

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

ADOLESCENT HEALTH SURVEY 2017

MALAYSIA



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SURVEY 2017

(NMRR-16-698-30042)

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LIST OF ABBREVIATIONS

AHS	Adolescent Health Survey
CDC	Centre Disease Control
GSHS	Global School-based Student Health survey
IAT	Internet Addiction Test
MVIAT	Malay Version Internet Addiction Test
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNICEF	United Nations Children's Fund
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization
YRBSS	Youth Risk Behavior Surveillance System

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Executive Summary

The Adolescent Health Survey 2017 is aimed at assessing the prevalence of health risk behaviours and protective factors amongst secondary school students in Malaysia using self-administered anonymous questionnaires adapted from the Malaysian Global School-based Student Health Survey (GSHS) 2012. This study was conducted among secondary school-going adolescents between 26th March and 3rd May 2017. In order to ensure national representativeness, this study was implemented using a two-stage cluster sampling design. Out of 2738 secondary schools from the Ministry of Education and Ministry of Rural and Regional Development, 212 schools were selected and more than 30,000 students were eligible to participate in this survey. The overall response rate was 89.0% and 27,497 school-going adolescents completed the survey.

Key Findings

The study observed that the prevalence of current cigarette smokers in school-going adolescents was 13.8%. Amongst those who ever smoked cigarettes, 68.4% had tried cigarettes before the age of 14 years and 71.0% had attempted to quit smoking in the past 12 months. The prevalence of current e-cigarette/vape use in school-going adolescents was 9.8%. Among those who ever smoked e-cigarette/vape, 42.2% had first tried e-cigarette/vape before age 14 years and 60.9% had tried to stop using e-cigarette/vape in the past 12 months. Overall, 13.7% of students reported having parents or guardians who used e-cigarette/vape, 42.2% of students reported having parents or guardians who used any form of tobacco products and 42.0% of students reported having been exposed to people who smoked in their presence in the past 7 days. Prevalence of current alcohol drinkers among school-going adolescents was 10.2% in which alcohol sources were mainly from their own family or bought from stores. Among students who had ever consumed alcohol (19.3%), three quarter had their first alcoholic beverage before age 14 years and 31.9% reported ever drunkenness in their lifetime. With regards to drug use, 4.3% of students reported had ever used drugs and the prevalence of current drug users was 3.4%. Prevalence of ever using marijuana in their lifetime was 2.8% and current use of marijuana was 2.5%, while 2.4% of students reported had ever used amphetamines or methamphetamines during their lifetime.

The study found that prevalence of ever having sex among school-going adolescents was 7.3% and the prevalence of having had sex in the past 30 days was 5.4%. Of those who ever had sex, 31.9% of them had their first sexual experience before age 14 years, and 16.6% had at least two sexual partners. It was found that 12.7% of students reported they, or their partners had used condoms whilst 10.3% used other birth control methods. A total of 29.9% students had been seriously injured in the past 12 months with two most common causes of injury being falls and motor vehicle accidents. Among respondents, 25.3% claimed to have been physically attacked in the past 12 months, while 24.9% of adolescents claimed to have been involved in physical fights. With regards to bullying, 16.2% reported to have ever been bullied in the past 30 days. The two most common forms of bullying were ‘being made fun of because of how their body or face looks’ and ‘made fun of with sexual jokes, comments or gestures’. Physical abuse at home was reported by 11.8% of students while 43.2% reported verbal abuse at home in the past 30 days.

The overall prevalence of internet use among school-going adolescents was 85.6% and the prevalence of internet addiction was 29.0%. Smartphones were the most prevalent device used. A total of 9.3% secondary school students in Malaysia reported feeling lonely and 3.6% reported that they had no close friend. A total of 7.1% reported being unable to sleep “most of the time or always” due to worry in the 12 months prior to the survey. Prevalence of suicidal ideation, plan and attempt were 10.0%, 7.3%, and 6.9% respectively. Prevalence of truancy amongst students in the past 30 days was 29.4% and only 44.2% claimed to have peer support. Students who reported having parental or guardian supervision, parental or guardian connectedness, parental or guardian bonding and parental or guardian respect for privacy were 13.2%, 32.0%, 42.6%, and 74.4% respectively.

Overall, 87.1% of students reported having cleaned or brushed their teeth at least twice daily while 1.2% of students reported they had never cleaned or brushed their teeth in the past 30 days. A total of 58.3% students reported use of fluoridated toothpaste, while only 19.3% used dental floss. In the past 30 days, 11.6% never or rarely used soap when washing their hands, 6.1% never or rarely washed their hands before eating and 4.8% reported that they had never or rarely washed their hands after using the toilet. In relation to dietary behaviours, 3.9% reported being hungry most of the time or always in the past 30 days because there was not

enough food at home. The consumption of fruits at least twice daily was 46.8% and consumption of vegetables at least thrice daily was 36.0% in the past 30 days. Only 23.5% reported fruits and vegetables consumption at least five times daily in the past 30 days. Consumption of carbonated soft drinks of at least once daily in the past 30 days was reported at 36.9% while 11.1% consumed food from fast food restaurants for at least three days in the past seven days. Milk/milk products consumption of at least two servings per day was reported at 31.0% while 60.4% drank plain water five times or more per day in the past 30 days. Prevalence of being physically active for a total of at least 60 minutes daily for five days or more in the past seven days was 19.8% whereas 50.1% of students had spent at least three hours in a typical or usual day in sitting activities.

Recommendations:

In view of the above findings, the following recommendations are suggested:

- To strengthen awareness, knowledge and practice of positive health-related behaviours through home, school and community settings.
- To develop and disseminate more health education materials on health risk behaviours, its consequences and preventive measures.
- To enhance resilience and coping skills among students through school and community programs and activities such as, Doktor Muda, Minda Sihat, cadets and volunteerism.
- To strengthen protective factors against risky behaviours through intersectoral collaboration with more emphasis on spiritual values and parenting skills.
- Intersectoral collaboration to tackle the social determinants contributing to the adolescent health morbidities and mortalities.
- To evaluate the effectiveness of adolescent health programs provided by various agencies at a regular interval.

1.0 INTRODUCTION

The World Health Organization (WHO) has defined adolescents as a group of population between the ages of 10 to 19 years.¹ Adolescence sub-categories used in Malaysia consists of early adolescence (10-14 years), middle adolescence (15-17 years) and late adolescence (18-19 years).² Total population of adolescents in Malaysia is around 18% out of 31 million population.³ Adolescents are the most valuable asset in the country as they will become future leaders who will continue to sustain our national agendas.

By definition, adolescence is a period of transition from childhood to adulthood where significant changes occur in the form of physical appearance as well as emotional well-being. Rapid biological maturity precedes psychosocial maturity, thus having an impact on health consequences.⁴ Generally, they are perceived as the healthiest population and often overlooked until now. However previous studies had observed multiple morbidities among adolescents resulting from unintentional injuries, risky behaviours such as smoking, use of alcohol and drugs and also involvement in sexual activity.⁵ The current trend of the cyber era, in which more adolescents spend too much time “on line” and have become addicted to the internet, results in detachment from the real world and difficulties adapting with real world communication, which is later associated with mental health problems among adolescents.⁶ Physical inactivity and unhealthy dietary behaviors are associated with obesity and these behaviours may continue until adulthood. The practice of good personal hygiene care and dietary behaviours are equally important aspects that should not be put aside in assessing adolescent health.⁵ Their interaction with the environment also shapes adolescent growth through psychosocial experiences where peer and parental support play an important role. Adolescents are at-risk of premature morbidity and mortality if no preventive measures are taken.⁷ This population should enjoy the highest attainable standards of health with a supportive environment.

1.1 Research in Adolescent Health in Malaysian Context

In Malaysia, the Adolescent Health Unit has been established in 1995 under the Family Health Development Division, Ministry of Health, Malaysia.³ In terms of research activities, a nationwide health risk behavior study among adolescents was conducted in 1996 with four

main scopes namely smoking, alcohol consumption, drug use and sexual activity practices.⁸ Following that, the Global Youth Tobacco Surveys were conducted in 2003 and 2009 to identify tobacco consumption among youth.^{9,10} In 2010, the Institute for Health Behavioural Research had initiated The Youth Behaviour Risk Factor Surveillance (YBRFS), however the respondents only consisted of students from Forms 1, Form 2 and Form 4.¹¹ In realizing that the national data on health risks and behaviours are very much important in developing policy and programs for adolescents, the Ministry of Health, Malaysia took a step forward in collaborating with the World Health Organization (WHO) in conducting the Global School-based Student Health Survey (GSHS) Malaysia in 2012. The survey used a self-administered questionnaire assessing 10 main scopes of adolescent health risk behaviours primarily among students aged 13 to 17 years. The GSHS questionnaire was developed by WHO and the Center for Disease Control and Prevention (CDC) in collaboration with UNICEF, UNESCO, and UNAIDS in 2001. It has been used as a standard tool by more than 100 countries in the world. Local adaption and validation of the questionnaire was done before running the actual nationwide survey.¹²

The purpose of the GSHS was to provide accurate data on health behaviours and protective factors among students to:

- Help countries develop priorities, establish programmes, and advocate for resources for school health and youth health programmes and policies;
- Establish trends in the prevalence of health behaviours and protective factors for use in evaluation of school health and youth health promotion; and
- Allow countries, international agencies, and others to make comparisons across countries and within countries regarding the prevalence of health risk behaviours and protective factors.

The 10 main scopes were:

- Alcohol use
- Dietary behaviours
- Drug use
- Hygiene (including oral health)
- Mental health problems

- Physical activity
- Protective factors
- Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy
- Tobacco use
- Violence and unintentional injury

With regards to the importance of serial data in measuring the trends of health risk behaviours among adolescents in Malaysia, the Ministry of Health has listed the Adolescent Health Survey as one of the main scopes in the National Health and Morbidity Survey (NHMS) cycle. The current Adolescent Health Survey used a similar methodology and validated Malaysian GSHS questionnaire in 2012 with the addition of the Malay Version Internet Addiction Test (MVIAT).¹³

References

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1.2 Objectives

1.2.1 General Objectives

To assess the prevalence of health risk behaviours among adolescents in Malaysia in order to review health priorities, program strategies and activities and planning for allocation of resources for adolescent health.

1.2.2 Specific Objectives

- 1.2.2.1 To identify the prevalence of alcohol use
- 1.2.2.2 To identify the dietary behaviors
- 1.2.2.3 To identify the prevalence of drug use
- 1.2.2.4 To identify the practice of hygiene including oral health
- 1.2.2.5 To identify the prevalence of internet use and addiction
- 1.2.2.6 To identify the prevalence of mental health problems
- 1.2.2.7 To identify the practice of physical activity
- 1.2.2.8 To identify the prevalence of protective factors
- 1.2.2.9 To identify the prevalence of sexual behaviours
- 1.2.2.10 To identify the prevalence of tobacco use
- 1.2.2.11 To identify the prevalence of violence and unintentional injury

1.2.3 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.

