<td>2,437</td>
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<td>2,791</td>
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<td>2,699</td>
<td>2,410</td>
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<td>90.5</td>
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<td>WP Putrajaya</td>
<td>14</td>
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<td>2,473</td>
<td>90.6</td>
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</tbody>
</table>

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

<table>
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<tr>
<th></th>
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<th>School Enrolment 2017</th>
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<td></td>
<td>n</td>
<td>Estimated Enrolment</td>
<td>Prevalence (%)</td>
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<td>281,354</td>
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<td><strong>Sex</strong></td>
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<td>422,891</td>
<td>12.2</td>
</tr>
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</table>
Figure 3: GIS mapping of the selected primary and secondary schools in Malaysia 2017
3.2 Nutritional status among adolescents (Primary 4 to Secondary 5) in Melaka

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 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 helps 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). The major indices referred to were:

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

3.2.4 Findings

3.2.4.1 Height-for-Age z-score

The findings of the survey showed that 93.6% (95% CI: 91.96, 94.99) of the adolescents had normal height-for-age status (HAZ: ≥ -2SD to ≤ +2SD). The prevalence was higher than the national level [91.8% (95% CI: 91.19, 92.29)]. Comparing between strata, rural areas had higher percentage of total stunting [6.8% (95% CI: 5.27, 8.72)] compared to urban areas [5.2% (95% CI: 2.93, 9.04%)]. In term of sexes, the prevalence of stunting was slightly higher among girls [6.7% (95% CI: 5.22-8.61)] compared to boys [6.0% (95% CI: 4.31, 8.28)]. Comparing class
category, the prevalence of thinnest was not much different between primary level [6.4\% (95\% CI: 4.62, 8.80)] and secondary level [6.3\% (95\% CI: 4.57, 8.73)] students.

3.2.4.2 BMI-for-Age z-score

In terms of BMI-for-age status, the findings showed that 61.5\% (95\% CI: 58.82-64.20) of the population was in the normal range (≥ -2SD to ≤ +1SD). The prevalence was lower than the national level [62.9\% (95\% CI: 61.84, 64.02)]. Comparing between strata, the prevalence of thinness was not much different between urban [5.5\% (95\% CI: 3.69, 8.01)] and rural [5.7\% (95\% CI: 4.93, 6.61)] areas. According to sexes, more boys [6.7\% (95\% CI: 5.68, 7.78)] were thinner than girls [4.6\% (95\% CI: 3.53, 6.09)]. In terms of class category, 6.1\% (95\% CI: 5.00, 7.46) primary level students were thin compared to 5.4\% (95\% CI: 4.36, 6.57) secondary level students.

On the other hand, the prevalence of overweight in Melaka (BMI-for-age: ≥ +1SD to ≤ +2SD) was 15.6\% (95\% CI: 13.56, 17.98), equal to national prevalence [15.6\% (95\% CI: 15.06, 16.19)]. Between strata, urban strata showed higher prevalence of overweight [18.3\% (95\% CI: 15.53-21.50)] than rural strata [14.6\% (95\% CI: 12.23, 17.43)]. Comparing between sexes, the prevalence of overweight was not much different between boys [15.4\% (95\% CI: 13.57, 17.53)] and girls [15.8\% (95\% CI: 12.24, 20.25)]. In terms of class category, 13.5 \% (95\% CI: 9.75, 18.33) primary level students were overweight compared to 16.9\% (95\% CI: 14.92, 19.08) secondary level students.

For the prevalence of obesity (BMI-for-age: > +2SD), the state prevalence was 17.2\% (95\% CI: 14.58, 20.10), which was higher than national prevalence [14.8\% (95\% CI: 14.00, 15.73)]. Between strata, rural strata showed higher prevalence of obesity [18.0\% (95\% CI: 15.04, 21.34)] than urban strata [15.0\% (95\% CI: 10.46, 21.03)]. Comparing between sexes, boys had higher prevalence of obesity [18.3\% (95\% CI: 15.18, 22.01)] than girls [16.0\% (95\% CI: 13.14, 19.33)]. In terms of class category, 21.1\% (95\% CI: 18.60, 23.88) primary level students were obese compared to 14.9\% (95\% CI: 11.86, 18.50) secondary level students.

3.2.5 Conclusion

The prevalence of stunting for adolescents aged 10 to 17 years in Melaka was 6.4\%. On the other hand, the prevalence of overweight and obesity among this population were 15.6\% and 17.2\% respectively. In contrast, 5.6\% of the population were found to have thinness. High demand of energy and nutrients are very important for physical growth and development at this age. However, the concept of healthy eating and living should be practised at younger ages to ensure healthy physical and mental development. Consequently, it is hoped reduce the prevalence of stunting, thinness, overweight and obesity.
3.2.6 Recommendation

Thinness, overweight and obesity is still a problem to be addressed for adolescents aged 10 to 17 years in Melaka. Various agencies have to take the initiative to set up a plan of action to overcome such problems. Healthy eating and living concepts should be carried out at an earlier stage. It can be implemented by developing pro-health policies and regulations to create health promoting environments in the work place, school, public areas and even at home.

One of the suggested initiatives that involves collaboration between Ministry of Health and Ministry of Education is to empower Parents and Teachers Associations in school to disseminate and implement healthy eating programs in schools. With that, it can give rise to the concept of healthy eating and living to the children during school time, and further practise and implement it at home and in daily life. Eventually, it is hoped 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 a person’s development patterns. An evaluation also provides useful insight into the nutritional and health situation of entire population groups.

References


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

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<th>Characteristic</th>
<th>Stunting (&lt;-2SD)</th>
<th>Normal (≥-2SD)</th>
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**95% CI**: Confidence interval.
Table 3.2.2: Distribution of adolescents according to BMI-For-Age status by sociodemographic characteristics

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3.3 Perception on body weight management among adolescent (Primary 4 to Secondary 5) in Melaka

**Contributors:** Nur Shahida Abdul Aziz, Safiah Md.Yusof, Rohana Yaakof, Ruby Zainureen, Noor Ani Ahmad, Norlida Zulkafly, Rashidah Ambak

### 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

- **Actual body weight:** Body weight that was measured during the survey.

- **Misperception:** - a wrong perception
3.3.4 Findings

Overall, 42.0% (95% CI: 39.43, 44.69) of the adolescents in Melaka perceived that they have normal weight. There was no significant different in school locality, however there was significant different in sex which boys was higher in perceived thin 30.7% (95%CI: 26.72, 34.98) as compared than girls, and primary adolescents was higher 33.4% (95%CI: 32.27,34.46) in perceived thin based on school category. (Table 3.3.1)

Among the normal weight category, 53.8% (95% CI: 51.42, 56.22) correctly perceived their weight to be normal, 27.4% (95% CI: 22.60, 32.80) underestimated their body weight or perceived themselves to be thin, while 17.8% (95% CI: 13.70, 22.70) and 1.0% (95% CI: 0.70, 1.60) were overestimated to be overweight and obese, respectively. However, among the actual overweight category, 54.0% (95% CI: 45.32, 62.38) correctly perceived their weight to be overweight, but 10.2% (95% CI: 6.12, 16.48) and 28.5% (95% CI: 23.33, 34.40) underestimated their body weight to be thin or normal respectively. There were significant differences among adolescents that had normal body weight but perceived themselves as overweight based on sex and school category with more girls at 24.1% (95% CI: 18.26, 31.08) and secondary school students at 23.3% (95% CI: 20.22, 26.74) who perceived themselves as overweight (Table 3.3.2)

Among all the adolescents who correctly perceived thin and have actual thin body weight, 69.9% (95% CI: 58.73, 79.09) reported they wanted to increase weight while adolescents who perceived normal and have actual normal body weight 28.1% (95% CI: 23.62, 32.97) 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 categories of action taken (Table 3.3.3)

However, adolescents whom misperception, perceived thin but actually in overweight and obese categories, most of them 66.4% (95% CI: 51.57, 78.56) wanted to lose weight while 10.2% (95% CI: 4.52, 21.58) wanted to increase their weight. There were no significant different in sex and school category based on their action taken. While for adolescents who have normal body weight but perceived thin or overweight there were no significant different based on school locality, sex and school category (Table 3.3.4)

About 66.2% (95% CI: 60.64, 71.36) adolescents choose health purpose as the main factor that motivate to lose weight followed by increase self-confidence 24.0% (95% CI: 19.67, 28.90). However, beauty purpose become the main factor to lose body weight among girls, 10.2% (95% CI: 7.04, 14.69) (Table 3.3.5)

When compared by sex, more boys chose health purposes as the main factor to motivate them to reduce body weight at 67.8% (95% CI: 61.39, 73.57), compared to girls at 64.9% (95% CI: 57.16, 71.99).
However, other factors to motivate adolescents to increase body weight were also health purposes at 60.5% (95% CI: 53.71, 66.90) followed by increased self-confidence at 26.7% (95% CI: 22.08, 31.93) (Table 3.3.6)

Exercise was the most frequent option preferred by adolescents to lose body weight 56.2% (95% CI: 52.50, 59.92) (Table 3.3.7), while increased quantity of food was the most frequent option preferred by adolescents to increase their body weight, 55.7% (48.86, 62.29) (Table 3.3.8)

3.3.5 Discussion/Conclusion

Perception of having normal weight among adolescents in Melaka was higher than the national prevalence at 42.0% and 41.4% respectively.

Among the adolescents with actual thinness in Melaka, 74.4% correctly perceived themselves as thin, and this was higher compared with the national prevalence of 69.9%. Adolescents with actual normal body weight, 53.8% had correctly perceived their weight to be normal and this was slightly higher than national prevalence, 50.2%.

In Melaka, the trend of main factors to lose body weight among adolescents was similar with the national trend. Health purposes was the highest (66.2%) main factor to lose body weight; followed by increased self confidence (24.0%), beauty purposes (7.4%) and to have more friends (2.5%).

Health purposes is the highest (60.5%) main factor to increase body weight. This was higher compared with the national prevalence. This was followed by increased self confidence (23.8%), beauty purposes (7.5%) and to have more friends (5.3%).

Adolescents in Melaka chose to exercise as the preferred option to lose weight. However this was lower compared with the national prevalence, at 56.2% and 62.5% respectively. This was followed by reduced consumption of high fat foods (23.8%), increased intake of fruits and vegetables (6.9%) and reduced intake of high sugar foods (5.3%). These trends are similar with the national trends.

An estimated 55.7% adolescents in Melaka chose to increase quantity of food as the preferred option to increase body weight. This 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 portrays unusually thin models, especially among females, emphasizing `thin` rather than `healthy` body shapes.

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

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

References

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

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

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<th>Obese</th>
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<td>%</td>
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<td>Upper</td>
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Table 3.3.2: Body weight perception among adolescent by actual BMI for age status (Cont.)

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<td>30</td>
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<td>4.95</td>
<td>10.69</td>
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</table>

Locality of school

| Urban     | 12   | 8.9    | 3.34       | 21.54 |
|           | 37   | 25.6   | 14.33      | 41.41 |
|           | 91   | 60.2   | 40.96      | 76.66 |
|           | 8    | 5.4    | 2.48       | 11.28 |

| Rural     | 29   | 10.8   | 5.93       | 18.82 |
|           | 85   | 29.9   | 25.37      | 34.85 |
|           | 142  | 51.1   | 42.76      | 59.36 |
|           | 22   | 8.2    | 5.28       | 12.60 |

Sex

| Boys      | 28   | 13.5   | 7.95       | 21.89 |
|           | 83   | 36.5   | 30.24      | 43.34 |
|           | 116  | 46.3   | 35.92      | 57.03 |
|           | 9    | 3.7    | 1.84       | 7.22  |

| Girls     | 13   | 7.0    | 3.32       | 14.17 |
|           | 39   | 20.8   | 15.29      | 27.53 |
|           | 117  | 61.4   | 53.03      | 69.14 |
|           | 21   | 10.9   | 7.07       | 16.31 |

School Category

| Primary   | 28   | 23.7   | 21.62      | 26.01 |
|           | 44   | 37.6   | 32.78      | 42.69 |
|           | 37   | 34.9   | 29.18      | 41.04 |
|           | 4    | 3.8    | 2.42       | 5.81  |

| Secondary | 13   | 3.9    | 1.94       | 7.71  |
|           | 78   | 24.3   | 18.84      | 30.80 |
|           | 196  | 62.8   | 55.75      | 69.33 |
|           | 26   | 9.0    | 5.91       | 13.39 |

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

<table>
<thead>
<tr>
<th>Perceived</th>
<th>Thin</th>
<th>Normal</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>Lower</td>
<td>Upper</td>
</tr>
<tr>
<td>Melaka</td>
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<td>14.7</td>
<td>9.96</td>
<td>21.16</td>
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</table>

Locality of school

| Urban     | 6    | 6.5    | 1.76       | 21.07 |
|           | 13   | 13.6   | 5.09       | 31.60 |
|           | 73   | 63.2   | 52.73      | 72.57 |
|           | 23   | 16.7   | 7.01       | 34.89 |

| Rural     | 48   | 14.3   | 10.03      | 19.91 |
|           | 70   | 20.2   | 13.21      | 29.51 |
|           | 176  | 51.5   | 46.01      | 56.97 |
|           | 46   | 14.1   | 9.08       | 21.16 |

Sex

| Boys      | 37   | 15.4   | 10.39      | 22.16 |
|           | 53   | 21.1   | 14.52      | 29.69 |
|           | 144  | 53.2   | 45.85      | 60.39 |
|           | 34   | 10.3   | 5.83       | 17.58 |

| Girls     | 17   | 9.0    | 5.14       | 15.44 |
|           | 30   | 15.7   | 8.52       | 27.20 |
|           | 105  | 55.5   | 47.82      | 62.97 |
|           | 35   | 19.7   | 13.02      | 28.71 |

School Category

| Primary   | 33   | 18.3   | 16.14      | 20.73 |
|           | 55   | 29.4   | 20.73      | 39.86 |
|           | 80   | 46.7   | 41.51      | 51.99 |
|           | 7    | 5.6    | 1.94       | 14.95 |

| Secondary | 21   | 7.6    | 2.97       | 17.90 |
|           | 28   | 9.7    | 6.66       | 13.97 |
|           | 169  | 60.5   | 53.26      | 67.32 |
|           | 62   | 22.2   | 18.04      | 27.05 |
### Table 3.3.3: Action taken according to correctly perceived body weight among adolescents (Cont.)

<table>
<thead>
<tr>
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<th>Increase weight</th>
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<tbody>
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<td>Prevalence (%)</td>
</tr>
<tr>
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### Table 3.3.3: Action taken according to correctly perceived body weight among adolescents (Cont.)

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<th>Maintain body weight</th>
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<td>Prevalence (%)</td>
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### Table 3.3.3: Action taken according to correctly perceived body weight among adolescents (Cont.)

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

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<th>Increase weight</th>
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### Table 3.3.4: Action taken according to misperception of body weight among adolescents (Cont.)

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</tr>
</thead>
<tbody>
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<td>Increase weight</td>
</tr>
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<td>Unweighted</td>
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### Table 3.3.4: Action taken according to misperception of body weight among adolescents (Cont.)

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

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

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3.4 Meal pattern among adolescents (10 to 17 years old) in Melaka

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3.4.1 Introduction

The term ‘meal patterns’ is often used to describe individuals’ eating patterns at the level of a ‘meal’, such as a main meal (for example, breakfast, lunch or dinner) or a smaller-sized meal (for example, supper or snack). It also can be described in three constructs, which is patterning (frequency, spacing, regularity, skipping, timing), format (types of food combinations, sequencing of foods, 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 pattern of adolescent in Melaka (Primary 4 to Secondary 5).