1.2.3.1 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 2**.

1.2.3.2 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 4**. Figure 1 detailed the organisation chart at the Institute for Public Health level. Adolescent Health Survey was part of NHMS 2017 using the sample from secondary schools only.

1.2.3.3 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. 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**.

1.2.3.4 State Liason Officers and Data Collection Team.

A State Liaison Officer 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**.

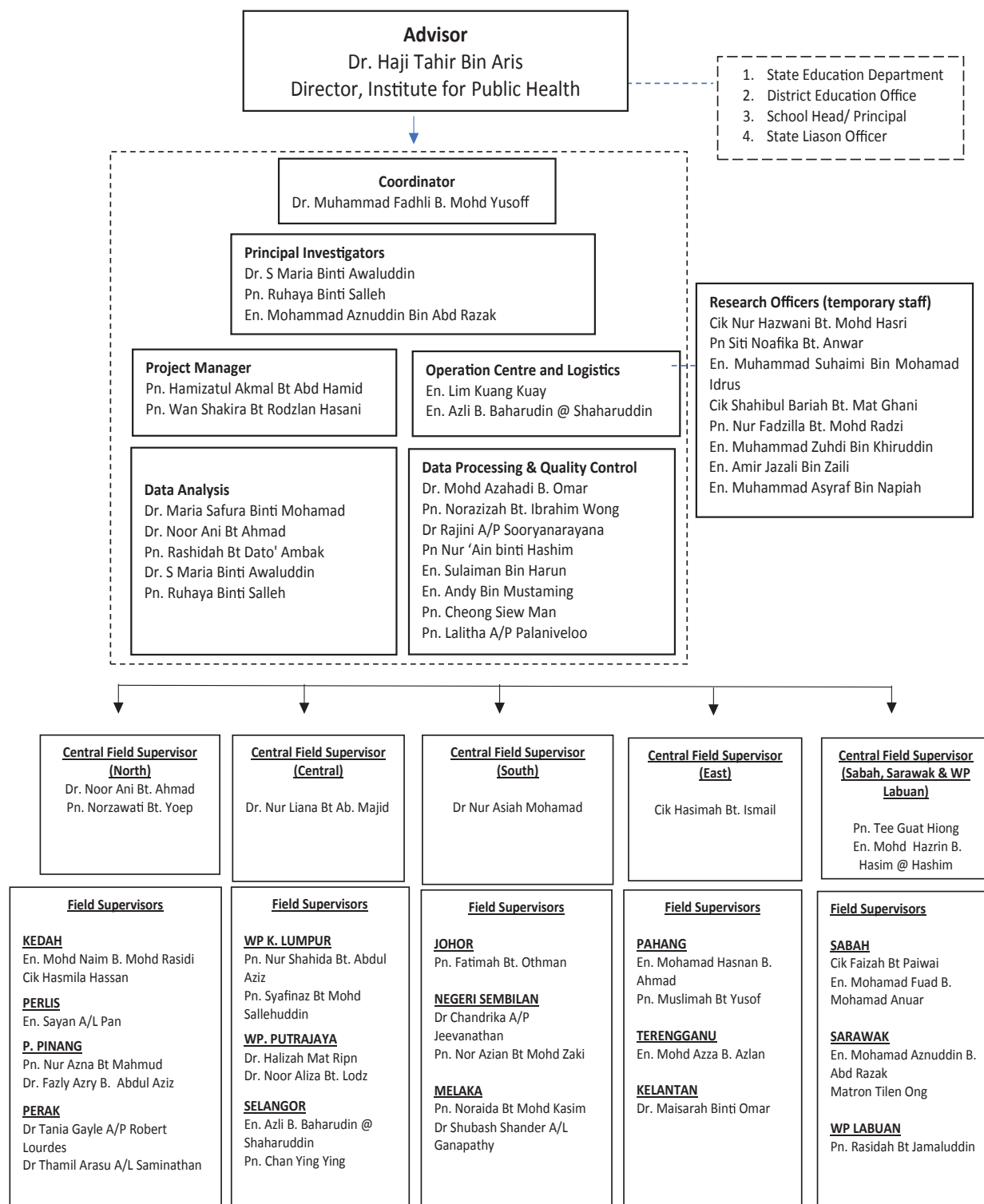


Figure 1: Organisation chart for data collection teams NHMS 2017

2.0 METHODOLOGY AND SAMPLING DESIGN

2.1 Target Population

The target population for the Adolescent Health Survey 2017 was school-going adolescents aged between 13 to 17 years in Malaysia. An equal sampling proportion was calculated from 13 States and three Federal Territories to represent adolescents in each State / Federal Territories.

2.2 Sampling Frame

The sampling frame used in this survey was the list of secondary schools from the Ministry of Education and Ministry of Rural and Regional Development. Students' enrolment data of Form 1 to Form 5 from 2,738 secondary schools in 2016 were used.

2.3 Sample Size Determination

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

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

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

To obtain an optimum sample size, a few adjustments were made to the sample size calculation as follows:

1. Adjusted n (srs) for total number of target population (N) (based on the population size for school-going adolescents in 2016)

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

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

4. The sample size was adjusted according to the needs of analysis; at the national or state level.

Based on the requirements to achieve the objectives of the survey and above mention considerations, the optimum sample size required was 30, 496 respondents (**Table 2.1**).

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

No.	State / Federal Territories	Total Number of Schools	Number of Schools Sampled	Number of students sampled
1	Johor	306	14	1,906
2	Kedah	219	14	1,906
3	Kelantan	193	14	1,906
4	Melaka	87	14	1,906
5	Negeri Sembilan	139	14	1,906
6	Pahang	209	14	1,906
7	Pulau Pinang	141	14	1,906
8	Perak	275	14	1,906
9	Perlis	33	14	1,906
10	Selangor	345	14	1,906
11	Terengganu	162	14	1,906
12	Sabah	246	14	1,906
13	Sarawak	220	14	1,906
14	WP Kuala Lumpur	133	14	1,906
15	WP Labuan	19	8	1,906
16	WP Putrajaya	11	8	1,906
Total		2,738	212	30,496

2.4 Sampling Design

This survey utilised a two-stage stratified cluster sampling design to ensure representativeness of students from Form 1 to Form 5 (13-17 years). Malaysia was stratified into 16 states/ Federal Territories. The first stage of sampling was selection of secondary schools (schools with students from Forms 1 to Form 5). Schools were selected randomly with probability proportionate to school enrolment size. A total of 212 secondary 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 minimum of four to maximum of 10 classes from each selected school to meet the required sample for each school in 13 states and WP Kuala Lumpur, WP Putrajaya and WP Labuan; 137 and 239 respondents respectively. All students in selected classes were eligible to participate in the survey.

2.5 Ethical Approval and Consent Forms

This study had obtained approvals from the Medical Research and Ethics Committee of the Ministry of Health and Ministry of Education. We obtained permission to carry out the survey from relevant offices of the Ministry of Education at state and district levels as well as from schools selected. Prior to the survey, several meetings with relevant Ministry of Education officers and persons in-charge at selected schools were conducted to ensure readiness in logistic preparation. Teachers were briefed on the parent's consent form, who then distributed it to parents a week prior to the survey. During the actual day of the survey, student's consent was obtained from eligible respondents before survey was conducted. Students who did not receive parental consent or they themselves refused to participate were considered as non-response of eligible participants in this survey.

2.6 Survey Instruments

A validated self-administered bilingual questionnaire adopted from the Malaysian GSHS 2012 with computer-scan-able answer sheets was used. Answer sheets were anonymous to ensure student confidentiality. Majority of the students completed the survey within two teaching periods. The Adolescent Health Questionnaires contained 77 questions addressing the following topics:

- Alcohol use
- Dietary behaviours
- Drug use
- Hygiene (including oral health)
- Internet Use and Addiction
- Mental health
- Physical activity
- Protective factors
- Sexual behaviours that contribute to HIV infection, other STIs, and unintended pregnancy
- Tobacco use
- Violence and unintentional injury

2.7 Data Collection

There were 36 teams to collect data; 4 teams each for Sabah and Sarawak and 2 teams per state in the Peninsular Malaysia and Federal Territories. Each team consisted of a field supervisor, research assistants and a driver. The field supervisor was a permanent staff in the Ministry of Health.

A pilot study was carried out on 6 February 2017. Data collection training was conducted in Kuala Lumpur and Kuching, Sarawak for data collection teams in Peninsular Malaysia, and for Sabah, Sarawak and WP Labuan respectively. The training module comprised of questionnaires and role-plays in handling the survey in classrooms or in a school hall. Data collection was from 26 March to 3 May 2017.

2.8 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.

2.8.1 Data Operation Centre

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

Station 1: Respondent ID checking

Station 2: Scanning

Station 3: Verification

Station 4: Storage

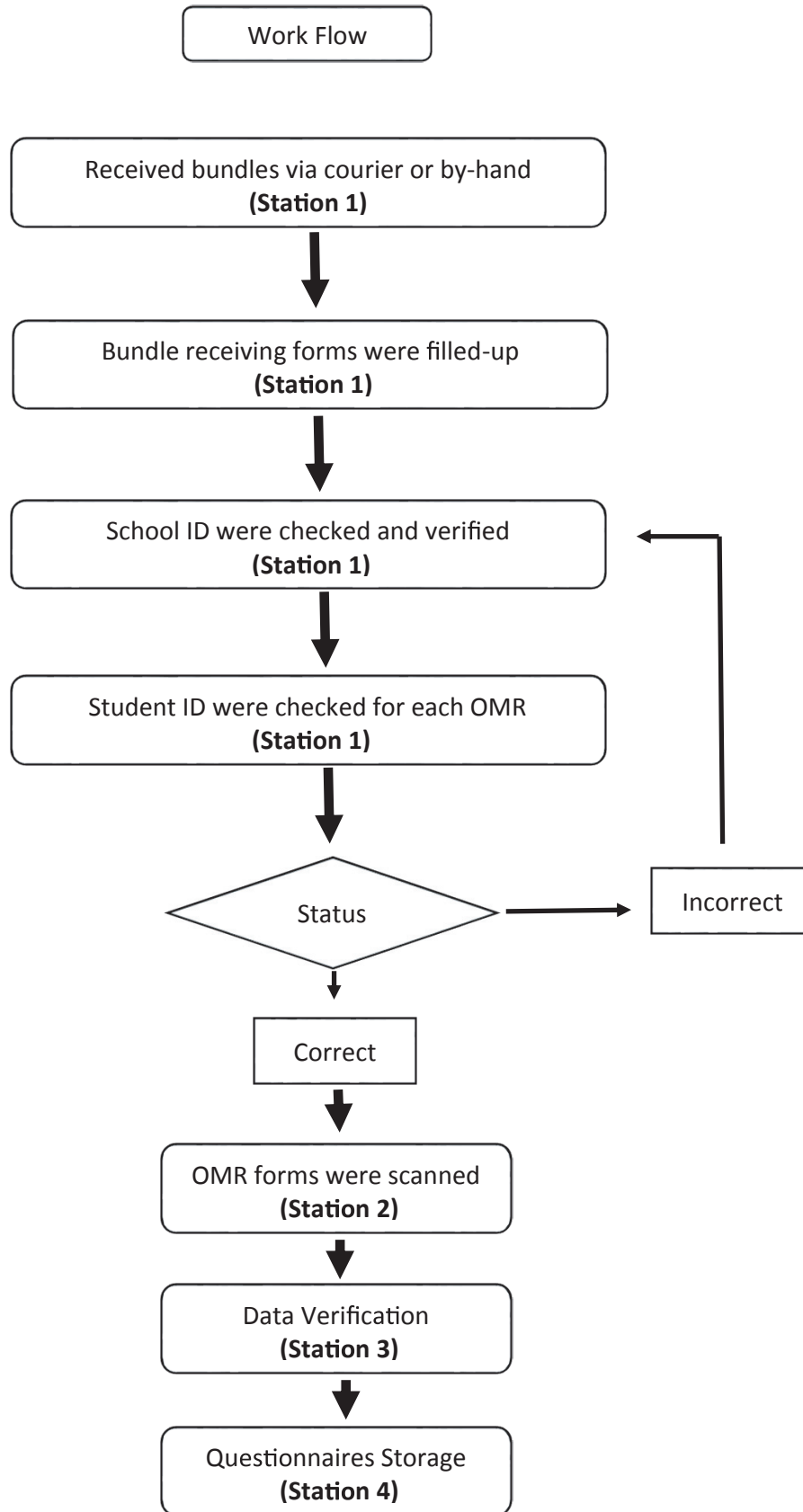


Figure 2 : Work Flow of NHMS 2017

2.8.2 Data Analysis

Analysis was prepared according to objectives of the survey, working definitions and dummy tables. IBM SPSS Statistics for Windows, Version 21.0. (Armonk, NY: IBM Corp.) was used to import raw datasets in Excel form. Data set was checked and cleaned for any inconsistencies. The final data analysis was conducted by using complex sampling design and 95% confidence interval.

A weighting factor was applied to each student record to adjust for non-response and for varying probabilities of selection. Weight estimation was calculated by the following formula:

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

Where;

W1 = the inverse of probability of selecting the school

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

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

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

The weighted results were used to make important inferences on the health risk behaviours and protective factors of all students from Form 1 to Form 5. Variable definitions used in this survey were derived from the Malaysian GSHS 2012 and was discussed in detail for each scope.

3.0 FINDINGS

3.1 General Findings

A total of 27,497 OMR forms were received from 212 selected schools. The overall response rate was 89.2%. The response rates for schools and classes were 100% each, while the response rate for students was 89.2%. (**Table 3.1.1**).

Table 3.1.1: Response Rate at Student Level by State, NHMS 2017

State	Selected Schools	Eligible students	Completed OMR forms	Response rate (%)
Johor	14	1,915	1,731	90.4
Kedah	14	1,930	1,691	87.6
Kelantan	14	1,900	1,631	85.8
Melaka	14	1,986	1,872	94.3
Negeri Sembilan	14	1,930	1,718	89.0
Pahang	14	1,948	1,784	91.6
Pulau Pinang	14	1,974	1,749	88.6
Perak	14	1,931	1,754	90.8
Perlis	14	1,992	1,667	83.7
Selangor	14	1,840	1,671	90.8
Terengganu	14	1,880	1,669	88.8
Sabah	14	1,965	1,686	85.8
Sarawak	14	1,919	1,779	92.7
WP Kuala Lumpur	14	1,937	1,721	88.8
WP Labuan	8	1,907	1,712	89.8
WP Putrajaya	8	1,869	1,662	88.9
Total	212	30,823	27,497	89.2

Comparison of total estimated population (weighted) with the national secondary school enrolment is shown in **Table 3.1.2** Geographic information system (GIS) on the mapping of selected secondary schools is shown in **Figure 3**. The socio-demographic characteristics of the sample by gender consist of 47.8% (13,135) males and 52.2% (14,362) females. In terms of ethnicity; 68.1% (18,713), 14.9% (4,100), 5.2% (1,428), 6.5% (1,781), 3.3% (921) and 2.0% (554) were Malays, Chinese, Indians, Bumiputera Sabah, Bumiputera Sarawak and Others respectively. In terms of school locality; 57.8% (15,899) students were from urban areas while 42.2% (11,598) from rural areas.

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

State	NHMS 2017			National Enrolment 2017	
	Unweighted count	Estimated Enrolment (weighted)	Prevalence (%)	Secondary School Students	Prevalence (%)
Malaysia	27,497	2,146,447	100.0	2,146,509	100.0
State					
Johor	1,731	275,711	12.8	275,700	12.8
Kedah	1,691	154,645	7.2	154,643	7.2
Kelantan	1,631	121,684	5.7	121,683	5.7
Melaka	1,872	67,234	3.1	67,235	3.1
Negeri Sembilan	1,718	88,430	4.1	88,429	4.1
Pahang	1,784	103,630	4.8	103,644	4.8
Pulau Pinang	1,749	112,980	5.3	112,981	5.3
Perak	1,754	181,681	8.5	181,724	8.5
Perlis	1,667	27,012	1.3	27,014	1.3
Selangor	1,671	391,634	18.2	391,623	18.2
Terengganu	1,669	98,667	4.6	98,664	4.6
Sabah	1,686	198,960	9.3	199,006	9.3
Sarawak	1,779	197,888	9.2	197,876	9.2
WP Kuala Lumpur	1,721	112,376	5.2	112,370	5.2
WP Labuan	1,712	5,539	0.3	5,539	0.3
WP Putrajaya	1,662	8,376	0.4	8,378	0.4
Sex					
Male	13,135	1,064,954	49.6	1,064,988	49.6
Female	14,362	1,081,493	50.4	1,081,521	50.4
Form					
Form 1	5,704	451,017	21.0	451,024	21.0
Form 2	5,501	426,924	19.9	426,908	19.9
Form 3	5,837	431,050	20.1	431,043	20.1
Form 4	5,532	414,604	19.3	414,653	19.3
Form 5	4,923	422,852	19.7	422,881	19.7

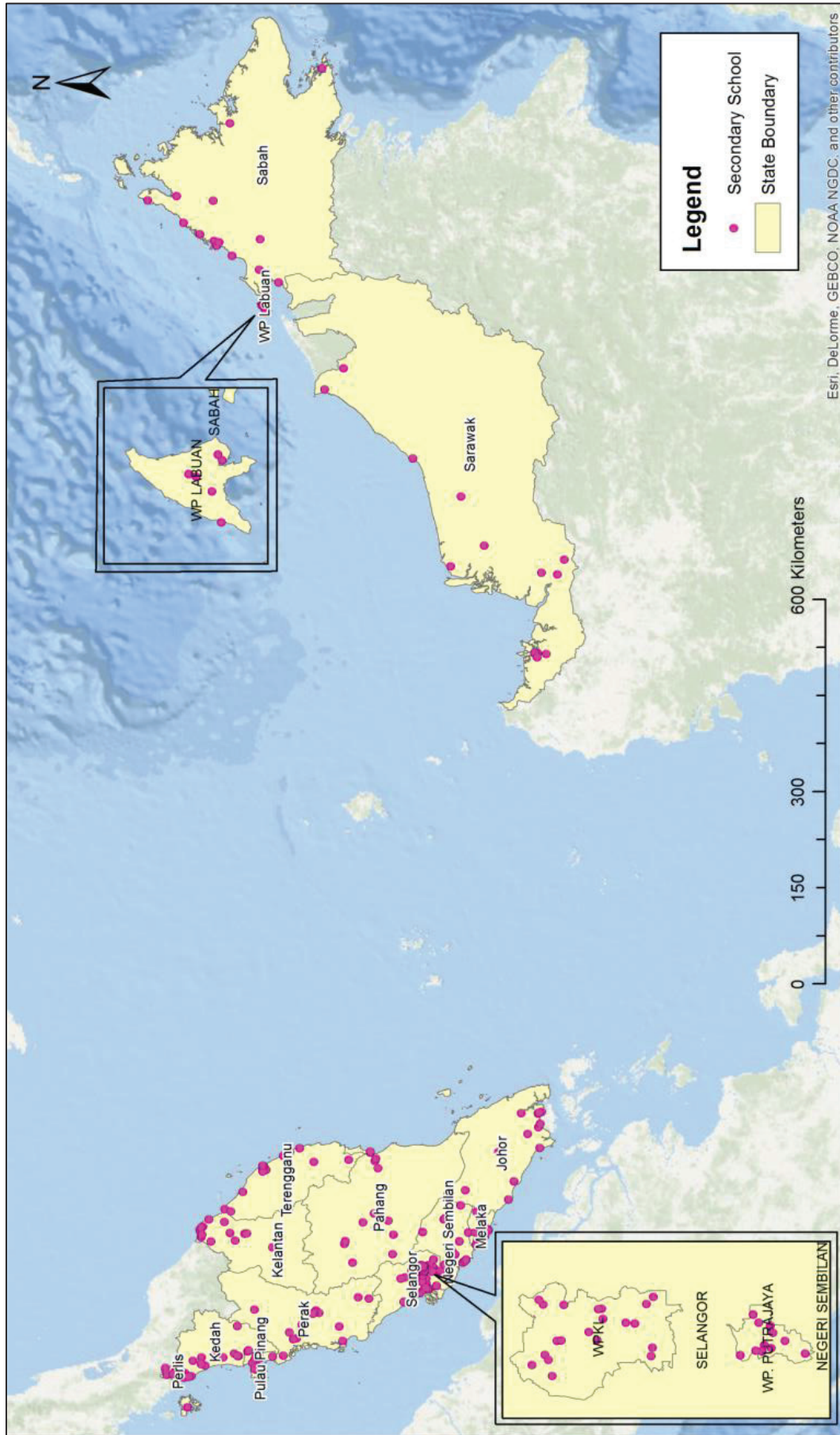


Figure 3: GIS mapping of the selected secondary schools

3.2 Alcohol Consumption

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3.2.1 Introduction

Globally, there are about 3.3 million deaths attributable to harmful use of alcohol annually.¹ The South East Asian region contributed to 4.6% of alcohol-attributable deaths and 4.0% burden of disease and injury.¹ People consuming alcohol are prone to more than 200 diseases and injuries as well as social consequences due to its harmful effects.¹ The Centre for Disease Control (CDC) estimates on average in the United States from 2006 to 2010, there were 4,358 alcohol-attributable deaths due to excessive alcohol use for those under 21; 1,580 deaths from motor vehicle crashes, 1,269 as a result of homicides, 492 from suicide, as well as 245 from other injuries such as falls, burns, and drowning.² Alarmingly, about 33% of teens (by age 15) have had at least 1 drink of an alcoholic beverage.³ Evidently, individuals who started drinking before the age of 15 are five times more likely to have alcohol-related problems later in life.⁴ The consequence of early alcohol drinking could lead to memory impairment, thus causing low educational achievement and high absenteeism rates.^{5,6}

3.2.2 Objectives

- i. To determine the prevalence of ever and current drinkers among students from Form 1 to Form 5.
- ii. To describe the socio-demographic characteristics of ever and current drinkers among students from Form 1 to Form 5.
- iii. To identify the age of alcohol drinking initiation among students from Form 1 to Form 5
- iv. To identify the sources of obtaining alcoholic beverages among students from Form 1 to Form 5.
- v. To identify the prevalence of drunkenness among students from Form 1 to Form 5 who consume alcohol.