**Specific objective:**

- To determine the prevalence consumption of individual main meals (breakfast, lunch, dinner) and intermeals (during recess, afternoon tea and heavy meal after dinner).
- To identify the sources of food and/or drink consume 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 bringing food or drinks to school.
- To identify common types 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 school area.
- To identify common type of snack consumed and bought out of school area.
- To identify sources of media that affect meal pattern 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, food intake in the early morning, between 6.00 am to 8.00 am.
- **Lunch**: defined as foods consumed or meal between 11.00 am to 3.00 pm.
- **Dinner**: defined as foods consumed or meal between 6.00 pm to 10.00 pm.
- **Afternoon tea**: defined as food and/or drinks taken between lunch and dinner, between 3.00 pm to 6.00 pm.
- **Heavy meal after dinner**: food taken at night after the dinner after 10.00 pm. Examples of foods 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 of frequency of eating for weight loss purposes.
- **Fast food**: meant in this question, including ready-to-eat food. Ready-to-eat foods are foods that can be eaten immediately after purchase. It consists of cooked food, food either hot or cold foods and foods that can be eaten without further cooking or heating.
- **Snacking**: consumption of energy intake outside of traditional meals such as breakfast, lunch, and dinner.
- **Eating during school break time**: Eating time between the intervals of classes after school started.
- **Eating out**: either eating at restaurant or hawker stall and does not includes buying outside food and eat it at home.
- **Snack food**: snack food such as bun, biscuits, fruits, nuts, crackers, ice cream, junk foods, pickles, flavored/carbonated drink, fries/ nugget/ sausage, candy or chocolate.
3.4.4 Findings

There were 2,682 respondents that represented 106,120 adolescents aged 10 to 17 years old in Melaka who responded to this module. About 35.3% (95% CI: 31.01, 39.83), 47.9% (95% CI: 42.75, 53.11) and 52.8% (95% CI: 47.00, 58.49) had consumed breakfast, lunch and dinner seven days per week respectively. Majority of adolescents in Melaka reported having their source of food for main meals from home. Half of the adolescents in this state tend to skip the main meal due to poor appetite. About 64.3% (95% CI: 59.17, 69.18) adolescents in Melaka reported that they took meals during recess everyday (5 days per week) and the main source of the meal was from the school canteen. There were 4.9% (95% CI: 3.94, 6.14) adolescents in Melaka having daily heavy meal after dinner. About 1.7% (95% CI: 1.15, 2.52) adolescents in Melaka consumed fast food on a daily basis. During the school day, 10.6% (95% CI: 8.23, 13.48) and 54.9% (95% CI: 49.45, 60.15) of adolescents practised bringing food and drink respectively everyday. The most common food brought to school was nasi lemak/fried rice/mixed rice at 40.8% (95% CI: 36.99, 44.82) and the most common drink brought to school was plain water at 93.1% (95% CI: 91.14, 94.70). Most of the adolescents also spent their pocket money for buying food or drink which is reported at 62.3% (95% CI: 59.42, 65.05). About 3.4% (95% CI: 2.41, 4.87) of adolescents in Melaka reported eating out as frequent as 7 times or more in a week. Majority of adolescents in Melaka took snack food one to three times in a week and the most common snack food consumed was bread/bun/sandwich. Three out of four adolescents in Melaka had bought food or drinks out of the school area at least one time in a week. The analysis also revealed that, flavoured/carbonated drink was the most common type of food or drink that adolescents in Melaka bought out of the school area. Television followed by social media were the two main medias source that influenced the dietary pattern of the adolescents in Melaka.

3.4.5 Discussions/Conclusion

The prevalence of daily breakfast, lunch and dinner among adolescents in Melaka was high compared to majority of the states in Malaysia. However, there are still concerns when half of them skip main meals due to poor appetite. Majority of adolescents in Melaka consumed food and/or drink during recess and the school canteen is the favourite place for them to obtain the food and/or drink. For adolescents who practise bringing food to school, the type of food that they brought was also an important issue to highlight. Most of them practised bringing food that was categorized as high calorie. However, there is still some good habits seen when majority of adolescent practised bringing plain water to school. Food and/or drinks that they bought out of the school area is also an important issue to highlight as our analysis found that flavoured and carbonated drinks are the popular drinks that adolescents in Melaka brought. An interactive advertisement and promotion on healthy food choice should be placed on television and social media as these are media that can influence adolescents’ dietary patterns.
3.4.6 Recommendation

Taking evidence from the survey, several recommendations were proposed. Advocacy on proper meal pattern practice among adolescent is crucial therefore, a holistic and comprehensive nutrition intervention should be implemented nation-wide, where every stakeholder must work together. The current adolescent is the future adult, thus, a healthier adolescent generation is warranted for a healthier nation. As 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 behavioural 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 intake daily especially on main meals.

References


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

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

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

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

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

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

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Locality of school

| Urban | 156     | 5819            | 40.1          | 36.69 - 43.52 | 21     | 750               | 5.2          | 3.25 - 8.11 |
| Rural | 395     | 16118           | 34.0          | 30.56 - 37.64 | 60     | 2313              | 4.9          | 3.52 - 6.73 |

Sex

| Boys | 289     | 10063           | 34.7          | 29.94 - 39.32 | 50     | 1670              | 5.8          | 4.30 - 7.66 |
| Girls | 262    | 11875           | 36.1          | 33.01 - 39.31 | 31     | 1393              | 4.2          | 3.14 - 5.70 |

Ethnicity

| Malay | 447     | 18016           | 34.8          | 31.41 - 38.40 | 72     | 2784              | 5.4          | 4.08 - 7.06 |
| Chinese | 79    | 2923            | 43.1          | 34.14 - 52.49 | 4      | 113               | 1.7          | 0.44 - 6.08 |
| Indian | 16     | 647             | 26.3          | 19.73 - 34.11 | 4      | 136               | 5.5          | 2.29 - 12.77 |
| Bumiputera Sabah | 1 | 47        | 16.3          | 3.04 - 54.54  |        |                   |              |          |
| Bumiputera Sarawak | 2 | 66       | 66.1          | 12.16 - 96.47 |        |                   |              |          |
| Others | 6      | 238             | 43.8          | 23.84 - 65.94 | 1      | 30                | 5.5          | 0.49 - 40.70 |

School level

| Primary school | 170     | 8001            | 35.9          | 29.55 - 42.84 | 21     | 932               | 4.2          | 2.96 - 5.88 |
| Secondary school | 381    | 13936           | 35.2          | 32.12 - 38.31 | 60     | 2131              | 5.4          | 3.81 - 7.54 |

Class

| Standard 4 | 41      | 2088            | 29.9          | 21.07 - 40.51 | 5      | 213               | 3.0          | 1.02 - 8.69 |
| Standard 5 | 63      | 2592            | 33.6          | 24.81 - 43.74 | 11     | 497               | 6.4          | 4.11 - 9.97 |
| Standard 6 | 66      | 3321            | 43.8          | 37.90 - 49.94 | 5      | 222               | 2.9          | 1.54 - 5.51 |
| Form 1     | 59      | 2254            | 30.5          | 22.57 - 39.77 | 11     | 406               | 5.5          | 3.02 - 9.80 |
| Form 2     | 56      | 2166            | 28.3          | 22.04 - 35.54 | 13     | 502               | 6.6          | 3.52 - 11.88 |
| Form 3     | 80      | 2734            | 36.4          | 29.27 - 44.10 | 12     | 398               | 5.3          | 2.99 - 9.19 |
| Form 4     | 86      | 3020            | 35.6          | 29.82 - 41.89 | 14     | 465               | 5.5          | 3.14 - 9.41 |
| Form 5     | 100     | 3762            | 43.7          | 36.52 - 51.19 | 10     | 361               | 4.2          | 2.17 - 7.93 |

School session

| Morning session | 271     | 10673           | 33.4          | 29.28 - 37.90 | 41     | 1580              | 5.0          | 3.83 - 6.38 |
| Evening session | 8       | 341             | 12.4          | 7.53 - 19.65  | 5      | 211               | 7.7          | 3.36 - 16.47 |
| Morning and evening session | 271 | 10890           | 40.0          | 36.68 - 43.43 | 35     | 1272              | 4.7          | 3.18 - 6.81 |

BMI-for-age status (BAZ)

| Thinness (<-2sd) | 22      | 925             | 34.3          | 23.40 - 47.06 | 2      | 53                | 2.0          | 0.47 - 7.97 |
| Normal (>-2sd - s+1sd) | 323 | 12882           | 33.7          | 30.80 - 36.80 | 36     | 1430              | 3.7          | 2.74 - 5.09 |
| Overweight (>+1sd - s+2sd) | 91     | 3550            | 38.5          | 31.83 - 45.69 | 18     | 692               | 7.5          | 4.19 - 13.11 |
| Obese (>+2sd) | 114     | 4542            | 38.7          | 30.82 - 47.16 | 25     | 888               | 7.6          | 4.49 - 12.46 |

Height-for-age status (HAZ)

<p>| Stunting (&lt;-2sd) | 40      | 1715            | 37.4          | 28.93 - 46.82 | 2      | 85                | 1.9          | 0.46 - 7.17 |
| Normal (&gt;-2sd) | 511     | 20222           | 35.3          | 32.01 - 38.67 | 79     | 2978              | 5.2          | 3.94 - 6.82 |</p>
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<th>Prevalence (%)</th>
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Table 3.4.4: Prevalence of lunch per week among adolescents by socio-demographic characteristics and nutritional status

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

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

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NATIONAL HEALTH AND MORBIDITY SURVEY 2017
Table 3.4.7: Prevalence of dinner per week among adolescents by socio-demographic characteristics and nutritional status

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

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

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

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

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

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

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

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Table 3.4.13: Source of food for afternoon tea among adolescents by socio-demographic characteristics and nutritional status (Cont.)
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Table 3.4.17: Practice of bringing food to school among adolescents by socio-demographic characteristics and nutritional status (Cont.)

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

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

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<td>Count</td>
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<td>Percentage (%)</td>
<td>95% CI</td>
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- **Count**: Number of participants.
- **Estimated Population**: Estimated population for the type of food.
- **Percentage (%)**: Percentage of the population for the type of food.
- **95% CI**: 95% Confidence Interval.
Table 3.4.18: Type of food usually brought to school among adolescents by socio-demographic characteristics and nutritional status (Cont.)

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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.)

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NATIONAL HEALTH AND MORBIDITY SURVEY 2017
Table 3.4.22: Prevalence of eating out in a week among adolescents by socio-demographic characteristics and nutritional status (Cont.)

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

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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.)

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NATIONAL HEALTH AND MORBIDITY SURVEY 2017
Table 3.4.23: Prevalence of consuming snack food in a week among adolescents by socio-demographic characteristics and nutritional status

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

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NATIONAL HEALTH AND MORBIDITY SURVEY 2017
Table 3.4.24: Type of snack foods usually consumed among adolescents by socio-demographic characteristics and nutritional status

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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.)

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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.)

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| Overweight (>=1sd 
<+2sd) | 146   | 5733                             | 34.6                       | 162                    | 6463                                   | 39.0                          | 32.65                  | 45.65                      |
| Obese (>+2sd)   | 157                | 6185                             | 34.0                       | 174                    | 6984                                   | 38.4                          | 32.48                  | 44.60                      |
| Height-for-age status (HAZ) |      |                                   |                            |                        |                                        |                               |                        |                             |                          |
| Stunting (<-2sd)| 67                 | 2636                             | 39.2                       | 65                     | 2631                                   | 39.1                          | 29.80                  | 49.36                      |
| Normal (>-2sd  
<+2sd) | 901   | 35674                            | 35.9                       | 908                    | 36516                                  | 36.8                          | 32.38                  | 41.41                      |
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3.5 Physical activity among adolescents (Primary 4 to Secondary 5) in Melaka

**Contributors:** Nor Azian Mohd Zaki, Hazizi Abu Saad, Shahrulnaz Norhazli Nazri, Mohd Azahadi Omar

### 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 physical activity pattern among adolescents and the specific objectives are as follows:

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

### 3.5.3 Variable definitions

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

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

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

The mean score for the physical activity level for adolescents in Melaka was 2.31 (95% CI: 2.20, 2.41) (Table 3.5.1). Overall prevalence of being physically active among adolescents was 44.7% (95% CI: 37.22, 52.46) and the prevalence of being physically inactive was 55.3% (95% CI: 47.54, 62.78). In terms of school locality, there was no significant difference of being physically active between students studying in urban area [(46.3% (95% CI: 33.23, 59.87)] and students from rural areas (44.1%; 95% CI: 35.17, 53.74). Boys showed higher prevalence of being physically active [56.8% (95% CI: 49.08, 64.25) compared to girls, 33.0% (95% CI: 24.08, 43.23). Primary students [63.2% (95% CI: 56.36, 69.57)] were significantly more active than secondary students [34.8% (95% CI: 30.74, 39.03)]. In term of BMI-for-age status, there was no significant difference among adolescents with thinness [50.3% (95% CI: 37.62, 63.00)], normal weight [44.4% (95% CI: 37.13, 51.89], overweight [44.3% (95% CI: 34.88, 54.18)] and obese 44.3% (95% CI: 34.07, 55.01) (Table 3.5.2).

The most popular spare-time physical activity according to percentage of adolescents in Melaka were walking for exercise [83.7% (95% CI: 81.75, 85.56)] (Table 3.5.3). About 12.9% (95% CI: 10.51, 15.67]) of adolescents reported they do not attend/very rarely participated in PE class (Table 3.5.4). A total of 45.5% (95% CI:38.60, 52.51) of the adolescents reported watching television, using computer and playing video games more than 2 hours per day over the weekend and another 28.6% (95% CI:24.96, 32.51) engaged in these screen activities more than 2 hours during school days (Table 3.5.5 and Table 3.5.6).

3.5.5 Discussion

The prevalence of being physically active among adolescents in Melaka (44.7%) was almost the same with national prevalence (44.6%). Boys and primary level 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 more than 2 hours during was higher during weekends than school days.

3.5.6 Conclusion

Based on National Health and Morbidity Survey (2017), 55.3% of children and adolescents in Melaka were physically inactive. Although it remains high, the prevalence of being physically inactive among Malaysian adolescents was slightly lower as compared to the Malaysian School-Based Nutrition Survey (2012). Therefore, more programmes and strategies to increase physical activity should be implemented among children and adolescents in Malaysia.
3.5.7 Recommendations

Adolescents should be encouraged to be more active in their daily life. Policies and campaigns to promote physical activity among children and adolescents should be enhanced and health promotion activities to increase physical activity should be promoted. A comprehensive surveillance system for monitoring physical activity should be developed to ensure compliance with physical activity recommendations 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 physical activity sedentary behaviours as well as screen time of their children. Interviewing techniques for physical activity assessment should be applied in future studies. Adolescents should be encouraged to get physically active in their daily life. Formulating specific programs and intensifying health campaigns are essential to promote physical activity among children and adolescents. Developing surveillance systems for physical activity enables compliance based on the standard recommendations. Parents should instil active lifestyle and limit the amount of sedentary and screen time behaviour as for their children. Improving techniques for physical activity assessment is also necessary.

References

1. Kowalski KC, Crocker PR, Donen RM. The physical activity questionnaire for older children (PAQ-C) and adolescents (PAQ-A) manual. College of Kinesiology, University of Saskatchewan. 2004;87.
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

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<td>Height-for-age status (HAZ)</td>
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Note:

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<th>Physical Activity Level (PAL)</th>
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<tr>
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<td>Moderate</td>
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<tr>
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(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

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<th>Not active</th>
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<td>95% CI</td>
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<td></td>
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<td></td>
</tr>
<tr>
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<td>12642</td>
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<td>33.23</td>
</tr>
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<td>Sex</td>
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<td></td>
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<tr>
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<td>50.3</td>
<td>37.62</td>
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<td>27175</td>
<td>44.4</td>
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<td>44.3</td>
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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

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<th>The five most preferred physical activities</th>
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<th>95% CI Lower</th>
<th>95% CI Upper</th>
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<td>81.75</td>
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<td>74.07</td>
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<td>67.1</td>
<td>59.94</td>
<td>73.46</td>
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<td>Badminton</td>
<td>1706</td>
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<td>51.15</td>
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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.)