- vi. To determine the frequency of social problems related to alcohol consumption among students from Form 1 to Form 5.

3.2.3 Variable definitions

- **Drinking alcohol:** A “drink” is a glass of wine, tuak, lihing, bahar, ijuk or toddy; a can of beer, a small glass of liquor’ or mixed drink. Drinking alcohol does not include drinking a few sips of wine for religious purposes.
- **Ever drinkers:** Those who had a history of alcohol consumption in their lifetime.
- **Current drinkers:** Those who had at least a “drink” of alcohol in the past 30 days.
- **Drunkness:** When someone demonstrates signs such as staggering when walking, not being able to speak right and throwing up after consuming alcohol in a lifetime.
- **Social problems:** Having trouble with family or friends, missed school or got into fights as a result of drinking alcohol in a lifetime.

3.2.4 Findings

Ever Alcohol Drinkers

The prevalence of ever alcohol drinkers among students from Form 1 to Form 5 in Malaysia was 19.3% (95% CI: 17.10, 21.70) and was significantly higher among those from urban schools (22.9%, 95% CI: 19.67, 26.52) compared to rural schools (14.6%, 95% CI: 11.94, 17.63). However, there was no significant difference noted across sex, form and ethnicity (**Table 3.2.1**).

Current Alcohol Drinkers

The prevalence of current alcohol drinkers among students from Form 1 to Form 5 was 10.2% (95% CI: 9.00, 11.60) and was significantly higher among males (12.8%, 95% CI: 11.30, 14.50) compared to females (7.7%, 95% CI: 6.50, 9.10). However, there was no significant difference noted across locality of school, form and ethnicity (**Table 3.2.2**).

Initiation of First Alcohol Use Before 14 years old

Among students who ever consumed alcohol, 76.4% (95% CI: 74.3, 78.3) had their first alcoholic beverage before the age of 14 years.

Drunkenness

Prevalence of drunkenness among all students from Form 1 to Form 5 was 6.1% (95% CI: 5.3, 7.1) and was significantly higher among males (8.1%, 95% CI: 6.9, 9.4) than females (4.2%, 95% CI: 3.4, 5.2). Among ever alcohol drinkers, 31.9% (95% CI: 29.26, 34.70) reported drunkenness and was significantly higher among males (37.2%, 95% CI: 33.30, 41.20) compared to females (25.2%, 95% CI: 22.35, 28.27) (**Table 3.2.3**).

Sources of Obtaining Alcoholic Beverages Among Current Alcohol Drinkers

Among current alcohol drinkers, most students obtained their alcoholic beverages from their family (37.7%, 95% CI: 33.26, 42.25). Other sources included buying drinks from stores (27.1%, 95% CI: 23.76, 30.67) or getting it from their friends (16.9% CI: 14.56, 19.56) (**Table 3.2.5**).

Social Problems as a Result of Alcohol Drinking

Overall, 4.7% (95% CI: 4.12, 5.24) of students got into trouble with their family and friends, missed school or got into fights one or more times as a result of drinking alcohol. These problems were significantly more common among males (5.8%, 95% CI: 5.04, 6.73) than females (3.5%, 95% CI: 3.05, 4.01) (**Table 3.2.6**).

3.2.5 Discussion

From this survey, the prevalence of ever drinkers (ever consumed alcohol in their lifetime) among students from Form 1 to Form 5 (13 to 17 years old) in Malaysia was 19.3%. This result was lower compared to the prevalence noted in Indonesia (in 2015) which was at 8.75%.⁹

Prevalence of current drinkers among these students was 10.2% (or one in 10). This showed a 1.3% increase from the Global School Health Survey (GSHS) conducted in Malaysia in 2012.⁷ On the other hand, Brunei reported a prevalence of 4.5% in 2014¹⁰ and 4.4% in Indonesia in 2015⁹ which was much lower compared to Malaysia.

Alarming, majority (76.4%) of the students (Form 1 to Form 5) in Malaysia had their first alcoholic drink before the age of 14 years old. Other Southeast Asian countries also showed similar findings, whereby majority of students in the same age group had their the first alcoholic drink before the age of 14 (Indonesia: 60.6%⁹, Brunei: 57.7%¹⁰). The peak of alcohol initiation was noted at the age of 12 to 13 years old.

Prevalence of drunkenness among students in Malaysia (6.1%) was noted higher as compared to Indonesia and Brunei which reported 3.7%⁹ and 3.8%¹⁰ respectively. Prevalence of drunkenness among male students (8.1%) was significantly higher compared to females (4.2%). This is consistent with findings from Indonesia where males (6.5%) were more likely to get drunk compared to females (0.9%). Brunei also reported similar findings, whereby males (5.4%) were more likely to get drunk compared to females (2.3%).

The main source of obtaining alcoholic beverages among the current drinkers was from their own family (GSHS 2012: 34.6%⁷; AHS 2017: 37.7%), similar findings as compared to GSHS 2012 in Malaysia. Prevalence of having social problems as a result of drinking alcohol was 4.7%. Alarming, this figure is almost twice higher compared to GSHS 2012 which was 2.6%.⁷

3.2.6 Conclusion

Although the prevalence of alcohol drinking among students in Malaysia is low compared to some developed countries, it is important for us to recognise its dangers and to nip the problem at the bud before it becomes out of hand. Public awareness on the harmful effect of underage drinking, alcohol use screening and early intervention are required in order to bring down the prevalence of drinking among adolescents and to prevent it from progressing to addiction, medical complications and psychosocial problems in the future.

3.2.7 Recommendations

Addressing alcohol drinking among adolescents in Malaysia is vital to prevent social and other harmful effects of alcohol on the health of adolescents. Mapping of localities with high alcohol drinking and drunkenness prevalence is highly recommended, since alcohol use is not rampant and localised in specific populations and locations.

By doing this, interventions can be focused on the identified groups. Among the interventions that can be implemented are:

1. To instill awareness about the danger of underage drinking to the adolescents as early as possible.
2. Family-based prevention programmes: Educating parents on the negative effects of alcohol especially on long-term memory and learning skills, health effects and its social repercussions on adolescent behaviour and subsequent dependence and abuse if not controlled. Parents should play an important role as the firsthand educators on the harmful effects of alcohol to their children and prohibiting children to initiate early alcohol drinking.
3. School-based prevention programmes: Empower counselors and teachers to screen their students for alcohol use and to start intervention for these students as soon as possible.

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Table 3.2.1: Prevalence of ever alcohol drinkers among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	4,747	413,467	19.3	17.10	21.70
State					
Johor	303	47,562	17.3	12.00	24.10
Kedah	248	22,743	14.7	9.00	23.10
Kelantan	141	11,345	9.3	6.50	13.20
Melaka	316	10,578	15.7	9.60	24.70
N. Sembilan	245	13,611	15.4	9.40	24.30
Pahang	246	15,579	15.0	8.70	24.80
Pulau Pinang	403	27,831	24.7	14.80	38.20
Perak	388	39,609	21.8	13.00	34.20
Perlis	191	3,286	12.2	8.30	17.40
Selangor	258	64,091	16.4	11.30	23.20
Terengganu	102	6,192	6.3	3.90	9.90
Sabah	429	50,793	25.5	17.30	36.00
Sarawak	619	70,290	35.5	27.80	44.10
WP Kuala Lumpur	413	28,393	25.3	16.10	37.40
WP Labuan	392	1,295	23.4	16.10	32.80
WP Putrajaya	53	268	3.2	2.50	4.10
Locality of school					
Urban	3,226	277,361	22.9	19.67	26.52
Rural	1,521	136,106	14.6	11.94	17.63
Sex					
Male	2,641	232,123	21.8	19.30	24.50
Female	2,106	181,343	16.8	14.40	19.50
Form					
Form 1	854	75,339	16.7	14.20	19.50
Form 2	856	72,354	17.0	14.30	20.00
Form 3	970	77,240	17.9	15.20	21.10
Form 4	1,032	85,223	20.6	17.40	24.20
Form 5	1,035	103,310	24.4	20.70	28.60
Ethnicity					
Malay	1,091	78,851	5.8	5.20	6.50
Chinese	2,240	198,476	55.4	52.40	58.40
Indian	372	41,789	28.0	24.00	32.50
Bumiputera Sabah	504	42,177	28.2	19.20	39.50
Bumiputera Sarawak	403	43,450	44.9	35.80	54.40
Others	137	8,724	23.0	17.80	29.10

Table 3.2.2: Prevalence of current alcohol drinkers among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	2,476	219,516	10.2	9.00	11.60
State					
Johor	124	19,719	7.2	4.90	10.30
Kedah	131	11,800	7.6	5.20	11.00
Kelantan	99	7,911	6.5	4.30	9.60
Melaka	138	4,526	6.7	3.90	11.50
N. Sembilan	119	7,101	8.0	4.20	14.90
Pahang	158	10,302	9.9	5.60	17.00
Pulau Pinang	182	13,017	11.5	7.10	18.30
Perak	226	22,859	12.6	8.00	19.30
Perlis	119	2,080	7.7	5.10	11.50
Selangor	159	38,257	9.8	6.60	14.20
Terengganu	75	4,625	4.7	2.90	7.50
Sabah	214	26,024	13.1	9.40	18.00
Sarawak	344	38,286	19.4	14.40	25.50
WP Kuala Lumpur	170	12,265	10.9	6.70	17.30
WP Labuan	199	657	11.9	7.40	18.50
WP Putrajaya	19	85	1.0	0.50	2.10
Locality of school					
Urban	1,543	136,071	11.2	9.58	13.15
Rural	933	83,446	8.9	7.20	11.02
Sex					
Male	1,545	136,539	12.8	11.30	14.50
Female	931	82,978	7.7	6.50	9.10
Form					
Form 1	550	50,382	11.2	9.10	13.70
Form 2	485	40,047	9.4	7.70	11.40
Form 3	505	40,882	9.5	7.70	11.60
Form 4	515	44,817	10.8	8.90	13.10
Form 5	421	43,388	10.3	8.60	12.20
Ethnicity					
Malay	639	46,823	3.5	2.90	4.10
Chinese	1,049	95,320	26.6	24.20	29.20
Indian	226	26,150	17.5	14.00	21.80
Bumiputera Sabah	250	20,950	14.0	10.00	19.40
Bumiputera Sarawak	240	25,928	26.8	20.20	34.70
Others	72	4,345	11.4	8.10	15.90

Table 3.2.3: Percentage of drunkenness among ever alcohol drinkers among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	1,477	131,705	31.9	29.26	34.70
Locality of school					
Urban	883	78,193	28.2	25.05	31.65
Rural	594	53,511	39.4	34.95	44.12
Sex					
Male	983	86,104	37.2	33.30	41.20
Female	494	45,601	25.2	22.35	28.27
Form					
Form 1	319	28,872	38.6	32.74	44.75
Form 2	284	23,248	32.2	28.28	36.39
Form 3	274	21,519	27.9	22.91	33.48
Form 4	306	27,169	31.9	27.09	37.16
Form 5	294	30,896	29.9	24.96	35.36
Ethnicity					
Malay	388	27,964	35.6	30.47	41.13
Chinese	525	46,539	23.5	20.63	26.62
Indian	163	19,556	46.9	39.42	54.51
Bumiputera Sabah	186	15,595	37.0	30.43	44.04
Bumiputera Sarawak	169	18,582	42.8	36.72	49.04
Others	46	3,467	39.7	28.59	52.07

Table 3.2.4: Initiation age of alcohol drinking among ever alcohol drinkers among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
7 years old or younger	402	35,921	8.7	7.57	9.99
8 or 9 years old	415	36,172	8.8	7.69	9.97
10 or 11 years old	616	53,195	12.9	11.56	14.34
12 or 13 years old	1,533	137,367	33.3	31.02	35.62
14 or 15 years old	937	81,134	19.7	17.84	21.60
16 years old or older	835	69,007	16.7	14.13	19.66

Table 3.2.5: Sources of obtaining alcohol among current alcohol drinkers among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
I bought in a store	575	47,838	27.1	23.76	30.67
I gave someone money to buy	171	15,921	9.0	7.06	11.43
I got it from my friends	337	29,874	16.9	14.56	19.56
I got it from my family	712	66,513	37.7	33.26	42.25
I stole it	32	3,162	1.8	1.14	2.80
I got it some other way	158	13,345	7.6	6.32	9.01

Table 3.2.6: Prevalence of social problems (got into trouble with family or friends, missed school, or got into fights) as a result of drinking alcohol among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	1,182	99,725	4.7	4.12	5.24
Locality of school					
Urban	608	49,055	4.1	3.41	4.81
Rural	574	50,670	5.4	4.55	6.46
Sex					
Male	725	61,970	5.8	5.04	6.73
Female	457	37,755	3.5	3.05	4.01

3.3. Dietary Behaviours

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3.3.1 Introduction

Fruits and vegetables are good sources of complex carbohydrates, vitamins, minerals, and other substances important for adolescent's good health. Dietary patterns that include higher intakes of fruits and vegetables are associated with several health benefits, including a decreased risk for some types of cancer.

3.3.2 Objectives

To describe the prevalence of:

- i. Students who had gone hungry most of the time or always in the past 30 days.
- ii. Fruits intake of at least twice daily in the past 30 days.
- iii. Vegetables intake of at least three times daily in the past 30 days.
- iv. Fruits and vegetables intake of at least five times daily in the past 30 days.
- v. Carbonated drinks consumption of at least once daily in the past 30 days.
- vi. Plain water intake of five times or more daily in the past 30 days.
- vii. Milk or milk products intake of at least two times daily in the past 30 days.
- viii. Food consumption from fast food restaurant of at least three days in the past seven days

3.3.3 Variable Definitions

- **Gone hungry:** students who had gone hungry most of the time or always because there was not enough food at home for the past 30 days, or living without financial means to access enough food for active and healthy living.
- **Fruits intake:** fruits intake of at least twice daily in the past 30 days, inclusive of various types of local fruit, seasonal fruit and imported fruit.
- **Vegetables intake:** vegetables intake of at least three times daily in the past 30 days, either eaten raw or cooked.
- **Plain water intake:** Includes mineral water, boiled water, or tap water
- **Carbonated drinks intake:** carbonated drinks consumption of at least once daily in the past 30 days (except mentioned as diet soft drinks).
- **Dairy products intake:** milk or milk products intake at least two times daily in the past 30 days.
- **Fast food intake:** consuming food from fast food restaurants at least three days in the past seven days

3.3.4 Findings

Hunger

A total of 3.9% (95%CI: 3.53, 4.24) students who reported being hungry most of the time or always because there was not enough food at home in the past 30 days (**Table 3.3.1**). Students in Kuala Lumpur were more likely to report being hungry (5.7%; 95%CI: 4.32, 7.38), followed by Negeri Sembilan (5.0%; 95%CI: 3.25, 7.48) and Perak (4.8%; 95%CI: 3.85, 5.85). Significantly, those living in urban areas were more likely to report being hungry (4.1%; 95%CI: 3.65, 4.66) compared to their counterparts in rural areas (3.5%; 95%CI: 3.07, 4.08). Prevalence of being hungry was 3.6% (95%CI: 3.17, 4.10) among male students and 4.1% (95%CI: 3.68, 4.63) female students. Those in the upper secondary school experienced food hunger (4.1%; 95%CI: 3.49, 3.69) more than their counterparts in the lower secondary school (3.8%; 95%CI: 3.27, 4.31). Significantly, students in Form 1 were more likely to experience hunger (4.8%; 95%CI: 3.82, 5.94) compared to those in Form 2 (2.9%; 95%CI: 2.27, 3.74). Indians were reported to be more likely to experience hunger (7.6%; 95%CI: 5.80, 9.87) compared to other ethnicities.

Fruits intake

About 46.8% (95%CI: 45.09, 48.53) students reported consuming fruits at least twice daily in the past 30 days (**Table 3.3.2**). Students in WP Putrajaya (35.1%; 95%CI: 30.92, 39.42), WP Kuala Lumpur (35.4%; 95%CI: 32.25, 38.69) and Pulau Pinang (36.2%; 95%CI: 31.11, 41.68) reported the lowest fruits intake in Malaysia. Students living in urban areas were less likely to consume fruits (43.2%; 95%CI: 40.69, 45.79) compared to those living in rural areas (51.4%; 95%CI: 49.29, 53.59). There was no difference in fruits intake by sex. The upper secondary students were less likely to consume fruits (42.3%; 95%CI: 39.84, 44.89) compared to lower secondary counterparts (49.7%; 95%CI: 47.98, 51.35). Students in Form 5 were less likely to consume fruits (41.9%; 95%CI: 38.42, 45.37) compared to those in Form 1 (51.9%; 95%CI: 49.59, 54.21) and Form 2 (50.4%; 95%CI: 47.79, 53.01). Chinese students reported the lowest frequency of fruits intake (33.0%; 95%CI: 30.65, 35.36) compared to other ethnicities.

Vegetables intake

About 36.0% (95%CI: 34.45, 37.52) students reported consuming vegetables at least three times daily in the past 30 days (**Table 3.3.3**). Students in WP Putrajaya reported the lowest vegetables intake (23.0%; 95%CI: 19.90, 26.49), followed by Pulau Pinang (26.5%; 95% CI: 23.11, 30.29) and Melaka (27.2%; 95%CI: 24.74, 29.90). There was no difference in vegetable intake by locality, sex, school level and forms. Malays reported the lowest frequency of vegetables intake (34.4%; 95%CI: 32.73, 36.07), followed by Chinese (35.0%; 95%CI: 32.25, 37.77) and Indians (38.6%; 95%CI: 33.88, 43.50).

Fruits and vegetables intake at least five time daily

A total of 23.5% (95% CI: 22.20, 24.96) students reported consuming fruits and vegetables at least five times daily in the past 30 days (**Table 3.3.4**). Among all states, students in WP Putrajaya reported consuming the least frequent for both fruits and vegetables in a day (12.6%; 95%CI: 10.39, 15.27). Three states with the lowest frequency of both fruits and vegetables intake were Melaka (14.8%; 95%CI: 12.94, 16.82), Pulau Pinang (15.5%; 95%CI: 13.44, 17.84) and WP Kuala Lumpur (15.7%; 95%CI: 13.87, 17.79). Those living in urban areas were less likely to consume both fruits and vegetables frequently (21.4%; 95%CI: 19.48, 23.54) compared to their rural counterparts (26.3%; 95%CI: 24.31, 28.35). There was no difference in both fruits and vegetables intake frequency by sex, school level and forms. Chinese students reported the lowest frequency

in consuming both fruits and vegetables (19.3%; 95%CI: 17.15, 21.72) compared to Malays (23.6%; 95%CI: 22.01, 25.26), Bumiputera Sabah (29.1%; 95%CI: 22.82, 36.23) and Bumiputera Sarawak (28.5%; 95%CI: 22.10, 35.89).

Carbonated soft drinks intake

A total of 36.9% (95%CI: 35.04, 38.79) students reported consuming carbonated soft drinks at least once daily in the past 30 days (**Table 3.3.5**). Sarawak contributed the highest prevalence (57.4%; 95%CI: 50.98, 63.60), followed by WP Labuan (52.4%; 95%CI: 45.57, 59.23) and Sabah (46.9%; 95%CI: 41.31, 52.57). Students in rural areas consumed carbonated soft drinks more frequent (41.0%; 95%CI: 38.39, 43.72) than those in urban areas (33.7%; 95%CI: 30.69, 36.87). Males consumed carbonated soft drinks more frequent (41.4%; 95%CI: 39.17, 43.76) than females (32.4%; 95%CI: 30.15, 34.76). Lower secondary students consumed more carbonated soft drinks (39.8%; 95%CI: 38.02, 41.67) compared to their upper secondary students (32.3%; 95%CI: 29.58, 35.18). Form 1 students (42.7%; 95%CI: 40.24, 45.13) and Form 2 students (40.3%; 95%CI: 37.56, 43.06) consumed carbonated soft drinks more than other students. Bumiputera Sarawak (63.6%; 95% CI: 54.71, 71.67) consumed more carbonated soft drinks, followed by Other ethnicities (48.2%; 95% CI: 42.37, 54.08), Bumiputera Sabah (47.4%; 95%CI: 41.25, 53.53) and Indians (43.6%; 95%CI: 37.39, 49.94).

Plain water intake

About 60.4% (95% CI: 59.07, 61.78) students drank plain water 5 times or more per day in the past 30 days (**Table 3.3.6**). Students in Kelantan (44.6%; 95%CI: 40.60, 48.74) were less likely to drink plain water compared to other states in Malaysia. Students living in rural areas were less likely to drink plain water (55.6%; 95%CI: 53.87, 57.40) compared to their urban counterparts (64.1%; 95%CI: 62.30, 65.93). Males less frequently drink plain water (57.7%; 95%CI: 56.03, 59.39) compared to females (63.1%; 95%CI: 61.41, 64.78) and lower secondary students were less likely to drink plain water (58.7%; 95%CI: 57.22, 60.23) compared to their upper secondary students (63.1%; 95%CI: 61.05, 65.11). Those in Form 1 (57.5%; 95% CI: 55.01, 59.90) and Form 2 (57.9%; 95% CI: 55.42, 60.35) were less likely to drink plain water as compared to the upper forms. Bumiputera Sarawak were less likely to drink plain water (53.1%; 95%CI: 47.41, 58.71) compared to Chinese (69.1%; 95%CI: 66.10, 71.96) and Indians (64.1%; 95%CI: 60.09, 67.88).