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<th>Occasionally/ Quite Often</th>
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123
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

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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

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<td>Prevalence (%)</td>
<td>95% CI</td>
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NATIONAL HEALTH AND MORBIDITY SURVEY 2017
Table 3.5.6: Length of time spent per day on watching television, using computer and playing video games on schooling days among adolescents by socio-demographic characteristics and BMI-for-age status

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3.6. Supplements intake among adolescents (10 to 17 years old) in Melaka

Contributors: Fatimah Othman, Sam Azura Ahmad, Syafinaz Mohd Sallehuddin, Mohamad Ihsan Tahir, Safiah Mohd Yusof, Nur Azna Mahmud

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 found 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 type 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 Melaka was 43.2% (95% CI: 35.34, 51.48) (Table 3.6.1) and 29.7% (95% CI: 23.79, 36.28) (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 Table 3.6.5). In average, the vitamin/mineral were consumed everyday by 15.5% (95% CI 12.41, 19.23) of adolescents (Table 3.6.4) and 9.1% (95% CI: 7.24, 11.30) for food supplements (Table 3.6.8). The most commonly consumed vitamin/minerals and food supplements were Vitamin C, 30.4% (95% CI: 24.50, 37.06) (Table 3.6.2) and Bee Product, 16.5% (95% CI: 12.33, 21.63) (Table 3.6.6). The main reason for taking vitamin / minerals and food supplements was due to parent’s advised 43.4% (95% CI: 39.5, 47.3) (Table 3.6.3) and 25.7% (95% CI: 21.4, 30.7) (Table 3.6.7).

3.6.4 Discussions

The prevalence of taking vitamin/minerals and food supplements among adolescents in Melaka was slightly 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 these results were consistent with the national findings. Findings from the survey showed that parent’s advice was the main and significant reason for taking vitamin/mineral and food supplements among adolescents in Melaka. It suggests the parents as strong influence for the intake of food supplement and vitamin of the children.

3.6.5 Conclusions

Overall findings from this survey showed that every four and three of ten adolescents in Melaka consumed vitamin / mineral and food supplements. Almost every four and three of ten parents influenced the children’s vitamin/ mineral and food supplements intake. Vitamin C and Bee products remain as the main type of vitamin and food supplement consumed by Melaka adolescents.

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.
References


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

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

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

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NATIONAL HEALTH AND MORBIDITY SURVEY 2017
Table 3.6.4: Frequency of taking vitamin/mineral among adolescents by socio-demographic characteristics

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

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

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

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3.7 Food and nutrition labeling among adolescent (Secondary 1 to Secondary 5) in Melaka

Contributors: Ruhaya Salleh, Ruzita Abd Talib, Lai Wai Kent, Noor ul-Aziha Muhammad, Mohamad Hasnan Ahmad, Lalitha Palaniveloo, Rashidah Ambak, Hazizi Abu Saad, Shubash Shander a/l Ganapathy

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

3.7.3 Variable definitions

a. 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 Melaka

The results in Table 3.7.1 showed 32.3% (95% CI: 95%CI: 28.68, 36.10) of adolescents in Melaka reported as always reading food labels and only 19.9% (95%CI: 16.99, 23.12) reported as never reading food labels when buying or receiving food. The prevalence of never reading food labels was significantly higher among boys [23.7% (95%CI: 19.85, 27.95)] than girls [16.2% (95%CI: 13.14, 19.77)]. By BMI-for-age status (BAZ), among adolescents who were thin, normal, overweight and obese, the highest prevalence of always reading food labels was found among overweight [37.0% (95%CI: 28.61, 46.33), while sometimes reading food labels showed highest among normal [48.8% (95%CI: 44.15, 53.42)] and never read food label showed highest among thin adolescents [22.0% (95%CI: 15.55, 30.21)]. According to height-for-age status (HAZ), adolescents that were stunted [34.5% (95%CI: 25.31, 45.06)] showed higher prevalence of always reading food labels compared to normal adolescents [32.1% (95%CI: 28.60, 35.87)] and never read food labels were higher among stunted adolescents [26.0% (95%CI: 16.87, 37.83)].

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

Among those who do not read food labels, the findings showed that the main reasons for not reading food labels were that the food labels were not interesting [35.9% (95%CI: 27.10, 45.75)], followed by do not understand food labels [28.1% (95%CI: 23.38, 33.39] and time constraint [16.5% (95%CI: 11.28, 23.51)]. The results also revealed that 14.2% (95%CI: 10.74, 18.51) of adolescents did not know the importance of food labels; 13.6% (95%CI: 10.70, 17.24) of adolescents think that the size of the printing on food labels was too small and 12.7% (95%CI: 9.11, 17.47) of adolescents were already aware of the food label information (Table 6.2). By locality of school, about half of the urban adolescents [52.3% (95%CI: 44.41, 60.01)] reported that food labels were not interesting was the significant main reason for not reading food labels, while 29.3% (95%CI: 23.89, 35.45) of rural adolescents reported that not understanding food labels was the highest percentage of the reason for not reading food labels. By sex, 35.8% (95%CI: 32.37, 39.31) of boys reported that the food labels were not attractive was the highest percentage of the reason for not reading food labels; while 38.7% (95%CI: 33.16, 44.52) of girls reported that not understanding food labels was the highest percentage of the reason for not reading food labels (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 [46.6% (95%CI: 40.26, 53.10)], carbohydrate content (including sugar) [41.5% (95%CI: 36.31, 46.86)] and total energy content [37.3% (95%CI: 32.04, 42.94)]. It was followed by protein content [24.0% (95%CI: 19.46, 29.10)], vitamin content [23.9% (95%CI: 20.70, 27.40)], fiber [12.2% (95%CI: 9.40, 15.69)], sodium content [10.2% (95%CI: 8.38, 12.30)] and mineral content [9.1% (95%CI: 6.88, 12.08)] (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, nutritional claim, nutrition facts, halal logo, food ingredients, storage instruction) read on the food label, most of the adolescents read expiry date [83.0% (95%CI: 78.33, 86.79)], followed by halal logo ([50.5% (95%CI: 39.86, 61.16)], food ingredients [32.8% (95%CI: 27.96, 38.11)] nutrition fact [27.9% (95%CI: 23.17, 33.20)], storage instruction [24.4% (95%CI: 19.67, 29.79)] and nutritional claim [18.1% (95%CI: 14.57, 22.28)] (Table 3.7.4).

3.7.4.5 Understanding of nutrition facts among adolescents in Melaka

Overall, more than half of the adolescents [67.2% (95%CI: 59.40, 74.15)] and [62.5% (95%CI: 55.48, 69.05)] 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 52.6 (95%CI: 44.51, 60.59)] correct responses for both energy and sugar (Table 3.7.5).

3.7.4.6 Understanding of front of pack labelling among adolescents in Melaka

Overall, less than half of the adolescents [43.9% (95%CI: 37.50, 50.51)] had given the correct response to question assessing interpretation of the energy content based on the front of pack labelling given and [50.5% (95%CI: 45.80, 55.15)] had given correct response to question assessing interpretation of the percentage of energy content based on the front of pack labelling given. However, the results showed a low level of correct responses [29.9% (95%CI: 25.08, 35.27)] to questions assessing interpretations of both the energy content and the percentage of energy content based on the front of pack labelling given (Table 3.7.6).
3.7.4.7 Understanding of the mostly and the least used ingredients based on the food ingredient list among adolescents in Melaka

Overall, slightly more than half of the adolescents [67.2% (95%CI: 59.40, 74.15)] 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 [59.3% (95%CI: 52.65, 65.70)] reported a higher prevalence of interpreting correctly as compared to the boys [56.5% (95%CI: 453.32, 59.63)]. While, 62.5% (95%CI: 55.48, 69.05) 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. The results showed a correct response [52.6% (95%CI: 44.51, 60.59)] 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 Melaka. 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 panel is necessary. Boys had a higher prevalence of not reading food and nutrition labelling. Thus, we need to be creative in education and promotion to ensure that adolescents know how to interpret the overall information that is stated at the food and nutrition labelling before choosing packaged food and drinks. In this survey, half of the adolescents know how to determine the highest and lowest ingredients content based on the food label.

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

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### Table 3.7.2: Reasons for not reading food label among adolescents

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95% CI

NATIONAL HEALTH AND MORBIDITY SURVEY 2017
Table 3.7.3a: Prevalence of reading nutrition information (macronutrient) among those who read food label (Yes, always/ Yes, sometimes) (Cont)

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

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158
Table 3.7.3b: Prevalence of reading nutrition information (micronutrient/fiber) among those who read food label (Yes, always/ Yes, sometimes) (Cont.)

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<th>Prevalence (%) &amp; 95% CI</th>
<th>Estimated Population</th>
<th>Prevalence (%) &amp; 95% CI</th>
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Locality of School

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<th>Prevalence (%) &amp; 95% CI</th>
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Sex

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Class

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Ethnicity

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BMI-for-age status (BAZ)

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<th>Prevalence (%) &amp; 95% CI</th>
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Height-for-age status (HAZ)

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<th>Prevalence (%) &amp; 95% CI</th>
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159
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<tr>
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<tr>
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<tr>
<td>Bumiputera Sarawak</td>
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<tr>
<td>Obese (&gt;-2sd)</td>
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<tr>
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Table 3.7.4: Prevalence of reading food label among those who read food label (Yes, always/ Yes, sometimes) (Cont.)

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

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

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<tr>
<td></td>
<td>Lower Upper</td>
<td>Prevalence (%)</td>
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**Locality of School**

- **Urban**
  - Melaka: 481 (39.6, 47.75) 27.96
  - Unweighted Count: 209 (39.6, 47.75) 27.96
- **Rural**
  - Melaka: 272 (29.4, 34.48) 27.96
  - Unweighted Count: 170 (29.4, 34.48) 27.96

**Sex**

- **Boys**
  - Melaka: 244 (29.7, 37.88) 27.96
  - Unweighted Count: 187 (29.7, 37.88) 27.96
- **Girls**
  - Melaka: 237 (35.6, 42.36) 27.96
  - Unweighted Count: 172 (35.6, 42.36) 27.96

**Class**

- **Form 1**
  - Melaka: 99 (35.1, 46.75) 27.96
  - Unweighted Count: 74 (35.1, 46.75) 27.96
- **Form 2**
  - Melaka: 67 (25.2, 34.27) 27.96
  - Unweighted Count: 58 (25.2, 34.27) 27.96
- **Form 3**
  - Melaka: 90 (29.7, 38.57) 27.96
  - Unweighted Count: 68 (29.7, 38.57) 27.96
- **Form 4**
  - Melaka: 112 (35.7, 46.49) 27.96
  - Unweighted Count: 72 (35.7, 46.49) 27.96
- **Form 5**
  - Melaka: 113 (38.0, 47.87) 27.96
  - Unweighted Count: 87 (38.0, 47.87) 27.96

**Ethnicity**

- **Malay**
  - Melaka: 352 (33.4, 42.07) 27.96
  - Unweighted Count: 227 (33.4, 42.07) 27.96
- **Chinese**
  - Melaka: 98 (32.7, 41.06) 27.96
  - Unweighted Count: 101 (32.7, 41.06) 27.96
- **Indian**
  - Melaka: 24 (27.0, 45.17) 27.96
  - Unweighted Count: 19 (27.0, 45.17) 27.96
- **Bumiputera Sabah**
  - Melaka: 1 (42.5, 85.35) 27.96
  - Unweighted Count: 1 (42.5, 85.35) 27.96
- **Bumiputera Sarawak**
  - Melaka: -
  - Unweighted Count: 3 (42.5, 85.35) 27.96
- **Others**
  - Melaka: 6 (43.8, 72.03) 27.96
  - Unweighted Count: 8 (43.8, 72.03) 27.96

**BMI-for-age status (BAZ)**

- **Thinness (<-2sd)**
  - Melaka: 20 (25.0, 39.34) 27.96
  - Unweighted Count: 16 (25.0, 39.34) 27.96
- **Normal (>-2sd - <+1sd)**
  - Melaka: 297 (32.7, 38.27) 27.96
  - Unweighted Count: 235 (32.7, 38.27) 27.96
- **Overweight (>+1sd - <+2sd)**
  - Melaka: 84 (33.3, 39.94) 27.96
  - Unweighted Count: 60 (33.3, 39.94) 27.96
- **Obese (>+2sd)**
  - Melaka: 79 (35.5, 45.17) 27.96
  - Unweighted Count: 47 (35.5, 45.17) 27.96

**Height-for-age status (HAZ)**

- **Stunting (<-2sd)**
  - Melaka: 25 (31.8, 43.27) 27.96
  - Unweighted Count: 13 (31.8, 43.27) 27.96
- **Normal (>-2sd)**
  - Melaka: 456 (32.9, 38.74) 27.96
  - Unweighted Count: 346 (32.9, 38.74) 27.96
Table 3.7.5: Prevalence of understanding on the interpretation calorie and sugar content on the nutrition labelling among adolescents (Cont.)

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

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

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<td>769</td>
</tr>
<tr>
<td>Bumiputera Sabah</td>
<td>1</td>
<td>34</td>
</tr>
<tr>
<td>Bumiputera Sarawak</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>112</td>
</tr>
<tr>
<td>BMI-for-age status (BAZ)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thinness (&lt;-2sd)</td>
<td>35</td>
<td>1197</td>
</tr>
<tr>
<td>Normal (&gt;-2sd - &lt;1sd)</td>
<td>349</td>
<td>12300</td>
</tr>
<tr>
<td>Overweight (&gt;+1sd - &lt;=2sd)</td>
<td>110</td>
<td>3945</td>
</tr>
<tr>
<td>Obese (&gt;+2sd)</td>
<td>77</td>
<td>2652</td>
</tr>
<tr>
<td>Height-for-age status (HAZ)</td>
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<td></td>
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<tr>
<td>Stunting (&lt;-2sd)</td>
<td>28</td>
<td>1052</td>
</tr>
<tr>
<td>Normal (&gt;-2sd)</td>
<td>544</td>
<td>19072</td>
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</table>
Table 3.7.6: Prevalence of understanding on correct interpretation of front of pack labelling for energy among adolescents (Cont.)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Know only the percentage of contribution by serving of foods</th>
<th>Unweighted Count</th>
<th>Estimated Population</th>
<th>Prevalence (%)</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>MELAKA</td>
<td></td>
<td>952</td>
<td>33941</td>
<td>50.5</td>
<td>45.80</td>
<td>55.15</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td>354</td>
<td>11865</td>
<td>51.6</td>
<td>43.43</td>
<td>59.67</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td>598</td>
<td>22075</td>
<td>49.9</td>
<td>44.25</td>
<td>55.56</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td>569</td>
<td>17681</td>
<td>53.3</td>
<td>47.08</td>
<td>59.39</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td>383</td>
<td>16260</td>
<td>47.7</td>
<td>42.04</td>
<td>53.51</td>
</tr>
<tr>
<td>Class</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Form 1</td>
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<td>6951</td>
<td>51.1</td>
<td>44.78</td>
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<td>35.39</td>
<td>50.56</td>
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<td>40.94</td>
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<td>7157</td>
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<td>61.67</td>
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<td>48.92</td>
<td>60.94</td>
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<td>Ethnicity</td>
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<td></td>
<td></td>
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<tr>
<td>Malay</td>
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<td>24464</td>
<td>50.3</td>
<td>44.71</td>
<td>55.97</td>
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<td>57.85</td>
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<tr>
<td>Indian</td>
<td></td>
<td>52</td>
<td>1762</td>
<td>49.2</td>
<td>35.20</td>
<td>63.32</td>
</tr>
<tr>
<td>Bumiputera Sabah</td>
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<td>67.7</td>
<td>42.78</td>
<td>85.43</td>
</tr>
<tr>
<td>Bumiputera Sarawak</td>
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<td>100.0</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Others</td>
<td></td>
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<td>254</td>
<td>48.5</td>
<td>28.98</td>
<td>68.56</td>
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<tr>
<td>BMI-for-age status (BAZ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Thinness (&lt;-2sd)</td>
<td></td>
<td>52</td>
<td>1776</td>
<td>49.2</td>
<td>33.34</td>
<td>65.23</td>
</tr>
<tr>
<td>Normal (&gt;-2sd·&lt;=+1sd)</td>
<td></td>
<td>584</td>
<td>20882</td>
<td>49.5</td>
<td>45.06</td>
<td>53.93</td>
</tr>
<tr>
<td>Overweight (&gt;+1sd·&lt;+2sd)</td>
<td></td>
<td>179</td>
<td>6450</td>
<td>56.9</td>
<td>48.24</td>
<td>65.08</td>
</tr>
<tr>
<td>Obese (&gt;+2sd)</td>
<td></td>
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<td>4802</td>
<td>48.1</td>
<td>40.15</td>
<td>56.12</td>
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<tr>
<td>Height-for-age status (HAZ)</td>
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<td></td>
<td></td>
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<td>Stunting (&lt;-2sd)</td>
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<td>60</td>
<td>2232</td>
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<td>40.03</td>
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<tr>
<td>Normal (&gt;2sd)</td>
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<td>45.72</td>
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Table 3.7.7: Prevalence on the understanding of food ingredients among adolescents (Cont.)