Milk and milk products intake

About 31.0% (95%CI: 30.02, 31.99) students consumed milk/milk products at least two servings per day in the past 30 days (**Table 3.3.7**). Kelantan (24.2%; 95% CI: 20.79, 27.96) and Pulau Pinang (24.4%; 95% CI: 22.07, 26.80) showed the lowest prevalence in milk/milk products consumption. Prevalence of milk/milk products consumption was similar by locality and sex (31.0%). Significantly, the upper secondary students were less likely to consume milk/milk products (27.9%, 95%CI: 26.51, 29.38) compared to the lower secondary students (33.0%; 95%CI: 31.82, 34.11). Findings showed a decreasing trend of consuming milk/milk products in upper forms. Chinese students reported the lowest frequency in consuming milk/milk products (21.9%; 95%CI: 19.99, 23.88) compared to other ethnics.

Fast food intake

About 11.1% (95%CI: 10.24, 12.01) students consumed food from fast food restaurants for at least three days in the past 7 days (**Table 3.3.8**). WP Labuan (16.9%; 95%CI: 13.58, 20.93), Sarawak (16.3%; 95%CI: 12.51, 20.87) and Perlis (15.3%; 95% CI: 13.02, 17.96) noted the highest frequency of consuming fast food. There was no difference in fast food consumption by locality, sex and school level. Form 2 and Form 4 students showed the highest frequency of consuming fast food. Indians were more likely to consume fast food (16.0%; 95%CI: 12.31, 20.49) compared to Malays (11.2%; 95% CI: 10.38, 12.02) and Chinese students (7.2%; 95% CI: 5.82, 8.77).

3.3.5 Discussion

This survey showed a decreasing trend of students being hungry due to not enough food at home, from 4.9% in 2012² to 3.9% in 2017. The same survey conducted in Thailand (2008) reported a lower prevalence of hunger which was 3.4%.¹ Prevalence of fruits consumption for at least twice daily in the past 30 days has increased from 44.0% in 2012² to 46.8% in 2017. Indonesia reported a lower prevalence of fruits consumption of 35.73% in 2015.³ There was an increase of vegetables consumption from 29.8% in 2012 to 36.0% in 2017.² Indonesia reported a lower prevalence of vegetables consumption; 22.1% in 2015.³ The consumption of carbonated soft drinks at least once daily has increased from 29.4% in 2012² to 36.9% in 2017. Other countries reported higher prevalence's of carbonated soft drinks at least once daily; 42.2% (Philippine; 2011)⁴, 46.4% (Brunei; 2014)⁵, 55.4% (Thailand; 2011)¹ and 90.9% (Indonesia; 2011)³. In regard to plain water

intake, there was an increased frequency of plain water intake from 54.8% in 2012² to 60.4% in 2017. In 2017, about 31.0% students reported drinking milk/milk products of at least two servings daily. Fast food intake has increased from 6.0% in 2012² to 11.1% in 2017, while Indonesia³ similarly reported 12.5% of their adolescents consumed fast food at least 3 days in the past 7 days.

3.3.6 Conclusion

There are 3.9% of students who reported being hungry due to lack of food at homes. Prevalence of students reported consuming fruits at least twice daily are 46.8% and 36.0% students consumed vegetables at least three times daily. However, only 23.5% of students consumed fruits and vegetables five times daily. About 60.4% of students reported drinking plain water 5 times or more daily and 31.0% of adolescents consumed milk/milk products at least two servings daily.

3.3.7 Recommendations

In view of the findings highlighted above, Malaysian students need more attention towards a healthy eating habit. Parents play an important role to ensure that healthy and nutritious food such as fruits, yogurt, and high fibre snacks are available on shelves and in fridges at home. Appropriate nutrition education program with creative and innovative approaches should be carried out in promoting healthy diet, specifically eating more fruits and vegetables, drinking more plain water, consuming more milk/milk products and reducing fast food intake and carbonated soft drinks intake. Further research should be conducted to identify underlying causes of food insecurity and unhealthy eating habits among students in Malaysia.

3.3.8 References

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Table 3.3.1: Prevalence of students who had gone hungry most of the time or always because there was not enough food among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Most of the time or always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper
MALAYSIA	1,062	83,003	3.9	3.53	4.24
State					
Johor	62	9,898	3.6	2.64	4.87
Kedah	56	5,079	3.3	2.02	5.30
Kelantan	42	3,216	2.6	1.72	4.04
Melaka	53	1,883	2.8	1.89	4.13
N. Sembilan	83	4,375	5.0	3.25	7.48
Pahang	62	3,848	3.7	3.04	4.53
Pulau Pinang	75	5,078	4.5	3.35	6.01
Perak	84	8,623	4.8	3.85	5.85
Perlis	77	1,222	4.5	3.40	6.02
Selangor	76	17,674	4.5	3.62	5.63
Terengganu	38	2,440	2.5	1.63	3.75
Sabah	68	7,952	4.0	2.77	5.74
Sarawak	44	4,749	2.4	1.77	3.26
WP Kuala Lumpur	95	6,361	5.7	4.32	7.38
WP Labuan	74	239	4.3	2.95	6.26
WP Putrajaya	73	367	4.4	3.29	5.80
Locality of school					
Urban	653	49,906	4.1	3.65	4.66
Rural	409	33,098	3.5	3.07	4.08
Sex					
Male	490	38,336	3.6	3.17	4.10
Female	572	44,667	4.1	3.68	4.63
School level					
Lower secondary	634	49,097	3.8	3.27	4.31
Upper secondary	428	33,906	4.1	3.49	4.69
Form					
Form 1	256	21,469	4.8	3.82	5.94
Form 2	175	12,453	2.9	2.27	3.74
Form 3	203	15,175	3.5	2.92	4.24
Form 4	230	16,861	4.1	3.35	4.94
Form 5	198	17,045	4.0	3.18	5.10
Ethnicity					
Malay	668	46,636	3.4	3.06	3.87
Chinese	161	14,435	4.0	3.21	5.05
Indian	101	11,325	7.6	5.80	9.87
Bumiputera Sabah	73	5,701	3.8	2.66	5.45
Bumiputera Sarawak	31	2,589	2.7	1.83	3.88
Others	28	2,318	6.1	3.71	9.87

Table 3.3.2: Prevalence of fruits intake of at least twice daily in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	12,825	1,004,350	46.8	45.09	48.53
State					
Johor	659	105,328	38.2	34.46	42.09
Kedah	932	84,373	54.6	49.33	59.74
Kelantan	831	61,783	50.8	46.66	55.01
Melaka	705	25,791	38.4	34.53	42.39
N. Sembilan	662	33,995	38.4	34.40	42.65
Pahang	904	52,225	50.5	46.00	54.94
Pulau Pinang	642	40,930	36.2	31.11	41.68
Perak	947	99,035	54.5	47.61	61.31
Perlis	966	15,580	57.8	54.64	60.80
Selangor	810	188,680	48.2	41.56	54.86
Terengganu	946	55,458	56.2	53.20	59.23
Sabah	829	96,704	48.6	43.11	54.18
Sarawak	888	98,946	50.0	45.15	54.85
WP Kuala Lumpur	622	39,785	35.4	32.25	38.69
WP Labuan	882	2,802	50.7	44.47	56.94
WP Putrajaya	600	2,935	35.1	30.92	39.42
Locality of school					
Urban	6,868	523,224	43.2	40.69	45.79
Rural	5,957	481,126	51.4	49.29	53.59
Sex					
Male	5,878	479,352	45.0	43.05	47.03
Female	6,947	524,998	48.6	46.51	50.62
School level					
Lower secondary	8,326	649,803	49.7	47.98	51.35
Upper secondary	4,499	354,547	42.3	39.84	44.89
Form					
Form 1	2,900	233,959	51.9	49.59	54.21
Form 2	2,711	215,150	50.4	47.79	53.01
Form 3	2,715	200,693	46.6	44.23	48.97
Form 4	2,388	177,604	42.8	40.32	45.40
Form 5	2,111	176,943	41.9	38.42	45.37
Ethnicity					
Malay	9,176	674,652	49.8	47.72	51.92
Chinese	1,353	118,129	33.0	30.65	35.36
Indian	615	66,280	44.4	39.91	49.05
Bumiputera Sabah	937	76,323	51.1	45.11	57.13
Bumiputera Sarawak	495	51,728	53.4	47.74	59.03
Others	249	17,238	45.4	40.12	50.73

Table 3.3.3: Prevalence of vegetables intake of at least three times daily in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	9,543	771,007	36.0	34.45	37.52
State					
Johor	502	80,627	29.2	27.23	31.34
Kedah	674	60,959	39.6	36.32	42.95
Kelantan	486	36,589	30.1	26.52	33.92
Melaka	512	18,258	27.2	24.74	29.90
N. Sembilan	480	24,730	28.0	25.10	31.02
Pahang	608	35,592	34.5	31.36	37.73
Pulau Pinang	454	29,989	26.5	23.11	30.29
Perak	739	77,610	42.7	39.09	46.47
Perlis	643	10,477	38.8	35.93	41.75
Selangor	642	147,815	37.8	31.80	44.22
Terengganu	698	40,926	41.5	38.91	44.19
Sabah	740	86,504	43.6	36.73	50.75
Sarawak	763	84,423	42.7	37.17	48.34
WP Kuala Lumpur	489	32,240	28.7	25.94	31.61
WP Labuan	725	2,340	42.3	39.47	45.26
WP Putrajaya	388	1,928	23.0	19.90	26.49
Locality of school					
Urban	5,233	411,942	34.1	31.83	36.35
Rural	4,310	359,065	38.4	36.24	40.70
Sex					
Male	4,582	381,880	35.9	34.21	37.65
Female	4,961	389,127	36.0	34.10	38.00
School level					
Lower secondary	5,985	481,735	36.8	35.26	38.45
Upper secondary	3,558	289,272	34.6	32.54	36.73
Form					
Form 1	2,079	173,664	38.6	36.28	40.87
Form 2	1,921	159,428	37.4	35.14	39.67
Form 3	1,985	148,643	34.5	32.59	36.49
Form 4	1,847	142,196	34.3	32.07	36.67
Form 5	1,711	147,076	34.9	31.85	38.02
Ethnicity					
Malay	6,230	464,971	34.4	32.73	36.07
Chinese	1,381	125,249	35.0	32.25	37.77
Indian	512	57,507	38.6	33.88	43.50
Bumiputera Sabah	787	65,711	44.1	37.16	51.37
Bumiputera Sarawak	398	41,637	43.0	36.01	50.29
Others	235	15,932	42.0	35.76	48.51

Table 3.3.4: Prevalence of fruits and vegetables intake at least five times daily in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	6,267	504,970	23.5	22.20	24.96
State					
Johor	276	43,681	15.8	14.21	17.63
Kedah	495	44,395	28.8	24.74	33.16
Kelantan	341	25,225	20.8	17.95	23.88
Melaka	276	9,912	14.8	12.94	16.82
N. Sembilan	267	13,812	15.6	13.19	18.40
Pahang	425	24,879	24.1	21.98	26.27
Pulau Pinang	268	17,526	15.5	13.44	17.84
Perak	525	55,422	30.5	26.16	35.30
Perlis	482	7,834	29.0	26.73	31.46
Selangor	442	102,188	26.1	21.08	31.90
Terengganu	516	29,963	30.4	27.75	33.22
Sabah	469	54,144	27.3	21.61	33.75
Sarawak	505	55,671	28.1	23.14	33.73
WP Kuala Lumpur	270	17,677	15.7	13.87	17.79
WP Labuan	493	1,583	28.7	25.26	32.39
WP Putrajaya	217	1,057	12.6	10.39	15.27
Locality of school					
Urban	3,279	259,337	21.4	19.48	23.54
Rural	2,988	245,633	26.3	24.31	28.35
Sex					
Male	2,923	243,918	22.9	21.45	24.46
Female	3,344	261,052	24.2	22.47	25.96
School level					
Lower secondary	4,026	325,480	24.9	23.49	26.34
Upper secondary	2,241	179,490	21.5	19.58	23.47
Form					
Form 1	1,413	120,453	26.7	24.72	28.84
Form 2	1,289	107,269	25.1	23.10	27.29
Form 3	1,324	97,758	22.7	21.01	24.51
Form 4	1,176	90,047	21.7	19.63	23.99
Form 5	1,065	89,443	21.2	18.81	23.78
Ethnicity					
Malay	4,256	319,285	23.6	22.01	25.26
Chinese	768	69,283	19.3	17.15	21.72
Indian	316	36,394	24.4	20.75	28.50
Bumiputera Sabah	531	43,314	29.1	22.82	36.23
Bumiputera Sarawak	267	27,589	28.5	22.10	35.89
Others	129	9,106	24.0	19.68	28.86

Table 3.3.5: Prevalence of carbonated soft drinks consumption at least once a day in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	9,827	790,718	36.9	35.04	38.79
State					
Johor	388	64,528	23.4	18.47	29.24
Kedah	622	55,814	36.2	31.59	41.01
Kelantan	556	42,987	35.4	28.91	42.46
Melaka	513	18,263	27.2	22.69	32.19
N. Sembilan	485	26,575	30.1	24.79	35.98
Pahang	616	37,044	35.9	30.48	41.65
Pulau Pinang	384	25,689	22.8	16.45	30.74
Perak	687	70,258	38.7	34.12	43.51
Perlis	688	11,279	41.8	37.43	46.22
Selangor	658	152,449	39.1	32.37	46.19
Terengganu	622	38,272	38.9	33.57	44.40
Sabah	785	93,310	46.9	41.31	52.57
Sarawak	1,021	113,609	57.4	50.98	63.60
WP Kuala Lumpur	523	35,863	31.9	26.97	37.30
WP Labuan	897	2,902	52.4	45.57	59.23
WP Putrajaya	382	1,875	22.4	17.50	28.19
Locality of school					
Urban	5,275	407,558	33.7	30.69	36.87
Rural	4,552	383,160	41.0	38.39	43.72
Sex					
Male	5,299	440,876	41.4	39.17	43.76
Female	4,528	349,841	32.4	30.15	34.76
School level					
Lower secondary	6,559	520,497	39.8	38.02	41.67
Upper secondary	3,268	270,221	32.3	29.58	35.18
Form					
Form 1	2,318	191,869	42.7	40.24	45.13
Form 2	2,120	171,886	40.3	37.56	43.06
Form 3	2,121	156,742	36.4	33.85	39.06
Form 4	1,830	142,754	34.5	31.67	37.42
Form 5	1,438	127,468	30.2	26.49	34.16
Ethnicity					
Malay	6,504	476,929	35.3	33.31	37.28
Chinese	1,059	98,272	27.5	23.90	31.36
Indian	556	64,887	43.6	37.39	49.94
Bumiputera Sabah	870	70,720	47.4	41.25	53.53
Bumiputera Sarawak	576	61,594	63.6	54.71	71.67
Others	262	18,316	48.2	42.37	54.08

Table 3.3.6 : Prevalence of plain water intake 5 times or more per day in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	16,638	1,292,624	60.4	59.07	61.78
State					
Johor	1,027	162,589	59.3	54.55	63.86
Kedah	1,087	99,171	64.5	58.42	70.17
Kelantan	737	53,936	44.6	40.60	48.74
Melaka	1,163	41,643	62.0	57.91	66.02
N. Sembilan	1,089	54,826	62.1	58.01	66.07
Pahang	1,077	61,537	59.6	53.84	65.11
Pulau Pinang	1,057	68,419	60.7	54.21	66.79
Perak	1,053	109,133	60.4	54.99	65.50
Perlis	1,065	17,109	63.5	58.32	68.39
Selangor	1,089	257,496	65.9	62.05	69.46
Terengganu	963	56,026	57.0	52.75	61.12
Sabah	1,038	121,596	61.3	57.74	64.70
Sarawak	962	108,279	54.9	50.76	59.01
WP Kuala Lumpur	1,101	72,122	64.4	61.18	67.42
WP Labuan	1,140	3,703	67.1	60.82	72.89
WP Putrajaya	990	5,038	60.2	55.31	64.80
Locality of school					
Urban	10,094	774,039	64.1	62.30	65.93
Rural	6,544	518,585	55.6	53.87	57.40
Sex					
Male	7,545	612,264	57.7	56.03	59.39
Female	9,093	680,360	63.1	61.41	64.78
School level					
Lower secondary	10,001	765,534	58.7	57.22	60.23
Upper secondary	6,637	527,090	63.1	61.05	65.11
Form					
Form 1	3,273	257,714	57.5	55.01	59.90
Form 2	3,181	246,114	57.9	55.42	60.35
Form 3	3,547	261,707	60.9	58.51	63.16
Form 4	3,406	251,423	60.7	58.03	63.38
Form 5	3,231	275,667	65.4	62.86	67.90
Ethnicity					
Malay	10,938	786,777	58.3	56.85	59.66
Chinese	2,824	246,230	69.1	66.10	71.96
Indian	904	95,214	64.1	60.09	67.88
Bumiputera Sabah	1,136	89,933	60.4	56.38	64.32
Bumiputera Sarawak	497	51,328	53.1	47.41	58.71
Others	339	23,142	60.9	52.16	69.02

Table 3.3.7 : Prevalence of milk or milk products intake at least two servings per day in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	8,554	664,558	31.0	30.02	31.99
State					
Johor	466	74,744	27.2	24.04	30.50
Kedah	614	55,515	35.9	31.60	40.53
Kelantan	383	29,442	24.2	20.79	27.96
Melaka	488	17,493	26.0	24.02	28.15
N. Sembilan	451	23,368	26.4	21.79	31.65
Pahang	605	35,406	34.2	31.19	37.28
Pulau Pinang	441	27,492	24.4	22.07	26.80
Perak	555	57,784	31.9	28.32	35.67
Perlis	620	9,987	37.0	34.19	39.92
Selangor	594	137,859	35.2	32.48	38.12
Terengganu	586	34,715	35.2	32.48	37.98
Sabah	474	56,436	28.4	26.03	30.90
Sarawak	580	65,810	33.3	29.44	37.39
WP Kuala Lumpur	520	33,730	30.0	26.66	33.66
WP Labuan	609	1,948	35.2	32.45	38.06
WP Putrajaya	568	2,829	33.8	30.96	36.72
Locality of school					
Urban	4,944	375,064	31.0	29.54	32.54
Rural	3,610	289,494	31.0	29.60	32.35
Sex					
Male	4,047	326,552	30.7	29.33	32.11
Female	4,507	338,006	31.3	30.01	32.58
School level					
Lower secondary	5,642	430,956	33.0	31.82	34.11
Upper secondary	2,912	233,603	27.9	26.51	29.38
Form					
Form 1	2,061	160,878	35.7	34.16	37.31
Form 2	1,823	144,462	33.8	31.93	35.82
Form 3	1,758	125,616	29.2	27.29	31.16
Form 4	1,560	118,276	28.5	26.77	30.39
Form 5	1,352	115,327	27.3	25.36	29.37
Ethnicity					
Malay	6,119	443,350	32.8	31.68	33.85
Chinese	897	78,206	21.9	19.99	23.88
Indian	497	54,767	36.8	33.65	40.05
Bumiputera Sabah	567	43,520	29.2	26.86	31.58
Bumiputera Sarawak	312	33,458	34.6	30.33	39.04
Others	162	11,258	29.6	24.02	35.92

Table 3.3.8: Prevalence of consuming food from fast food restaurants of at least three days in the past 7 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	3,052	237,797	11.1	10.24	12.01
State					
Johor	119	19,631	7.1	5.33	9.48
Kedah	182	16,381	10.6	8.46	13.20
Kelantan	107	8,171	6.7	5.26	8.56
Melaka	114	4,095	6.1	4.85	7.64
N. Sembilan	121	5,983	6.8	5.44	8.40
Pahang	194	11,707	11.3	8.51	14.91
Pulau Pinang	148	9,315	8.2	6.21	10.87
Perak	204	20,784	11.4	9.28	14.04
Perlis	251	4,116	15.3	13.02	17.96
Selangor	228	52,116	13.3	10.30	17.10
Terengganu	210	12,679	12.9	10.45	15.78
Sabah	204	24,925	12.5	10.37	15.11
Sarawak	283	32,128	16.3	12.51	20.87
WP Kuala Lumpur	217	13,879	12.4	9.78	15.49
WP Labuan	287	938	16.9	13.58	20.93
WP Putrajaya	183	949	11.3	9.29	13.74
Locality of school					
Urban	1,760	128,580	10.6	9.30	12.13
Rural	1,292	109,217	11.7	10.60	12.87
Sex					
Male	1,528	125,355	11.8	10.56	13.13
Female	1,524	112,442	10.4	9.40	11.51
School level					
Lower secondary	1,928	146,558	11.2	10.33	12.17
Upper secondary	1,124	91,239	10.9	9.62	12.34
Form					
Form 1	644	51,209	11.4	9.90	13.05
Form 2	641	51,199	12.0	10.72	13.43
Form 3	643	44,150	10.3	8.91	11.77
Form 4	621	49,343	11.9	10.67	13.30
Form 5	503	41,896	9.9	8.14	12.01
Ethnicity					
Malay	2,156	151,177	11.2	10.38	12.02
Chinese	267	25,618	7.2	5.82	8.77
Indian	200	23,777	16.0	12.31	20.49
Bumiputera Sabah	223	17,863	12.0	9.53	14.91
Bumiputera Sarawak	142	15,178	15.7	11.97	20.26
Others	64	4,184	11.0	7.80	15.43

3.4 Drug Use

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3.4.1 Introduction

According to the World Drug Report 2017, an estimated quarter of a billion people, or around five per cent of the global adult population, used drugs at least once in 2015. Even more worrisome is the fact that about 29.5 million of those drug users, or 0.6 percent of the global adult population, suffer from drug use disorders.¹ This means that their drug use is harmful to the point that they may experience drug dependence and require treatment.