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<th>Characteristic</th>
<th>Both Correct</th>
<th>Know only the highest ingredient</th>
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<td>Urban</td>
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<tr>
<td>Rural</td>
<td>69</td>
<td>2536</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>58</td>
<td>1823</td>
</tr>
<tr>
<td>Girls</td>
<td>48</td>
<td>2009</td>
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<tr>
<td>Class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form 1</td>
<td>24</td>
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</tr>
<tr>
<td>Form 2</td>
<td>26</td>
<td>955</td>
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<td>Form 4</td>
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<td>756</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malay</td>
<td>66</td>
<td>2439</td>
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<tr>
<td>Chinese</td>
<td>29</td>
<td>1029</td>
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<tr>
<td>Indian</td>
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<td>-</td>
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<tr>
<td>Bumiputera Sarawak</td>
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<tr>
<td>Others</td>
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<td>BMI-for-age status (BAZ)</td>
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<tr>
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<tr>
<td>Overweight (&gt;+1sd - &lt;+2sd)</td>
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<tr>
<td>Obese (&gt;+2sd)</td>
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<td>551</td>
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<tr>
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<tr>
<td>Normal (&gt;-2sd)</td>
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168
Table 3.7.7: Prevalence on the understanding of food ingredients among adolescents (Cont.)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>MELAKA</th>
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<td>Count</td>
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<tr>
<td>--------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Locality of School</td>
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<td>Urban</td>
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<tr>
<td>Rural</td>
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<tr>
<td>Sex</td>
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<td>Boys</td>
<td>115</td>
</tr>
<tr>
<td>Girls</td>
<td>87</td>
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<tr>
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<td>Form 4</td>
<td>44</td>
</tr>
<tr>
<td>Form 5</td>
<td>37</td>
</tr>
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<td>Ethnicity</td>
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</tr>
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<tr>
<td>Chinese</td>
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<td>Indian</td>
<td>15</td>
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<td>Bumiputera Sarawak</td>
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<tr>
<td>Others</td>
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</tr>
<tr>
<td>Thinness (&lt;-2sd)</td>
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</tr>
<tr>
<td>Normal (&gt;2sd - s+1sd)</td>
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</tr>
<tr>
<td>Overweight (&gt;s+1sd - s+2sd)</td>
<td>32</td>
</tr>
<tr>
<td>Obese (&gt;+2sd)</td>
<td>31</td>
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<tr>
<td>Height-for-age status (HAZ)</td>
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</tr>
<tr>
<td>Stunting (&lt;-2sd)</td>
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</tr>
<tr>
<td>Normal (&gt;2sd)</td>
<td>192</td>
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</tbody>
</table>
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
15. En. Mohd Hazrin bin Hasim @ Hashim, Central Field Supervisor of WP Labuan & Sabah
16. Pn. 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
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

<table>
<thead>
<tr>
<th>No</th>
<th>Team</th>
<th>Duties</th>
<th>Officers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Project Management and Finance</td>
<td>Work closely with recruitment group for employment of RA</td>
<td>Dr. Muhammad Fadhli bin Mohd Yusoff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prepare Questionnaires manual, Data collection manual</td>
<td>Dr. S. Maria binti Awaluddin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meeting with Liaison Officers</td>
<td>Pn. Ruhaya binti Salleh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Planning for data collection training</td>
<td>Pn. Hamizatul Akmal binti Abd Hamid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prepare security cards/name tags for research team</td>
<td>Pn. Wan Shakira binti Rodzlan Hasani</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arrangement for advanced payment for team managers, nurses and drivers</td>
<td>Cik Nur Hazwani binti Mohd Hasri</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Process claims of MOH staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prepare tickets for travelling</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monitor the expenditure/budget</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Survey Research Centre</td>
<td>Calculate the sample size</td>
<td>Dr. Muhammad Fadhli bin Mohd Yusoff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Determine the sample distribution by state</td>
<td>Pn. Norazizah binti Ibrahim Wong</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pn. Wan Shakira binti Rodzlan Hasani</td>
</tr>
<tr>
<td>3</td>
<td>ICT Unit</td>
<td>Maintenance of the scanning machine</td>
<td>Pn. Siti Nor'ain Binti Hashim</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daily back up for databases</td>
<td>En. Sulaiman Bin Harun</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>En. Yusmirol Bin Yusop</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>En. Andy Bin Mustaming</td>
</tr>
<tr>
<td>4</td>
<td>Central Field Supervisors</td>
<td><strong>Before Data Collection</strong></td>
<td>Dr Nor Asiah Binti Muhamad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Central Field Supervisors are expected to prepare for the initiation of data collection. The preparation tasks include:</td>
<td>Dr Nur Liana Binti Ab Majid</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pn. Norzawati Binti Yeop</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Noor Ani Binti Ahmad</td>
</tr>
</tbody>
</table>
| Conduct meeting with State Education Office, School Principals, Teacher in-charge for the selected schools. 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:  
- Human resources are available: Field Supervisors, Team leaders, Research Assistants and drivers.  
- Manage transport: Vehicles  
- Manage survey instruments and relevant forms  
- Manage lodging for data collectors  

**During Data Collection**

Gather feedback from the field on the data collection status and problems related to logistics.

Visit the field to help data collectors solve the problem if necessary.

To ensure all data collection monitoring forms have been received on time.

To ensure bundle from field received by the Operation Centre by hand and by post (Sabah, Sarawak, WP Labuan)

Updating the monitoring board for state achievement and attending CCT meeting. |

| Pn. Hasimah Binti Ismail  
Pn. Helen Tee Guat Hiong  
En. Mohd Hazrin Bin Hasim @ Hashim |
| 5 | Data Processing and management | Setting up data processing facility  
Development of directory of variables database  
Development of QC manual for data  
Specify data structure for data processing and data output requirement  
Responsible for data entry and data Cleaning  
Monitoring and evaluation of QC performance for data processing | Dr. Mohd Azahadi bin Omar  
Dr. Rajini a/p sooryanarayana  
Dr. Fazila Haryati Binti Ahmad  
Pn. Nazirah Binti Alias |
|---|---|---|
| 6 | Operation Centre | Arrange date and place of meeting  
Prepare and circulate briefing materials  
Prepare and circulate minutes of CCT meeting  
Prepare letters of appointment to state liaison officers, nurses, scouts and data collectors  
Prepare advertisement material for recruitment of data collectors, team leaders, and interviewers  
Prepare letters of notifications for data collections  
Prepare manuals for scouts, field supervisors, data collectors and nurses  
Develop a system/format and monitor the distribution of materials/equipment for field work  
Arrange transport/drivers for distribution and collection of materials/equipment/SAQ | Pn. Hamizatul Akmal binti Abd Hamid  
En. Azli bin Baharudin  
Cik Nur Hazwani binti Mohd Hasri  
Pn. Siti Noafika Binti Anwar  
En. Muhammad Suhaime Bin Mohamad Idrus  
Cik Shahibul Bariah binti Mat Ghani  
Pn. Nur Fadzilla binti Mohd Radzi  
En. Muhammad Zuhdi Bin Khiruddin  
Cik Nurbaiti Binti Asmawi |
Appendix 5: List of Research Team Members, NHMS 2017

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

MELAKA
Liaison Officer
Ms. Jamilah binti Ahmad

Field Supervisor
1. Dr. Shubash Shander a/l Ganapathy
2. Ms. Noraida binti Mohamad Kasim

Nutritionist
1. Ms. Zahratul Nur binti Kalmi
2. Ms. Nathirah binti Maamor
3. Ms. Rohana binti Ya’akof
4. Ms. Asvini a/p Vastavan

Drivers
1. Mr. Wan Muhd Firdaus bin Wan ismail
2. Mr. Anuar bin Mohamad

Research Assistants
1. Nabila Huda binti Mohd Nor
2. Thaneswaran a/l Subramaniam
3. Muhamad Hazwan bin Hasman
4. Nur Nazihah binti Mohamed
5. Mohamad Asyfik bin Whakiddin
6. Nursyafawani binti Yusoff
7. Nur Afifah binti Shaari
8. Nabilah binti Mohd Nawi
9. Muhammad Noriduan bin Nor’amilin
TINJAUAN PEMAKANAN REMAJA 2017

BORANG SOAL SELIDIK

Pengenalan

Tinjauan ini dijalankan untuk mengetahui status pemakanan, amalan pemakanan, pengambilan makanan, tahap aktifiti fizikal, dan penggunaan laba makanan dan pemakanan anda. Pelajar lain yang terpilih sepeti anda di seluruh negara juga menjawab borang soal selidik ini.

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

א. Penjelasan

Kerana masyarakat yang makan sering kurang berperanan dalam menentukan aneka makanan yang diambil oleh masyarakat, maka berhak kerajaan memastikan masyarakat memeriksa kesehatan makanan yang diambil oleh masyarakat.

Panduan mengisi borang soal-selidik

A. Penjelasan

1. Jawapan yang anda berikan adalah DIRAHASIAH. Jawab soalan-soalan berdasarkan apa yang tahu dan apa yang anda lakukan. Tidak ada jawapan yang betul atau salah.


3. Cara menghitamkan jawapan:

   - Hitamkan jawapan anda seperti ini: ☐
   - Bukan seperti ini: ☒
   - Atau: ☑

4. Hanya satu jawapan bagi setiap soalan KECUALI ada arahan lain yang dinyatakan.

5. Sekiranya anda tidak faham, sila anfak tanggap untuk bertanya soalan semasa sesi menjawab soalan.

6. Apabila anda selesai menjawab, tunggu arahan daripada Fasilitator yang menjaga keselamatan anda.

Terima kasih atas kesedian anda menjawab soal selidik ini.

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

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### MODUL A: MAKLUMAT PERIBADI

<table>
<thead>
<tr>
<th>Arahan: sisikan ID pelajar, tarih lahir dan hitamkan jawapan pada kertas jawapan yang disediakan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID Pelajar</td>
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<td>A1</td>
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<td>A2</td>
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<td>A3</td>
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### Jantina

<table>
<thead>
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<th>Arahan: hitamkan jantina pelajar.</th>
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<tbody>
<tr>
<td>Jantina</td>
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<td>A3</td>
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### Bangsa

<table>
<thead>
<tr>
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<tbody>
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### Sekolah Rendah

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</tbody>
</table>

### Sekolah Menengah

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<thead>
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<tr>
<td>Sekolah Menengah</td>
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<td>A6</td>
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<tr>
<td>---</td>
</tr>
</tbody>
</table>
MODUL B : CORAK PEMAKANAN

Arendah: Pilih jawapan yang paling sesuai dalam wawancara yang disediakan.

B1. Apakah sesi persekolahan anda?
   A. Sesuapi saha / atasan不影响 whereby
   B. Sesuapi saha / atasan不影响 whereby
   C. Sesuapi sampai saha / atasan不影响 whereby

B2. Kebiasaannya, dalam seminggu berapakah anda mengambil sarapan (dari pukul 6.00 pagi hingga 8.00 pagi)?
   A. 1 hari / 1 peringkat
   B. 2 hari / 2 peringkat
   C. 3 hari / 3 peringkat
   D. 4 hari / 4 peringkat
   E. 5 hari / 5 peringkat
   F. 6 hari / 6 peringkat
   G. 7 hari / 7 peringkat
   H. Tidak berkaitan / Tidak ambil sarapan

B3. Kebiasaannya, dari mana anda dapat makanan itu?
   A. Disediakan di rumah / perum
   B. Beli di kantin sekolah / asrama
   C. Belli di restoran atau warong / kafe
   D. Disediakan di asrama / asrama
   E. Lain-lain / lain-lain
   F. Tidak ambil sarapan / tidak ambil sarapan

B4. Setiranya anda tidak mengambil sarapan, apakah sebabnya?
   A. Tiada makanan / tidak ada makanan
   B. Tiada selera / tidak ada selera
   C. Tiada makan / tidak ada makan
   D. Berdiet/kawal berat badan / kawal berat badan
   E. Tiada duit / tidak ada duit
   F. Lain-lain / lain-lain
   G. Tidak berkaitan/kerana saya mengambil sarapan setiap hari


<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| 85 | Kebiasaannya, dalam seringkali berapa hari anda makan dan/atau minum pada waktu rehat sekolah? | A 0 hari / 0 minggu  
B 1 hari / 1 minggu  
C 2 hari / 2 minggu  
D 3 hari / 3 minggu  
E 4 hari / 4 minggu  
F 5 hari / 5 minggu |
| 86 | Kebiasaannya, dari mana anda dapat makanan itu? | A Beka dari rumah / บ้าน  
B Beli dari kantin sekolah / โรงอาหาร  
C Beli dari restoran atau warung / ร้านอาหาร  
D Disediakan di rumah / บ้าน  
E Lain-lain / อื่น ๆ  
F Tidak berkaitan/tidak mengambil makanan dan/atau minum pada waktu rehat / ไม่มีส่วนร่วมในกิจกรรมห่างไกล|
| 87 | Kebiasaannya, dalam seringkali berapa hari anda makan tengah hari (11.00 pagi hingga 3.00 petang)? | A 1 hari / 1 minggu  
B 2 hari / 2 minggu  
C 3 hari / 3 minggu  
D 4 hari / 4 minggu  
E 5 hari / 5 minggu  
F 6 hari / 6 minggu  
G 7 hari / 7 minggu  
H Tidak mengambil makanan tengah hari / ไม่มีส่วนร่วมในกิจกรรมห่างไกล|
| 88 | Kebiasaannya, dari mana anda dapat makanan itu? | A Disediakan di rumah / บ้าน  
B Beli dari kantin sekolah / โรงอาหาร  
C Beli dari restoran atau warung / ร้านอาหาร  
D Disediakan di rumah / บ้าน  
E Lain-lain / อื่น ๆ  
F Tidak berkaitan/tidak ambil makanan tengah hari / ไม่มีส่วนร่วมในกิจกรรมห่างไกล |
99 Selirenya anda tidak mengambil makan tengahari, apakah sebabnya?
A Tiada makanan / 飯類
B Tiada selera / 食慾
C Tiada masa / 時間
D Berlebih atau berat badan / 太過肥滿
E Tiada durut / 飲水
F Lain-lain / 其他
G Tidak berkut hub / 未得

810 Kebiasaannya, dalam seminggu berapa hari anda mengambil minum petang (3.00 petang hingga 6.00 petang)?
A 1 hari / 1 日
B 2 hari / 2 日
C 3 hari / 3 日
D 4 hari / 4 日
E 5 hari / 5 日
F 6 hari / 6 日
G 7 hari / 7 日
H Tidak minum petang / 未得

811 Kebiasaannya, dari mana anda dapat makanan itu?
A Di rumah / 家
B Di kantin sekolah / 學校食堂
C Di restoran atau warung / 市場
D Di rumah / 家
E Lain-lain / 其他
F Tidak ambil minum petang / 未得

812 Kebiasaannya, dalam seminggu berapa hari anda makan malam (6.00 petang hingga 10.00 malam)?
A 1 hari / 1 日
B 2 hari / 2 日
C 3 hari / 3 日
D 4 hari / 4 日
E 5 hari / 5 日
F 6 hari / 6 日
G 7 hari / 7 日
H Tidak makan malam / 未得
913  Kebiasaannya, dari mana anda dapat makanan itu?

A Disediakan di rumah / endir
B Beli di restoran atau warung /  dana...
C Disediakan di asrama /  latar
D Lain-lain /  pilihan
E Tidak berkari/tidak ambil makanan malam /  dana

914  Sekiranya anda tidak mengambil makanan malam, apakah sebabnya?

A Tiada makanan /  dana
B Tiada selera /  dana
C Tiada masak /  dana
D Berdiet /  dana
E Tiada utuh /  dana
F Lain-lain /  pilihan
G Tidak berkari/ambil makanan malam /  dana

915  Dalam seminggu yang lalu, berapa kerap anda ambil makanan berat selepas makan malam? (Contoh: nasi lemak, roti canai, mee goreng, burger, ayam goreng, mee segera dan sebagainya. Ini tidak termasuk kacang ringan kontohnya 2 keping biscuit dan/atau satu gelas susu)

A 1 hari /  1 pilihan
B 2 hari /  2 pilihan
C 3 hari /  3 pilihan
D 4 hari /  4 pilihan
E 5 hari /  5 pilihan
F 6 hari /  6 pilihan
G 7 hari /  7 pilihan
H Tidak ambil makanan berat selepas makan malam /  dana

916  Di manaah anda mengambil makanan berat tersebut?

A Rumah /  dana
B Restoran atau warung /  dana
C Asrama /  latar
D Lain-lain /  pilihan
E Tidak berkari/tidak ambil makanan berat /  dana

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917. Kebiasaannya, dalam seminggu berapakah hari anda makan makanan segera yang dibeli dari restoran makanan segera seperti burger, pizza, ayam goreng, kecantik goreng, nugget dan sebagainya?
- A. 1 hari / 1 periuk
- B. 2 hari / 2 periuk
- C. 3 hari / 3 periuk
- D. 4 hari / 4 periuk
- E. 5 hari / 5 periuk
- F. 6 hari / 6 periuk
- G. 7 hari / 7 periuk
- H. Tidak ambil makanan segera / periuk hampir.  

918. Berapakah kerap anda membawa bekal makanan ke sekolah?
- A. Setiap hari / setiap perhembunan
- B. Kadang-kadang / jarang setiap perhembunan
- C. Tidak / sekiranya dalam perhembunan satu

919. Apakah bekal makanan yang biasa dibawa ke sekolah? (Boleh pilih satu atau dua jawapan sahaja)
- A. Nasi lemak/nasi goreng/nasi berlauk / nasi / sayuran
- B. Mee/bihun/Kueh Teow / mie/mieh/roti/seed
- C. Roti/bun/Sandwich / sandwich / pao/ kuih
- D. Nugget/Sosej/Burger / nugget / sosis / pempek
- E. Biskuit / kuih
- F. Buah-buahan / buah
- G. Lain-lain / perhembunan
- H. Tidak bawa bekal / sekiranya dalam bekal makanan yang lain

920. Berapakah kerap anda membawa bekal minuman ke sekolah?
- A. Setiap hari / setiap perhembunan
- B. Kadang-kadang / jarang setiap perhembunan
- C. Tidak / sekiranya dalam perhembunan satu
921. Apakah bekalan minuman yang biasa dibawa ke sekolah? (Boleh pilih SATU atau DUA jawapan sahaja)

   A. Air kosong
   B. Air bermersia (air kotak/air sirap/teh/kopi/milo)
   C. Air berkarbonat
   D. Susu/minuman bertikut (air yogurt/air yogurt)
   E. Lain-lain
   F. Tidak bawa bekal

922. Kebiasaannya, bagaimana warna sakukduit poket anda banyak dibeli dalam:

   A. Membeli makanan dan atau minuman
   B. Membeli makanan
   C. Simpanan
   D. Lain-lain
   E. Tidak bawa sakukduit poket


   A. 1 kali
   B. 2 kali
   C. 3 kali
   D. 4 kali
   E. 5 kali
   F. 6 kali
   G. 7 kali atau lebih
   H. Tidak pernah

924. Apakah jenis makanan ringan yang selalu anda makan? (Boleh pilih SATU atau DUA jawapan sahaja)

   A. Roti/Bun/Sandwich
   B. Kentang goreng
   C. Bisikut
   D. Buah-buahan
   E. Kekcang
   F. Kerupuk
   G. Aisirim
   H. Tidak ambil makanan ringan
B25  Borapa kerap anda mengambil makanan ringan tersebut dalam seminggu?

A 1 kali / 1 makan
B 2 kali / 2 makan
C 3 kali / 3 makan
D 4 kali / 4 makan
E 5 kali / 5 makan
F 6 kali / 6 makan
G 7 kali atau lebih / 7 makan

H Tidak pernah makanan ringan atau snack / Tidak pernah makanan ringan atau snack

B26  Apakah jenis makanan dan/atau minuman yang selalu anda beli dari luar pagar sekolah?(Boleh pilih SATU atau DUA jawapan sahaja)

A Gula-gula/coller / 電解液
B Kentang goreng / nuget / sosis / keju / บิสกิต / ซูชิ / รนตบ / ตกบิง
C Air berperisa/air berkarbonat / น้ำดื่มน้ำหวาน
D Makanan jeruk / ชีส
E Makanan ringan/hapu / คุรุโค
F Keropek / ผัก
G Aiskrim / ไอศกรีม
H Tidak ambil makanan ringan di luar pagar sekolah / ไม่เคยกินอาหารเสริมอยู่นอกโรงเรียน

B27  Dalam seminggu, orangtua anda membeli makanan dan/atau minuman di luar pagar sekolah?

A 1 kali / 1 makan
B 2 kali / 2 makan
C 3 kali / 3 makan
D 4 kali / 4 makan
E 5 kali / 5 makan
F 6 kali / 6 makan
G 7 kali atau lebih / 7 makan

H Tidak pernah / ไม่เคย
B28 Sumber media manakah yang paling mempengaruhi pengambilan makansn anda? (Boleh pilih SATU atau DUA jawapan sahaja)
A. Media sosial (contoh : Internet, YouTube, Facebook, Instagram, Twitter)
B. Televisyen / Pertunjukan Video
C. Radio / Pemancar Raja
D. Media cetak (contoh: majalah, surat khabar, papan iklan, risalah, catalog)
E. Tidak terpengaruh / Pemahaman Sendiri...
### MODUL C: AKTIVITI FIZIKAL
#### Submodul C: ricalnas yang boleh dilakukan

C1 Aktiviti Fizikal di waktu lapaq: Adakah anda melakukan aktiviti-aktiviti yang disenaraikan di bawah sepanjang 7 harinya, iaitu hari yang lepas (minggu lepas)? Jika Ya, berapa kali?

<table>
<thead>
<tr>
<th>Aktiviti fizikal</th>
<th>1-2 kali/week</th>
<th>3-4 kali/week</th>
<th>5-6 kali/week</th>
<th>7 kali atau lebih/week</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Lompat tali</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>b Mendayung/ Berkeru</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>c Silat / Karate / Taekwondo</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>d Bernam jari-jari</td>
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<td>D</td>
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<td>e Bernam dengan berjalan</td>
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<td>f Berhavicik</td>
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<td>g Juggling / Berlarang</td>
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<td>h Senamrobik</td>
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<td>j Bola siut / Bola sepak</td>
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<td>k Menari</td>
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<td>o Bola tampar</td>
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<td>C</td>
<td>D</td>
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<tr>
<td>p Bola keranjang / Bola jaring</td>
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<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>q Sepak takraw</td>
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<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>r Bola sepak / Futsal</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>s Pingpong</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>
| Q2 | Dalam 7 hari yang lepas semasa aktifiti kelas pendidikan jasmani, berapa kerap anda beroda dalam keadaan sanga aktif (bermain, berliar, melompat, melompati)?
|    | A Saya tidak mengikut kelas pendidikan jasmani
|    | B Sangat jarang / jarang sekali
|    | C Kadang-kadang / biasanya
|    | D Agak kerap / agak jarang
|    | E Selandai / dengan kegembiraan |

| Q3 | Dalam 7 hari yang lepas, apakah perkara yang anda biasa lakukan semasa waktu rehat di sekolah?
|    | A Duduk (berbual, membaca, membuat kerja sekolah)
|    | B Berdiri atau berjalan-jalan
|    | C Berdiri atau berman sedikit
|    | D Berlari dan berman sedikit
|    | E Berlari dan berman hampir sepanjang masa |

| Q4 | Dalam 7 hari yang lepas, apakah perkara yang biasa anda lakukan semasa waktu makan tengahari (selain daripada makan)?
|    | A Duduk (berbual, membaca, membuat kerja sekolah)
|    | B Berdiri atau berjalan-jalan
|    | C Berdiri atau berman sedikit
|    | D Berlari dan berman sedikit
|    | E Berlari dan berman hampir sepanjang masa |
C5. Dalam 7 hari yang lepas, berapa harkah anda bersukan, menari atau berman dengan aktif sebaik sahaja tamat waktu persekolahan?
A. Tiada / ไม่เคยออกกำลังกาย
B. 1 hari / 1 hari
C. 2 atau 3 hari / 2 หรือ 3 วัน
D. 4 hari / 4 วัน
E. 5 hari / 5 วัน

C6. Dalam 7 hari yang lepas, berapa harkah anda bersukan, menari atau berman dengan aktif pada waktu petang?
A. Tiada / ไม่เคยออกกำลังกาย
B. 1 hari / 1 วัน
C. 2 atau 3 hari / 2 หรือ 3 วัน
D. 4 atau 5 hari / 4 หรือ 5 วัน
E. 6 atau 7 hari / 6 หรือ 7 วัน

C7. Pada hujung minggu yang lepas, berapa kali anda terlibat dengan aktiviti bersukan, menari atau melibatkan diri dengan permainan yang aktif?
A. Tiada / ไม่เคยออกกำลังกาย
B. 1 kali / 1 ครั้ง
C. 2 atau 3 kali / 2 หรือ 3 ครั้ง
D. 4 atau 5 kali / 4 หรือ 5 ครั้ง
E. 6 atau lebih kali / 6 หรือ มากกว่า ครั้ง
NATIONAL HEALTH AND MORBIDITY SURVEY 2017

C8  Yang manakah antara penyata berikut menggambarkan diri anda dalam tempoh 7 hari yang lepas?

A  Saya menggunakan semua atau kebanyakannya masa lapang saya dengan melakukan aktiviti ringan
   (contoh: berjalan, bertukar bahagian pergerakan badan, berat badan, bermain dinding)

B  Saya kadang-kadang (1-2 kali seminggu) melakukan aktiviti fizikal semasa waktu lapang saya (contoh:  
   bersukan, berlari, bermain, berbasaq, aktiviti aerobik)
   (contoh: berjalan, bergamal (1-2 kali seminggu), bermain badminton, bergerak, bermain badminton,  
   bermain badminton)

C  Saya selalu (3-4 kali seminggu) melakukan aktiviti fizikal semasa waktu lapang saya (contoh: bersukan,  
   berlari, bermain, berbasaq, aktiviti aerobik)
   (contoh: berjalan, bergamal (3-4 kali seminggu), bermain badminton, bermain badminton,  
   bermain badminton)

D  Saya kerap (5-6 kali seminggu) melakukan aktiviti fizikal semasa waktu lapang saya (contoh: bersukan,  
   berlari, bermain, berbasaq, aktiviti aerobik)
   (contoh: berjalan, bergamal (5-6 kali seminggu), bermain badminton, bermain badminton,  
   bermain badminton)

E  Saya sangat kerap (7 kali atau lebih seminggu) melakukan aktiviti fizikal semasa waktu lapang saya  
   (contoh: bersukan, berlari, bermain, berbasaq, aktiviti aerobik)
   (contoh: berjalan, bergamal (7 kali atau lebih), bermain badminton, bermain badminton,  
   bermain badminton)

C9  Tandakan kekerapan anda melakukan aktiviti fizikal (seperti bersukan, berlari, bermain, atau apa-apa  
    aktiviti fizikal) untuk setiap hari pada minggu lepas.

<table>
<thead>
<tr>
<th>Hari</th>
<th>Tindakan Aktiviti Fizikal</th>
<th>(1-2 kali)</th>
<th>(3-4 kali)</th>
<th>(5-6 kali)</th>
<th>(7 kali atau lebih)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>smin</td>
<td>D</td>
<td>E</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td>b</td>
<td>Selasa</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>c</td>
<td>Ahad</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>d</td>
<td>Abu</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>e</td>
<td>Aqil</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>f</td>
<td>Siti</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>g</td>
<td>Zama</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>h</td>
<td>Zuhair</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>i</td>
<td>Asma</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>j</td>
<td>Ahsan</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>k</td>
<td>Asri</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>l</td>
<td>Zaini</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>m</td>
<td>Anis</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>
C10  Adakah anda tukik pada minggu lepas, atau adalah terdapat sebarang perkara yang menghalang anda daripada melakukan aktiviti fizikal yang biasa dilakukan pada minggu lepas?
A  Ya / Ya
B  Tidak / Tidak

C11  Pada hueung minggu adalah anda menonton televisyen dan/atau menggunakan komputer dan/atau bermain permainan video (contoh: PSP, Playstation, Gameboy dan lain-lain)?
A  Ya / Ya
B  Tidak / Tidak

C12  Berapa lamaakah anda menonton televisyen dan/atau menggunakan komputer dan/atau bermain permainan video pada hueung minggu?
A  kurang dari 1 jam sehari
B  1 jam hingga kurang dari 2 jam sehari
C  2 jam hingga kurang dari 3 jam sehari
D  3 jam hingga kurang dari 4 jam sehari
E  Lebih dari 4 jam sehari

C13  Pada hari pereseukian adalah anda menonton televisyen dan/atau menggunakan komputer dan/atau bermain permainan video (contoh: PSP, Playstation, Gameboy dan lain-lain)?
A  Ya / Ya
B  Tidak / Tidak
CI4: Berapa lamaakah anda menonton televisyen dan/atau menggunakan komputer dan/atau bermain permainan video pada hari persekolahan?

A. Kurang dari 1 jam sehari
   1. Lebih dari 1 jam

B. 1 jam hingga kurang dari 2 jam sehari
   2. Lebih dari 2 jam

C. 2 jam hingga kurang dari 3 jam sehari
   3. Lebih dari 3 jam

D. 3 jam hingga kurang dari 4 jam sehari
   4. Lebih dari 4 jam

E. Lebih dari 4 jam sehari
   5. Lebih dari 5 jam
<table>
<thead>
<tr>
<th>MODUL D: PERSEPSI PENGURUSAN BERAT BADAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1 Pada masa selepas, anda rasa anda:</td>
</tr>
<tr>
<td>A  Kurang berat badan yang ketara</td>
</tr>
<tr>
<td>B  Kurang berat badan</td>
</tr>
<tr>
<td>C  Mempunyai berat badan yang sesuai</td>
</tr>
<tr>
<td>D  Berlebihan berat badan</td>
</tr>
<tr>
<td>E  Sangat berlebihan berat badan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D2 Apakah yang anda sedang lakukan terhadap berat badan anda?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A  Saya sedang berusaha untuk menurunkan berat badan saya</td>
</tr>
<tr>
<td>B  Saya sedang berusaha untuk menambah berat badan saya</td>
</tr>
<tr>
<td>C  Saya tidak membuat apa-apa terhadap berat badan saya</td>
</tr>
<tr>
<td>D  Saya sedang mengekalkan berat badan saya</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D3 Seliranya anda berhasrat untuk mengurangkan berat badan, apakah faktor utama yang mendorong anda berbuat demikian?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A  Kesihatan</td>
</tr>
<tr>
<td>B  Kecantikan</td>
</tr>
<tr>
<td>C  Meningkatkan keyakinan diri</td>
</tr>
<tr>
<td>D  Mendapat ramai kawan</td>
</tr>
<tr>
<td>E  Tidak berhasrat mengurangkan berat badan</td>
</tr>
</tbody>
</table>
| D4 | Sekiranya anda berhasrat untuk mengurangkan berat badan, apakah kaedah yang menjadi pilihan utama anda? Apakah kegiatan yang anda lakukan untuk mencapai kegiatan tersebut?  
A. Berenang  
B. Kurangkan pengambilan makanan tinggi lemak  
C. Kurangkan pengambilan makanan manis  
D. Meningkatkan pengambilan sayur-sayuran dan buah-buahan  
E. Tidak mengambil hidangan utama (sarapan, makan tengah hari, makan malam)  
F. Mengambil ob diet/menggunakan krim pelangsing tubuh  
G. Berenang  
H. Mendapat konsultasi profesional dari doktor  
I. Tidak berhasrat mengurangkan berat badan  

| D5 | Sekiranya anda berhasrat untuk menambah berat badan, apakah faktor utama yang mendorong anda berbuat demikian?  
A. Kesehatan / fizikal  
B. Kecanduan / gula  
C. Meningkatkan kerakan diri / akhlak  
D. Mendapat ramai kawan / tindakan yang memenaikan berat badan  
E. Tidak berhasrat menambah berat badan  

| D6 | Sekiranya anda berhasrat untuk menambah berat badan, apakah kaedah yang menjadi pilihan utama anda?  
A. Menambah kuantiti makanan yang dibakar  
B. Menambah suplemen (Makanan tambahan seperti susu, suplemen vitamin)  
C. Mengambil makanan yang berkalori tinggi  
D. Lain-lain  
E. Tidak berhasrat menambah berat badan  

196
<table>
<thead>
<tr>
<th>No</th>
<th>Pertanyaan</th>
<th>Pilihan Jawapan 1</th>
<th>Pilihan Jawapan 2</th>
<th>Pilihan Jawapan 3</th>
<th>Pilihan Jawapan 4</th>
<th>Pilihan Jawapan 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adakah anda pernah mengambil sebarang suplemen vitamin / mineral?</td>
<td>Ya / Ya</td>
<td>Tidak / Tidak</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Apakah jenis suplemen vitamin / mineral yang biasa diambil?</td>
<td>Multivitamin / Multivitamin</td>
<td>Vitamin C / Vitamin C</td>
<td>Zat besi (Ferum) / Zat besi</td>
<td>Lain-lain / Lain-lain</td>
<td>Tidak ambil suplemen / Tidak ambil suplemen</td>
</tr>
<tr>
<td>3</td>
<td>Apakah sebab anda mengambil suplemen vitamin / mineral tersebut?</td>
<td>Atas arahan doktor / Atas arahan doktor</td>
<td>Kesedaran sendiri / Kesedaran sendiri</td>
<td>Pengaruh kawan-kawan / Pengaruh kawan-kawan</td>
<td>Lain-lain / Lain-lain</td>
<td>Tidak ambil suplemen / Tidak ambil suplemen</td>
</tr>
<tr>
<td>4</td>
<td>Berapakah kerap anda mengambil suplemen vitamin / mineral tersebut?</td>
<td>Setiap hari / 2-4 kali seminggu</td>
<td>5-6 kali seminggu / 2-4 kali seminggu</td>
<td>3-4 kali seminggu / 1-2 kali seminggu</td>
<td>Tidak ambil suplemen / Tidak ambil suplemen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bahasa Melayu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E5</td>
<td>Adakah anda ada mengambil sebarang suplemen makanan?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Tidak ada jawapan jika TIDAK AMBI SUPLEMEM di soalan E6, E7, dan E8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Ya / Ya</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Tidak / Tidak</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| E6 | Apakah jenis suplemen makanan yang biasa diambil?                        |
|    | (Tidak ada jawapan jika TIDAK AMBI SUPLEMEM di soalan E6, E7, dan E8)     |
| A | Spirulina / Spirulina                                                  |
| B | Mnyak kan / Mnyak kan                                                   |
| C | Made atau hasil medu / Medu                                             |
| D | Pati sayam / Pati sayam                                                  |
| E | Lain-lain / Lain-lain                                                   |
| F | Tidak ambil suplemen / Tidak ambil suplemen                           |

| E7 | Apakah sebab anda mengambil suplemen makanan tersebut?                   |
|    | (Tidak ada jawapan jika TIDAK AMBI SUPLEMEM di soalan E6, E7, dan E8)     |
| A | Atas arahan doktor / Atas arahan doktor                                |
| B | Atas arahan ibubapa / Atas arahan ibubapa                              |
| C | Kesedaran sendiri / Kesedaran sendiri                                  |
| D | Pengaruh kawan-kawan / Pengaruh kawan-kawan                            |
| E | Lain-lain / Lain-lain                                                   |
| F | Tidak ambil suplemen / Tidak ambil suplemen                            |

| E8 | Berapa kera suplemen makanan tersebut?                                   |
|    | (Tidak ada jawapan jika TIDAK AMBI SUPLEMEM di soalan E6, E7, dan E8)     |
| A | Setiap hari / Setiap hari                                                 |
| B | 5-6 kali seminggu / 5-6 kali seminggu                                     |
| C | 3-4 kali seminggu / 3-4 kali seminggu                                     |
| D | 1-2 kali seminggu / 1-2 kali seminggu                                     |
| E | Tidak ambil suplemen / Tidak ambil suplemen                             |
MODUL F : LABEL MAKANAN DAN PEMAKANAN (SEKOLAH MENENGAH SAHAIJA)

Arahan : Sila jawap dan hitamkan pada kertas jawapan yang disediakan.

**F1** Adakah anda membaca label makanan ketika membeli atau menerima makanan/minuman?

A. Ya, selalu kali (terus ke soalan F3 dan jawab hingga soalan F10)
B. Ya, kadang-kadang
C. Tidak

**F2** Sama ada anda tidak membaca label makanan, nyatakan sebab-sebabnya?

<table>
<thead>
<tr>
<th>Sebab-sebab tidak membaca label makanan</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Tulisan kecil /cannot read</td>
</tr>
<tr>
<td>B</td>
<td>Tidak faham / tidak memahami</td>
</tr>
<tr>
<td>C</td>
<td>Tidak menarik / tidak memangkas</td>
</tr>
<tr>
<td>D</td>
<td>Tidak tahu tentang / tidak mengerti</td>
</tr>
<tr>
<td>E</td>
<td>Tidak mahu / tidak tertarik</td>
</tr>
<tr>
<td>F</td>
<td>Telah mengetahui testang maklumat</td>
</tr>
</tbody>
</table>

**F3** Apakah jenis maklumat panel maklumat: pemakanan yang anda baca? Anda boleh memilih lebih daripada satu jawapan.

<table>
<thead>
<tr>
<th>Maklumat khas label makanan</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Jumlah tamga makanan</td>
</tr>
<tr>
<td>B</td>
<td>Kandungan karbohidrat /gula</td>
</tr>
<tr>
<td>C</td>
<td>Kandungan lemak</td>
</tr>
<tr>
<td>D</td>
<td>Kandungan protein</td>
</tr>
<tr>
<td>E</td>
<td>Kandungan garam/natrium</td>
</tr>
<tr>
<td>F</td>
<td>Kandungan vitamin</td>
</tr>
<tr>
<td>G</td>
<td>Kandungan mineral</td>
</tr>
<tr>
<td>H</td>
<td>Serat (fiber)</td>
</tr>
</tbody>
</table>

(Contoh: panel maklumat pemakaian)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| A | Tarih luput  
|   | penggunaan minuman  
| B | Akun pemakaian  
|   | maklumat minuman  
| C | Panel maklumat pemakaian  
|   | maklumat minuman  
| D | Logo halal  
|   | informasi  
| E | Senarai ramban/bahan  
|   | penggunaan minuman  
| F | Arahan penyimpanan  
|   | informasi  

(Adapted for natural reading)
Berdasarkan kepada panel maklumat pemakanan pada satu Minuman Kotak XYZ yang ditunjukkan di bawah. Sila buka dan nyatakan sama ada kenyataan berikut adalah betul atau salah.

<table>
<thead>
<tr>
<th>Maklumat Pemakanan bagi Minuman XYZ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Kawalan hidangan : 250ml</td>
</tr>
<tr>
<td>Larutan minuman : 250ml</td>
</tr>
<tr>
<td>Jumlah hidangan bagi setiap totok : 1</td>
</tr>
<tr>
<td>Larutan minuman : 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>100 ml</th>
<th>250ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenaga (kcal)</td>
<td>56</td>
<td>140</td>
</tr>
<tr>
<td>Karbohidrat</td>
<td>9.9</td>
<td>27.3</td>
</tr>
<tr>
<td>Lemak (g)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>0.5</td>
<td>2.5</td>
</tr>
</tbody>
</table>

F5 Jika saya minum 100ml minuman ini, ia membeikan 56 kcal tenaga
dan 9.9 g karbohidrat. Pertanyaan 56 adalah betul atau salah?
A  Betul / ndefu
B  Salah / ndefu
C  Tidak tahu / ndefu

F6 Jika saya minum satu kotak minuman ini, bermaksud saya telah mengambil 26.3 gram gula
dan 10.5 g protein. Pertanyaan 26.3 adalah betul atau salah?
A  Betul / ndefu
B  Salah / ndefu
C  Tidak tahu / ndefu
Berdasarkan kepada label kandungan tenaga pada pandangan hadapan (front of pack labelling) di bawah, sila nyatakan sama ada kenyataan berikut adalah betul atau salah.

**Tentukan harga** 7% peratus dari 2000 kalori tersebut. Dapatkah anda minum satu hidangan makanan ini, ia membebankan 7% tenaga daripada 2000 kalori tersebut.

A. Betul / Benar
B. Salah / Palsu
C. Tidak tahu / Tidak perlu dilihat

**F7**
Nilai tenaga untuk dua hidangan makanan ini adalah 140 kcal.
1. Pergi ke pasaran merujuk 140 kcal.
   A. Betul / Benar
   B. Salah / Palsu
   C. Tidak tahu / Tidak perlu dilihat

**F8**
Jika saya minum satu hidangan makanan ini, ia membebankan 7% tenaga daripada 2000 kalori tersebut. Dapatkah anda minum satu hidangan makanan ini, ia membebankan 7% tenaga daripada 2000 kalori tersebut.

A. Betul / Benar
B. Salah / Palsu
C. Tidak tahu / Tidak perlu dilihat
F9  Apakah ramuan/bahan paling banyak digunakan dalam ais krim ini?

A. Pepejal susu
   ヤヨイ
B. Sirap glukosa
   サラスイカ
C. Gula
   グラニャカ
D. Olein/Minyak isirung kelapa sawit
   オリオ/ミンヤックイシュウningen kelapasingawat
E. Serbuk koko
   セルブキコー

F10  Apakah ramuan/bahan yang paling sedikit dalam ais krim ini?

A. Sirap glukosa
   サラスイカ
B. Gula
   グラニャカ
C. Olein/Minyak isirung kelapa sawit
   オリオ/ミンヤックイシュウningen kelapasingawat
D. Pepejal susu
   ヤヨイ
E. Serbuk koko
   セルブキコー
### MODUL G: PENGUKURAN ANTRONOMETRI

Arahan: Bahagian ini akan disi oleh pelajar di dalam kertas jawapan yang disediakan.

<table>
<thead>
<tr>
<th>G1</th>
<th>Tariik pengukuran Antropometri</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hari</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>G2</th>
<th>Berat Badan</th>
</tr>
</thead>
<tbody>
<tr>
<td>G2a</td>
<td>Berat 1</td>
</tr>
<tr>
<td>G2b</td>
<td>Berat 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>G3</th>
<th>Tinggi</th>
</tr>
</thead>
<tbody>
<tr>
<td>G3a</td>
<td>Tinggi 1</td>
</tr>
<tr>
<td>G3b</td>
<td>Tinggi 2</td>
</tr>
</tbody>
</table>

Enggan diukur

---
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，体育活动质量，和食品标签应用。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.

你所提供信息将会被用于规划更好的健康方案给予下一代的年轻一代。

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。请按照你所知道的来作答。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圈作答。

3. How to shade the answer / 如何划圈作答：
   
   Shade your answer like this:  
   
   Not like this:  
   
   or:  

4. Only one answer for each question UNLESS there are other instructions.

每题只能选一个答案，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.

当你完成问卷，请等待班上协调者的指令。

THANK YOU FOR YOUR WILLINGNESS TO COMPLETE THE SURVEY

感谢你愿意回答问卷
### Personal Information

**INSTRUCTION:** Fill in the Student ID, date of birth and shade your answer on the answer sheet provided.

<table>
<thead>
<tr>
<th>Module A: Personal Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A1</strong> Student ID / 学生编号</td>
</tr>
<tr>
<td><strong>A2</strong> Date of birth / 出生日期</td>
</tr>
<tr>
<td><strong>A3</strong> Gender / 性别</td>
</tr>
<tr>
<td><strong>A4</strong> Ethnicity / 种族</td>
</tr>
<tr>
<td><strong>A5</strong> Class / 年级</td>
</tr>
<tr>
<td><strong>A6</strong> Age / 年龄</td>
</tr>
</tbody>
</table>

#### Primary school / 小学
- A. Primary 4 / 4年级
- B. Primary 5 / 5年级
- C. Primary 6 / 6年级

#### Secondary school / 中学
- D. Remove class / 剩余级
- E. Secondary 1 / 初中 1
- F. Secondary 2 / 初中 2
- G. Secondary 3 / 初中 3
- H. Secondary 4 / 初中 4
- I. Secondary 5 / 初中 5

#### 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
- E. 14 year old / 14 岁
- F. 15 year old / 15 岁
- G. 16 year old / 16 岁
- H. 17 year old / 17 岁
- I. 18 year old / 18 岁
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| B1 What is your school session? | 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 |
| B2 Normally, how many days in a week do you take breakfast (from 6.00AM till 8.00AM)? | 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 |
| B3 Normally, where do you get your breakfast from? | 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/餐馆或摊位购买  
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 |
| B4 If you do not take breakfast what is the reason? | 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  
H Not applicable/because I take breakfast everyday/不相关/我每天都吃早餐  
I Not applicable/because I take breakfast everyday/不相关/我每天都吃早餐 |

NATIONAL HEALTH AND MORBIDITY SURVEY 2017
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| B5       | 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       | 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/没有在学校休息时间吃食物或饮料 |
| B7       | 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/没有吃午餐 |
| B8       | 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 |
<table>
<thead>
<tr>
<th>Question</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>B9</td>
<td>If you do not take lunch, what is the reason?</td>
</tr>
<tr>
<td>A</td>
<td>No food/没有食物</td>
</tr>
<tr>
<td>B</td>
<td>No appetite/没有胃口</td>
</tr>
<tr>
<td>C</td>
<td>No time/没有时间</td>
</tr>
<tr>
<td>D</td>
<td>On diet/控制体重/节食/控制体重</td>
</tr>
<tr>
<td>E</td>
<td>No money/没有钱</td>
</tr>
<tr>
<td>F</td>
<td>Others/其他原因</td>
</tr>
<tr>
<td>G</td>
<td>Not applicable/与午餐无关/没有吃午餐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>B10</td>
<td>Normally, how many days in a week do you have afternoon tea (3:00PM till 6:00PM)?</td>
</tr>
<tr>
<td>A</td>
<td>1 day/1天</td>
</tr>
<tr>
<td>B</td>
<td>2 days/2天</td>
</tr>
<tr>
<td>C</td>
<td>3 days/3天</td>
</tr>
<tr>
<td>D</td>
<td>4 days/4天</td>
</tr>
<tr>
<td>E</td>
<td>5 days/5天</td>
</tr>
<tr>
<td>F</td>
<td>6 days/6天</td>
</tr>
<tr>
<td>G</td>
<td>7 days/7天</td>
</tr>
<tr>
<td>H</td>
<td>No afternoon tea/没有吃下午茶</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>B11</td>
<td>Normally, where do you obtain the food?</td>
</tr>
<tr>
<td>A</td>
<td>Prepared at home/在家准备</td>
</tr>
<tr>
<td>B</td>
<td>Buy from school canteen/学校食堂购买</td>
</tr>
<tr>
<td>C</td>
<td>Buy from restaurant or kiosk/餐馆或摊子购买</td>
</tr>
<tr>
<td>D</td>
<td>Provided by hostel/宿舍提供</td>
</tr>
<tr>
<td>E</td>
<td>Others/其他途径</td>
</tr>
<tr>
<td>F</td>
<td>Not having afternoon tea/没有吃下午茶</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>B12</td>
<td>Normally, how many days in a week do you have dinner (6:00PM till 10:00PM)?</td>
</tr>
<tr>
<td>A</td>
<td>1 day/1天</td>
</tr>
<tr>
<td>B</td>
<td>2 days/2天</td>
</tr>
<tr>
<td>C</td>
<td>3 days/3天</td>
</tr>
<tr>
<td>D</td>
<td>4 days/4天</td>
</tr>
<tr>
<td>E</td>
<td>5 days/5天</td>
</tr>
<tr>
<td>F</td>
<td>6 days/6天</td>
</tr>
<tr>
<td>G</td>
<td>7 days/7天</td>
</tr>
<tr>
<td>H</td>
<td>Not having dinner/没有吃晚餐</td>
</tr>
</tbody>
</table>
**B13** Normally, where do you obtain the food?

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Prepared at home/在家准备</td>
</tr>
<tr>
<td>B</td>
<td>Buy from restaurant or kiosk/餐馆或摊子购买</td>
</tr>
<tr>
<td>C</td>
<td>Provided by hostel/宿舍提供</td>
</tr>
<tr>
<td>D</td>
<td>Others/其他途径</td>
</tr>
<tr>
<td>E</td>
<td>Not applicable/ I do not take dinner/ 不相关/ 没有吃晚餐</td>
</tr>
</tbody>
</table>

**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?

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>No food/没有食物</td>
</tr>
<tr>
<td>B</td>
<td>No appetite/没有胃口</td>
</tr>
<tr>
<td>C</td>
<td>No time/没有时间</td>
</tr>
<tr>
<td>D</td>
<td>On diet/节食</td>
</tr>
<tr>
<td>E</td>
<td>No money/没有钱</td>
</tr>
<tr>
<td>F</td>
<td>Others/其他原因</td>
</tr>
<tr>
<td>G</td>
<td>Not applicable/ I take dinner/ 不相关/ 有吃晚餐</td>
</tr>
</tbody>
</table>

**B15** For the past one week, how often do you take heavy meals after dinner? (Example: nasi lemak, 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) 在上星期，你有几天在晚餐后会吃难消化的食物？（例如：槟城饭、印度煎饼、炒面、汉堡、炸鸡、方便面等。这不包括小吃，例如2块饼干和/或一杯牛奶）

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1 day/1天</td>
</tr>
<tr>
<td>B</td>
<td>2 days/2天</td>
</tr>
<tr>
<td>C</td>
<td>3 days/3天</td>
</tr>
<tr>
<td>D</td>
<td>4 days/4天</td>
</tr>
<tr>
<td>E</td>
<td>5 days/5天</td>
</tr>
<tr>
<td>F</td>
<td>6 days/6天</td>
</tr>
<tr>
<td>G</td>
<td>7 days/7天</td>
</tr>
<tr>
<td>H</td>
<td>I do not take heavy meals after dinner/ 晚餐后不再吃东西</td>
</tr>
</tbody>
</table>

**B16** Where do you take the heavy meals? 你从哪里享用该食物?

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Home/家里</td>
</tr>
<tr>
<td>B</td>
<td>Restaurant/ kiosk/餐馆或摊子</td>
</tr>
<tr>
<td>C</td>
<td>Hostel/宿舍</td>
</tr>
<tr>
<td>D</td>
<td>Others/其他地方</td>
</tr>
<tr>
<td>E</td>
<td>Not applicable/ I do not take heavy meals/ 不相关/ 晚餐后不再吃东西</td>
</tr>
<tr>
<td>Question</td>
<td>Options</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>B17</td>
<td>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快餐店购买的食物如汉堡包，披萨，炸鸡，薯条，鸡块等等？</td>
</tr>
<tr>
<td>A</td>
<td>1 day/1天</td>
</tr>
<tr>
<td>B</td>
<td>2 days/2天</td>
</tr>
<tr>
<td>C</td>
<td>3 days/3天</td>
</tr>
<tr>
<td>D</td>
<td>4 days/4天</td>
</tr>
<tr>
<td>E</td>
<td>5 days/5天</td>
</tr>
<tr>
<td>F</td>
<td>6 days/6天</td>
</tr>
<tr>
<td>G</td>
<td>7 days/7天</td>
</tr>
<tr>
<td>H</td>
<td>No fast food/没有吃快餐</td>
</tr>
<tr>
<td>B18</td>
<td>How often do you bring food to school?  你是否从家里携带便当/食物到学校?</td>
</tr>
<tr>
<td>A</td>
<td>Everyday/每天</td>
</tr>
<tr>
<td>B</td>
<td>Occasionally/偶尔（有时候会）</td>
</tr>
<tr>
<td>C</td>
<td>Never/没有携带</td>
</tr>
<tr>
<td>B19</td>
<td>What is the usual packed meal that you bring to school?  (Can choose ONE or TWO answer(s) only)  通常你会带什么食物到学校？（只能选择一个或两个答案）</td>
</tr>
<tr>
<td>A</td>
<td>Nasi lemak/fried rice/mixed rice  槟榔饭/炒饭/饭粒</td>
</tr>
<tr>
<td>B</td>
<td>Noodle / Vermicelli / KuehTeow  面 / 米线 / 蔬条</td>
</tr>
<tr>
<td>C</td>
<td>Bread / Bun / Sandwich  面包 / 饼头 / 三文治</td>
</tr>
<tr>
<td>D</td>
<td>Nugget / Sausage / Burger  鸡肉块 / 香肠 / 汉堡包</td>
</tr>
<tr>
<td>E</td>
<td>Biscuit /饼干</td>
</tr>
<tr>
<td>F</td>
<td>Fruits /水果</td>
</tr>
<tr>
<td>G</td>
<td>Others /其他</td>
</tr>
<tr>
<td>H</td>
<td>I do not bring packed meal /没有携带食物</td>
</tr>
<tr>
<td>B20</td>
<td>How often do you bring drink to school?  你是否从家里携带饮料到学校?</td>
</tr>
<tr>
<td>A</td>
<td>Everyday/每天</td>
</tr>
<tr>
<td>B</td>
<td>Occasionally/偶尔（有时候会）</td>
</tr>
<tr>
<td>C</td>
<td>Never/没有携带</td>
</tr>
<tr>
<td>Code</td>
<td>Question</td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 821  | **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/ Milo  
C. Carbonated drink/汽水  
D. Milk/cultured drink/酸奶饮品（优格）  
E. Others/其他  
F. I don't bring drink to school/没有携带饮料                                                                                     |
| 822  | **Normally, where do you mostly spend your pocket money?**  
你通常把零用钱花在那一方面？  
A. Buy food and/or drink/购买食物或饮料  
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                                                                               |
| 823  | **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会再外用餐？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次及以上  
H. Never/没有在外出用餐                                                                                                           |
| 824  | **What kind of snack foods that you always eat? (Can choose ONE or TWO answer(s) only)**  
你最喜欢吃零食是什么？（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/虾鱼饼/虾卷  
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?

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)

A Candy/chocolate/糖果 /巧克力
B French fries/ nugget / sausage/薯条 /鸡块 /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?

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)

A Social media (example: Surf Internet / YouTube / Facebook / Instagram, Twitter)
B Television/电视机
C Radio/电台
D Printed media (Example: magazine, newspaper, billboard, brochure, catalogue)
E Not affected/没有被影响
### Module C: Physical Activity

**Instruction:** Choose the answer and shade on the answer sheet provided.

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?

<table>
<thead>
<tr>
<th>Activity/Activity</th>
<th>Never/No</th>
<th>1-2 times/1-2次</th>
<th>3-4 times/3-4次</th>
<th>5-6 times/5-6次</th>
<th>7 times or more/7次或以上</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Repe skipping/跳绳</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>b Rowing/Canoeing/划艇</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>c Siat/Karate/Taskwondo 马来武术/空手道/跆拳道</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>d Chasing game/追逐游戏</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>e Brisk walking/步行运动</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>f Cycling/骑行踏车</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>g Jogging/Running/慢跑/赛跑</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>h Aerobics/有氧体操</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>i Swimming/游泳</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>j Baseball/棒球</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>k Dancing/跳舞</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>l Rugby/橄榄球</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>m Badminton/羽毛球</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>n Hockey/曲棍球</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>o Volleyball/排球</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>p Basketball/Netball/篮球</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>q Sepak takraw/藤球</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>r Football/Futsal/足球</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>s Ping pong/乒乓球</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>
C2. During physical education class in the last 7 days, how often are you in an active condition (playing, running, throwing, jumping)?

A. I do not attend the physical education class/我不参与体育课
B. Very rare/很少
C. Occasionally/偶尔（有时会）
D. Quite often/经常
E. Always/经常

C3. What do you usually do during break time in the school for the last 7 days?

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/跑步或偶尔玩耍
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)?

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

C5. In the last 7 days, how many days did you spend playing sports, dance or playing actively immediately after school hours?

A. Never/没有
B. 1 day/1 天
C. 2 or 3 days/2 天或3天
D. 4 days or 4 天
E. 5 days or 5 天

C6. In the last 7 days, how many days did you play sports, dance or play actively in the evening?

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 activates, dancing or engage in active games during last weekend?
A Never
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剧烈的活动
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，跳步，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，跳步，游泳，骑脚踏车，有氧运动）
D I often (5-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，我经常（每周5次）会参与课外活动（例：运动，赛跑，跳步，游泳，骑脚踏车，有氧运动）
E I regularly (7 times 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次以上）会参与课外活动（例：运动，赛跑，跳步，游泳，骑脚踏车，有氧运动）
Highlight the frequency of your activity (such as sports, playing, dancing, or any other physical activity) for each day during the last 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）

<table>
<thead>
<tr>
<th>Day/日期</th>
<th>No activity/没有活动</th>
<th>Occasionally (1-2 times)/偶尔 (1-2次)</th>
<th>Sometimes (3-4 times)/有时 (3-4次)</th>
<th>Often (5-6 times)/经常 (5-6次)</th>
<th>Regularly (7 times or more)/常常 (7次或以上)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Monday/星期一</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>b Tuesday/星期二</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>c Wednesday/星期三</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>d Thursday/星期四</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>e Friday/星期五</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>f Saturday/星期六</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>g Sunday/星期日</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>
C10 For the past week, are you sick, or are there any things that prevent you from doing regular physical activity?

A Yes/是
B No/不是

C11 During **weekend**, do you watch television and/or use computer and/or play video games? (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**?

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?

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**?

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

### INSTRUCTION: Choose the answer and shade on the answer sheet provided.

#### D1 At the present time, you think you are:

- A. **Significantly underweight** /体重严重不足
- B. **Underweight** /体重不足
- C. **Has appropriate body weight** /拥有的体重
- D. **Overweight** /体重过重
- E. **Obese** /肥胖

#### D2 What are you doing to your body weight?

- 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? (如果你要减肥，主要因素是什么？)

- A. **Health** /健康
- B. **Beauty** /漂亮
- C. **Increase self-confidence** /增加自信
- 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? (如果要减肥，你首选会做什么？)

- A. **Exercise** /运动
- B. **Reduce consumption of high fat foods** /减少高脂肪食物
- C. **Reduce intake of sugary foods** /减少糖分食物
- D. **Increase intake of vegetables and fruits** /增加蔬菜和水果的摄入
- E. **Skip main meals** /不吃饭
- F. **Taking diet pills/use dimming cream/Eat meal replacement** /服用减肥药/使用减肥霜
- G. **Fasting** /禁食
- H. **Get professional advice** /寻求专业建议
- 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? (如果你要增重，主要因素是什么？)

- A. **Health** /健康
- B. **Beauty** /漂亮
- C. **Increase self-confidence** /增加自信
- D. **To have more friends** /结交更多朋友
- E. **Does not intend to increase body weight** /没有想过增重

#### D6 If you intend to increase body weight, what is the preferred option? (如果要增重，你首选会做什么？)

- A. **Increase the quantity of food consumed** /多吃一些食物
- B. **Taking supplements** /补充品（如钙、维生素等）
- 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

#### E1 ARE YOU TAKING ANY VITAMIN SUPPLEMENT/ MINERALS?

- **A** Yes/有
- **B** No/没有

(If No, please answer 'I DON'T TAKE SUPPLEMENT' at question E2, E3, and E4.

(如果没有，请在E2、E3和E4回答没有食用补品)

#### E2 WHAT TYPE OF VITAMIN SUPPLEMENT/ MINERALS THAT YOU USUALLY TAKE?

- **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/没有食用补品

#### E3 WHAT IS THE REASON FOR YOU TO TAKE VITAMIN SUPPLEMENT/ MINERALS?

- **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/没有食用补品

#### E4 HOW OFTEN DO YOU TAKE VITAMIN SUPPLEMENT/ MINERALS?

- **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/没有食用补品

#### E5 ARE YOU TAKING ANY FOOD SUPPLEMENT?

- **A** Yes/有
- **B** No/没有

(If No, please answer 'I DON'T TAKE SUPPLEMENT' at question E6, E7, and E8.

(如果没有，请在E6、E7和E8回答没有食用补品)
### E6
**What kind of food supplement that you usually take?**

- A Spirulina/螺旋藻
- B Fish oil/鱼油
- C Honey/蜂蜜或蜂蜜制品
- D Chicken essence/鸡精
- E Others/其他
- F I do not take supplement/没有食用补充品

### E7
**What is the reason for you to take food supplement?**

- 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/没有服用补充品

### E8
**How often do you take food supplement?**

- 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/没有服用补充品
MODULE F: NUTRITION AND FOOD LABELLING

**Instruction:** Choose the answer and shade on the answer sheet provided

**F1**  Do you read food label when buying or receiving food/drink?

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/
请直接跳到回答问题 F3，并继续回答至 F10)

(Please answer question F2 and question F3 till F8/
请回答问题 F2，并直接跳至 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

如果没有阅读食品标签，请列出原因。你可以选择多个答案

<table>
<thead>
<tr>
<th>Reasons for not reading food labels/没有阅读食品标签的原因</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Small printing font/字体太小</td>
</tr>
<tr>
<td>B Do not understand food labels/不理解</td>
</tr>
<tr>
<td>C Not interesting/不感兴趣</td>
</tr>
<tr>
<td>D Do not know the importance/不知道重要性</td>
</tr>
<tr>
<td>E No time/没有时间</td>
</tr>
<tr>
<td>F Already know the information/已经知道相关资料</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Nutrition fact information/营养资讯</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Energy content/日能</td>
</tr>
<tr>
<td>B Carbohydrate/sugar content/碳水化合物/糖分含量</td>
</tr>
<tr>
<td>C Fat content/脂肪含量</td>
</tr>
<tr>
<td>D Protein content/蛋白质含量</td>
</tr>
<tr>
<td>E Salt/sodium content/盐含量</td>
</tr>
<tr>
<td>F Vitamin content/维生素含量</td>
</tr>
<tr>
<td>G Mineral content/矿物质含量</td>
</tr>
<tr>
<td>H Fiber/纤维</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Type of Information/食品资料</th>
</tr>
</thead>
<tbody>
<tr>
<td>A  Expiry date/有限期</td>
</tr>
<tr>
<td>B  Dietary declaration/食品标签</td>
</tr>
<tr>
<td>C  Nutrition fact/营养资料</td>
</tr>
<tr>
<td>D  Halal logo/清真标志</td>
</tr>
<tr>
<td>E  List of ingredients/成分</td>
</tr>
<tr>
<td>F  Storage instructions/存放指示</td>
</tr>
</tbody>
</table>
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，请阅读后并确定下列陈述正确与否。

<table>
<thead>
<tr>
<th>Nutrition Facts for Drink XYZ / XYZ包装饮料食品说明</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Serving size</strong>:食用分量: 250 ml /毫升</td>
</tr>
<tr>
<td><strong>Serving per box</strong>:每包装所含食用份量: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Every 100 ml/每100毫升</th>
<th>Every serving 250 ml/每食用份量250毫升</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy/能量 [kcal/千卡]</td>
<td>56</td>
<td>140</td>
</tr>
<tr>
<td>Carbohydrate/碳水化合物 [g/克]</td>
<td>10.9</td>
<td>27.3</td>
</tr>
<tr>
<td>Total sugar/总糖量 [g/克]</td>
<td>13.6</td>
<td>26.5</td>
</tr>
<tr>
<td>Protein/蛋白质 [g/克]</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fat/脂肪 [g/克]</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**F5** If I drink 100 ml 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

F7  Energy for 2 serving of this food is 140 kcal

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

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？
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？
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

**G1: Anthropometry measurement date/测量日期**

<table>
<thead>
<tr>
<th>Day/日期</th>
<th>Month/月份</th>
<th>Year/年份</th>
</tr>
</thead>
</table>

**G2: Body weight/体重**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>kg/公斤</th>
</tr>
</thead>
<tbody>
<tr>
<td>G2a Weight 1/体重1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G2b Weight 2/体重2</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**G2 Refuse to be measured/不愿被测量**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**G3: Body height/身高**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>cm/厘米</th>
</tr>
</thead>
<tbody>
<tr>
<td>G3a Height 1/身高1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G3b Height 2/身高2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**G3 Refuse to be measured/不愿被测量**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
### Tinjauan Pemakanan Remaja 2017
#### Kertas Jawapan

<table>
<thead>
<tr>
<th>AI ID Pelajar</th>
<th>Negri</th>
<th>Strata</th>
<th>Kategori Sekolah</th>
<th>Kod Sekolah</th>
<th>Kelas</th>
<th>Pelajar</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

**Modul C**

<table>
<thead>
<tr>
<th>C1(a)</th>
<th>C1(b)</th>
<th>C1(c)</th>
<th>C1(d)</th>
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**G1**

Tarak Pergukaran Asasometri

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229
Appendix 8: Consent Form

Parents Consent Form

RISALAH MAKLUMAT Ibu RAPA/ PENJAGA (RESPONDEN BAWAH 18 TAHUN)

1. Tujuan:
Tanjua Kebangsaan Kesihatan dan Morbiditi (NHMS) 2017

2. Nama Penyelidik dan Institusi:
   i. Dr. S. Maria Binti Awalludin, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia
   ii. Puan Ruzayya Binti Salleh, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia
   iii. Dr. Mohd Kamal Arif bin Abdul Ghani, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia

3. Nama Pesan:

Kementerian Kesihatan Malaysia

4. Pengenalan:

Kementerian Kesihatan Malaysia sedang menjalankan Tanjua Kebangsaan Kesihatan dan Morbiditi 2017 pada tahun ini. Terdapat dua fokus utama dalam kajian ini iaitu Tanjua Kebangsaan Remaja dan Tanjuaan Pemakanan Remaja. Maklumat di bawah akan menjelaskan hal-hal berkaitan tanjuaan tersebut untuk anda membentuk keputusan anda mengenai tinjauan ini.


Setelah anda memahami maklumat tanjuaan ini dan memberi kebenaran untuk anak anda mengambil bahagian, anda perlu menandatangani Borang Persetuanan Ibu Rapa/ Penjaga (Salinan Ibu-Rapa/ Penjaga & Salinan Penyelidik) yang diertatkan bersama-sama risalah ini. Tuan/Puan mempunyai masa selama tujuh (7) hari untuk membuat keputusan bagi penyetuan anak Tuan/Puan dalam kajian ini. Borang persetuanan yang telah ditandatangani akan dikumpul oleh pasukan penyelidik sebelum pengumpulan data dijalkas. Penyetuan anak anda dalam tinjauan ini adalah secara sukarela dan 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 mau. Keengganan anak anda untuk mengambil bahagian atau menarik diri tidak akan menjejaskan sebarang manebat perubatan atau kesihatan yang sememangnya bak anda.

Tanjuaan ini dita sepenyuhnya oleh Kementerian Kesihatan Malaysia dan telah mendapat keusamaan junatwaka Etnik dan Penyelidikan Perubatan, Kementerian Kesihatan Malaysia.

5. Apakah tujuan tinjauan ini dilakukan?

Tanjuaan tinjauan ini dilakukan adalah untuk memperoleh maklumat berkeraan kesihatan dan faktor pelindung serta menilai status pemakanan, korak pengambilan makanan dan korak aktiviti fisikal dalam kalangan remaja berumur 10 hingga 17 tahun. Maklumat yang diperoleh ini akan dikaji dan dijumpai bagi membantu kebanyakan strategi yang dilaksanakan di peringkat sekolah dan untuk meningkatkan kesihatan remaja.

6. Apakah yang perlu anak saya lakukan sekiranya bersetuju untuk menyetuan tinjauan ini?

Memberi respon berhubung soalan-soalan kajak 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 menyetuan tinjauan ini?

Adalah penting untuk anak anda menjawab kesemua soalan yang ditanyai oleh ahli penyelidik dengan lengkap. Menyetuan tinjauan ini tidak memehrun anda mengesahkan sebarang perhelikan.

8. Apakah risiko dan kesan-kesan sampaian inonen tinjauan ini?

Tiada risiko terhadap anak anda sekiranya menyetuan tinjauan ini memandangkan tiada keadaan yang invasif atau merhabah digunakan.
9. Apakah manfaatnya anak saya menyertai tinjauan ini?

Tinjauan ini tidak memberikan sebarang gugatan atau kesan kesihatan secara langsung apabila anak anda menyertai tinjauan ini. Namun, segala maklumat yang diperoleh daripada tinjauan ini akan diperbarui pengujian darap untuk merancang dan menambah bahan program sedia ada untuk golongan remaja di Malaysia.

10. Adakah maklumat perubatan anak saya akan dirahsiakan?

Segala maklumat anak anda yang diperoleh dalam tinjauan ini akan disimpan dan dikendalikan secara sult, bersesuaian dengan peraturan-peraturan dan/atau undang-undang yang berkeraenan. Hanya penyelidik penjau yang berkeraenan, auditor, dan pihak berkura yang berkeraenan kajian ini sahaja mempunyai akses kepada maklumat yang anak anda berikan. Sekiranya kasus 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?

Jika anda mempunyai sebarang pertanyaan berkeraenan dengan hak-hak anak anda sebagai responden dalam tinjauan ini, sila hubungi Setiausaha, Jawatankuasa Etika & Penyelidikan Perubatan (MREC), Kementerian Kesihatan Malaysia di talian 03-22979000 untuk penjelasan lebih lanjut.

**BORANG PESETIJUAN 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:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1. Saya telah diberi maklumat tentang tinjauan ini atas dan saya telah membaca dan memahami segala maklumat yang diberikan di dalam risalah ini.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Saya mempunyai masa yang sesuai untuk mempertimbangkan penyertaan anak saya dalam tinjauan ini dan telah diberi peluang untuk bertanya sepanjang selesainya dengan mematuhi.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Saya memahami risiko dan manfaat dari tinjauan ini dan saya memahami keizinan secara sukarela untuk anak saya mengambil bahagian dalam tinjauan. Saya faham bahawa anak saya mesti mengikut arahan yang berkeraenan dengan penyertaan saya dalam tinjauan ini.</td>
<td></td>
<td></td>
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<tr>
<td>5. Saya akan menerima satu salinan maklumat tinjauan/borang setijuan ibu bapa/penjaga termakan ini yang telah ditandatangani dan bertarikh.</td>
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</tbody>
</table>

Saya, ______________ member/tidak memberi keizinan* untuk anak/aga saya bernama ______________ dari kelas ______ mengambil bahagian di dalam Tinjauan Kebangsaan Kesihatan dan Morbiditi (NHMS) 2017 seipititamana yang telah dimaklumkan. (**Potong yang tidak berkeraenan**)

(Tandatangan)
Nama Ibu Bapa/ 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:

1. Saya telah diberi maklumat tentang tinjauan di atas dan saya telah membaca dan memahami segala maklumat yang diberikan di dalam risalah ini. □

2. Saya mempunyai masa yang secukupnya untuk mempertimbangkan penyertaan anak saya dalam tinjauan ini dan telah diberi peluang untuk bertanyaan soalan dan semua soalan saya telah dijawab dengan memuaskan. □

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. □

4. Saya memahami risiko dan manfaat dari tinjauan ini dan saya memberi keizinan secara sukarela untuk anak saya meagambil bahagian dalam tinjauan. Saya faham bahawa anak saya mesti mengikuti arahan yang berkaitan dengan penyertaannya dalam tinjauan ini. □

5. Saya akan menerima satu salinan maklumat tinjauan/borang persetujuan ibu bapa/penjaga termaklum ini yang telah ditandatangani dan bertarikh. □

Saya ___________ memberi/tidak memberi keizinan* anak saya untuk anak/jagaan saya bermasa _______ dari kelas _______ mengambil bahagian di dalam Tinjauan Kebangsaan Kesihatan dan Morbiditi 2017 seperti terdapat dalam Risalah. (*Potong yang tidak berkenaan)

(Tandatangan)
Nama Ibu bapa/ Penjaga*: __________________________
Nombor K/P: __________________________
Tarikh: ___________
RISALAH MAKLUMAT RESPONDEN (BAWAH 18 TAHUN)

1. Tajuk:
Tinjauan Kebangsaan Kesihatan dan Morbiditi (NIIMS) 2017

2. Nama Penyelidik Utama dan Institusi:
   i. Dr. S Maria Binti Awalluddin, 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. Pengemalan:
Kementerian Kesihatan Malaysia sedang menjalankan Tinjauan Kebangsaan Kesihatan dan Morbiditi 2017 pada tahun ini. Terdapat dua fokus utama dalam Cajian ini iaitu Tinjauan Kesihatan Remaja dan Tinjauan Pemakanan Remaja. Maklumat di bawah akan menjelaskan hal-hal berkaitan tinjauan tersebut untuk persetujuan anda menyertai tinjauan ini.


Tinjauan ini ditaip 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 berkaitan kesihatan dan faktor pelindung serta menilaiah status pemakanan, corak pengambilan makanan dan corak aktiviti fizikal dalam kalangan remaja berumur 10 hingga 17 tahun. Maklumat yang diperoleh ini akan dikaji dan disusun bagi membantu penyelidikan keberkesanan strategi yang dilaksanakan di peringkat sekelah dan untuk meningkatkan kesihatan remaja.

6. Apakah yang perlu saya tahu/lakukan sekiranya bersetuju untuk menyertai tinjauan ini?
Memberi respon terhadap soalan-soalan kajian selidik yang perlu dijawab oleh anda dan juga pengambilan ukuran berat dan tinggi yang akan dilakukan oleh pasukan penyelidik.

7. Apakah tanguagajawab 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 mengelakkan sebarang perbelanjaan.

8. Apakah risiko dan kesan-kesan samapian menyertai tinjauan ini?
Tiada risiko terhadap anda sekiranya menyertai tinjauan ini memandangkan tiada keadaan yang invasif atau merbahaya digunakan.

Students Consent Form
9. Apakah manfaatnya saya menyertai tinjauan ini?

Tinjauan ini tidak memberikan sebarang sagahati atau kecuali kesihatan secara langsung apabila anda menyertai tinjauan ini. Namun, segala maklumat yang diperoleh daripada tinjauan ini akan dapat membantu penggubal dasar untuk merancang dan menambah baik program sedia ada untuk golongan remaja di Malaysia.

10. Adakah maklumat saya akan dirahsiaikan?

Segala maklumat anda yang diperoleh dalam tinjauan ini akan disimpan dan dikendalikan secara sultik, berasosiasi dengan peraturan-peraturan dan/ atau undang-undang yang berkaitan. Hanya penyelidik, peninju yang berkelayakan, auditor, dan pihak kebunsa yang berkaitan kuian 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 sobaan menganjurkan tinjauan ini atau memerlukan keterangan lanjut, anda boleh hubungi penyelidik Dr. S. Maria Awadhuln, Puan Ruhayah Salih dan Dr. Mhd 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, siap hubungi Setiausaha, Jawatankuasa Etika & Penyelidikan Perubatan (MREC), Kementerian Kesihatan Malaysia di talian 03-22979452.

BORANG PERSETUJUAN RESPONDEN RAWAH 18 TAHUN (Untuk Salinan Respon)

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

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


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<th>Sila tanda kan ✓ di dalam kotak</th>
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<tr>
<td>1. Saya telah diberi maklumat tentang tinjauan ini atas cara lisan dan bertulis dan saya telah membaca dan memahami segala maklumat yang dihantar di dalam risalah ini.</td>
</tr>
<tr>
<td>2. Saya mempunyai masa yang secukupnya untuk mempertimbangkan penyetaraan saya dalam tinjauan ini dan telah diberi peluang untuk bertanya dan memahami sebenar maklumat saya telah dijawab dengan memastikan.</td>
</tr>
<tr>
<td>3. Saya faham bahawa penyetaraan saya adalah secara sukarela dan boleh menarik diri daripada tinjauan ini pada bila-bila masa tanpa memberi sebarang sebab.</td>
</tr>
<tr>
<td>4. Saya memahami risiko dan manfaat dari tinjauan ini dan saya memberi kebenaran secara sukarela untuk mengambil bahagian dalam tinjauan. Saya faham bahawa saya mesti mengikuti arahan yang berkaitan dengan penyetaraan saya dalam tinjauan ini.</td>
</tr>
<tr>
<td>5. Saya faham bahawa penyelidik, peninju yang berkelayakan, auditor, dan pihak kebunsa 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 dirahsiaikan.</td>
</tr>
<tr>
<td>6. Saya akan memerhati satu salinan maklumat tinjauan/borang persetujuan ini yang telah ditandatangan dan bertarikh.</td>
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Responden:

<table>
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<th>Tandatangan</th>
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<th>Nomber K/P</th>
<th>Tarikh</th>
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Penyelidik:

<table>
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<th>Nama</th>
<th>Nomber K/P</th>
<th>Tarikh</th>
</tr>
</thead>
</table>
BORANG PERSETUJUAN RESPONDEN BAWAH 18 TAHUN (Untuk Salinan Penyelidik)

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

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<td>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.</td>
<td></td>
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<tr>
<td>2</td>
<td>Saya mempunyai masa yangsecukupnya untuk mengambil langkah-langkah untuk bertanggungjawab atas tinjauan ini dan telah diberi peluang untuk bertanya kepada sebarang soalan yang ditawarkan oleh penyelidik.</td>
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<tr>
<td>3</td>
<td>Saya faham bahawa penyertaan saya adalah secara sukarela dan boleh menarik diri daripada tinjauan ini pada bila-bila masa tanpa memberi sebarang sebab.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Saya memahami risiko dan manfaat daripada tinjauan ini dan saya memberi keizinan secara sukarela untuk mengambil bahagian dalam tinjauan. Saya faham bahawa saya boleh menerima arahan yang berkaitan dengan tinjauan ini.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Saya faham bahawa penyelidik, peninjau yang berkelayakan, auditor, dan pihak berkuasa 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 dirahsiai.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Saya akan menerima satu salinan maklumat tinjauan/borang setujuan ini yang telah ditandatangani dan bertarikh.</td>
<td></td>
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</tbody>
</table>

Responden:
- Tanda tangan: __________________________
- Nama: __________________________
- Nombor K/P: __________________________
- Tarikh: __________________________

Penyelidik:
- Tanda tangan: __________________________
- Nama: __________________________
- Nombor K/P: __________________________
- Tarikh: __________________________
### Appendix 9: List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>FFQ</td>
<td>Food Frequency Questionnaire</td>
</tr>
<tr>
<td>PE</td>
<td>Physical Education</td>
</tr>
<tr>
<td>PA</td>
<td>Physical Activity</td>
</tr>
<tr>
<td>BAZ</td>
<td>BMI-for-Age</td>
</tr>
<tr>
<td>HAZ</td>
<td>Height-for-Age</td>
</tr>
<tr>
<td>MDG</td>
<td>Malaysian Dietary Guidelines</td>
</tr>
<tr>
<td>RNI</td>
<td>Recommended Nutrient Intake</td>
</tr>
<tr>
<td>Kcal</td>
<td>Kilocalorie</td>
</tr>
<tr>
<td>NHMS</td>
<td>National Health and Morbidity Survey</td>
</tr>
<tr>
<td>CCT</td>
<td>Central Coordinating Team</td>
</tr>
<tr>
<td>PSP</td>
<td>Pegawai Sains Pemakanan</td>
</tr>
<tr>
<td>RA</td>
<td>Research Assistant</td>
</tr>
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<td>RO</td>
<td>Research Officer</td>
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<td>g</td>
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