Marijuana or cannabis remains the world's most widely used drug, with an annual prevalence of 3.8 per cent of the adult population, or an estimated 183 million people (range 128 million to 238 million), having used marijuana in the past year.² Amphetamines remain the second most commonly used drug worldwide, with an estimated 35 million past-year users (range 13 million to 58 million), and the use of amphetamines, particularly methamphetamine, is perceived to be increasing in many regions, including most parts of Asia.

This drug menace contributes to various social and medical ill health implications particularly among adolescents. The broad range of problems reported by young people include deteriorating family relations, truancy, poorer performance in school, mental disorders such as depression and anxiety, drug induced psychosis particularly with the New Psychoactive Substances (NPS), unwanted and unprotected sexual activity, accidents, violence and increased risk of blood-borne viral diseases such as HIV and Hepatitis C for those injecting drug users (IDU). Some youth engaging in heavy substance use will continue to do so into adulthood and will experience various longer-term health and social problems.

3.4.2 Objectives

- i. To determine the prevalence of ever and current drug use among Form 1 to Form 5 students
- ii. To describe the socio-demographic characteristics of ever and current drug use among Form 1 to Form 5 students
- iii. To determine the prevalence of ever and current marijuana use among Form 1 to Form 5 students
- iv. To describe the socio-demographic characteristics of ever and current marijuana use among Form 1 to Form 5 students
- v. To determine the prevalence and socio-demographic characteristics of ever amphetamines or methamphetamines use among Form 1 to Form 5 students
- vi. To identify the age of initiation and the sources of obtaining drugs among Form 1 to Form 5 students

3.4.3 Variable Definitions

- **Drug use:** taking of heroin, morphine, glue, amphetamine or methamphetamines (ecstasy, syabu, ice), marijuana/*ganja* (except prescribed medicine).
- **Ever drug use:** students who had history of drug use in their lifetime
- **Current drug use:** students who used drugs in the past 30 days
- **Ever Marijuana use:** students who had history of marijuana use in their lifetime
- **Current Marijuana use:** students who used marijuana in the past 30 days
- **Ever Amphetamine or Methamphetamines use:** students who had history of amphetamine or methamphetamines use in their lifetime.

3.4.4 Findings

Overall, 4.3% (95% CI: 3.64, 5.08) of students reported that they had ever used drug during their lifetime and it was significantly higher among males [6.6% (95%CI: 5.60, 7.80)] as compared to females [2.0% (95%CI: 1.57, 2.63)] (**Table 3.4.1**).

The prevalence of current drug users was 3.4% (95%CI: 2.83, 4.12), males [5.3% (95%CI: 4.47, 6.37)] were significantly higher than females [1.5% (95%CI: 1.10, 2.12)] (**Table 3.4.2**). Among current users, about 25.9% (95% CI: 21.71, 30.59) had bought drugs from someone else (**Table 3.4.6**).

The prevalence of ever used marijuana in lifetime was 2.8% (95% CI: 2.27, 3.38) and it was significantly higher among males [4.4% (95%CI: 3.67, 5.33)] as compared to females [1.1% (95%CI: 0.81, 1.61)] (**Table 3.4.3**). About 2.5% (95%CI: 2.08, 3.06) of students were current marijuana users. Males (3.9%) (95% CI: 3.20, 4.63) significantly higher than females 1.2% (95% CI: 0.88, 1.69) (**Table 3.4.4**).

Overall, 2.4% (95% CI: 1.98, 3.02) of students reported had ever used amphetamines or methamphetamines during their lifetime and it was significantly higher in rural areas 3.3% (95% CI: 2.49, 4.34) as compared to urban areas 1.8% (95% CI: 1.30, 2.47). Males was also significantly higher [3.6% (95% CI: 2.93, 4.45)] than females [1.3% (95% CI: 0.98, 1.72)] (**Table 3.4.5**).

Among ever drug users, 17.1% (95% CI: 13.7, 21.0) of them had initiated at the age of 7 years or younger with lower percentage in urban areas [15.6% (95% CI: 10.62, 22.32)] compared to rural areas [18.4% (95% CI: 14.46, 23.18)] (**Table 3.4.7**). A total of 72.7% (95% CI: 65.8, 78.6) ever drug users had initiated at the age before age of 14 years old.

3.4.5 Discussion

In Malaysia, the prevalence of Form 1 to Form 5 students who had ever used drugs in their lifetime was 4.3%. This was 2.5 times higher compared to Malaysian GSHS 2012(1.7%).³

The prevalence of students in Malaysia who had ever used marijuana (2.8%) was higher compared to the GSHS 2012 which was 0.9%.³ This prevalence was also higher compared to students in Indonesia⁴ which was 1.4% and Brunei (0.4%)⁵ but lower than Thailand (7%)⁶.

Prevalence of students who had ever used amphetamines or methamphetamines was 2.4%. This prevalence was higher compared to the GSHS 2012³, which was 1.0%.

Among ever drug users, majority [72.7% (95% CI: 65.8, 78.6)] had initiated at the age before age of 14 years old. This prevalence was almost similar to the GSHS 2012³ which was 73.7%. Other Southeast Asian countries also showed similar findings, whereby majority of students had their first drug use before the age of 14 (Indonesia: 84.6%⁴, Thailand: 73.4%⁶).

3.4.6 Conclusion

There was an increase of 2.5 times of ever drug use and 2.3 times of current drug use among Form 1 to Form 5 students over the five-year period (2012 - 2017). About threefold increase of ever marijuana use and current marijuana use were reported among Malaysian students between the five-year period of comparison. As for ever amphetamines or methamphetamines use, there was also an increase of 2.4 times.

3.4.7 Recommendations

Prevention and control measures of drug use among adolescents in Malaysia needs to be strengthened and started early from the primary school level. New strategies and approaches must be developed to address this issue. Health education and the dangers of drug abuse should be emphasized. Early detection and intervention also needs to be given priority.

3.4.8 References

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Table 3.4.1: Prevalence of ever used drugs in a lifetime among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	1020	92385	4.3	3.64	5.08
State					
Johor	40	7124	2.6	1.68	3.95
Kedah	61	5507	3.6	2.40	5.25
Kelantan	57	4735	3.9	2.13	6.99
Melaka	26	-	1.2	0.65	2.29
N. Sembilan	48	3129	3.5	1.88	6.56
Pahang	101	6930	6.7	3.61	12.06
Pulau Pinang	30	2033	1.8	0.77	4.18
Perak	111	11311	6.2	4.26	9.02
Perlis	88	1561	5.8	3.76	8.79
Selangor	105	24820	6.3	3.89	10.19
Terengganu	63	4085	4.1	2.65	6.42
Sabah	66	7560	3.8	2.48	5.78
Sarawak	91	10084	5.1	3.44	7.50
WP Kuala Lumpur	29	-	2.1	1.22	3.42
WP Labuan	77	247	4.5	2.65	7.46
WP Putrajaya	27	-	1.5	0.92	2.61
Locality of school					
Urban	477	43876	3.6	2.80	4.67
Rural	543	48509	5.2	4.12	6.51
Sex					
Male	776	70407	6.6	5.60	7.80
Female	244	21978	2.0	1.57	2.63
Form					
Form 1	342	30904	6.9	4.99	9.35
Form 2	223	17296	4.1	3.12	5.25
Form 3	167	13446	3.1	2.18	4.45
Form 4	166	15989	3.9	2.69	5.52
Form 5	122	14750	3.5	2.48	4.90
Ethnicity					
Malay	566	46263	3.4	2.87	4.06
Chinese	169	16492	4.6	3.38	6.23
Indian	124	16110	10.8	6.81	16.74
Bumiputera Sabah	76	5985	4.0	2.50	6.37
Bumiputera Sarawak	56	5828	6.0	4.09	8.80
Others	29	-	4.5	2.87	6.96

Table 3.4.2: Prevalence of current drug use in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	800	73,390	3.4	2.83	4.12
State					
Johor	26	-	1.6	0.84	3.17
Kedah	45	4,096	2.6	1.52	4.58
Kelantan	47	3,964	3.3	1.60	6.51
Melaka	15	-	0.7	0.27	1.77
N. Sembilan	32	2,269	2.6	1.21	5.37
Pahang	82	5,830	5.6	2.83	10.86
Pulau Pinang	21	-	1.3	0.44	3.65
Perak	99	10,016	5.5	3.63	8.29
Perlis	76	1,351	5.0	3.06	8.08
Selangor	87	20,572	5.3	3.15	8.66
Terengganu	55	3,540	3.6	2.15	5.94
Sabah	51	5,840	2.9	1.92	4.46
Sarawak	72	7,957	4.0	2.54	6.32
WP Kuala Lumpur	14	1,233	1.1	0.57	2.10
WP Labuan	57	181	3.3	1.93	5.54
WP Putrajaya	21	-	1.2	0.72	1.99
Locality of school					
Urban	349	33,598	2.8	2.09	3.69
Rural	451	39,791	4.3	3.27	5.53
Sex					
Male	627	56,876	5.3	4.47	6.37
Female	173	16,514	1.5	1.10	2.12
Form					
Form 1	294	26,646	5.9	4.20	8.26
Form 2	183	13,904	3.3	2.38	4.45
Form 3	132	10,447	2.4	1.58	3.69
Form 4	119	11,741	2.8	1.84	4.35
Form 5	72	10,653	2.5	1.69	3.74
Ethnicity					
Malay	432	35,319	2.6	2.14	3.18
Chinese	128	12,456	3.5	2.45	4.92
Indian	112	14,907	10.0	6.26	15.61
Bumiputera Sabah	62	4,605	3.1	1.97	4.80
Bumiputera Sarawak	44	4,656	4.8	2.87	7.97
Others	22	-	3.8	2.31	6.21

Table 3.4.3: Prevalence of ever used marijuana in a life time among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	643	59,445	2.8	2.27	3.38
State					
Johor	20	-	1.3	0.75	2.38
Kedah	32	2,975	1.9	1.06	3.45
Kelantan	39	3,176	2.6	1.36	4.95
Melaka	19	-	0.8	0.40	1.76
N. Sembilan	30	2,100	2.4	1.10	5.06
Pahang	64	4,557	4.4	2.16	8.75
Pulau Pinang	15	-	0.8	0.34	1.96
Perak	79	8,074	4.5	2.90	6.79
Perlis	61	1,059	3.9	2.43	6.27
Selangor	72	17,555	4.5	2.62	7.60
Terengganu	38	2,613	2.7	1.60	4.37
Sabah	36	4,088	2.1	1.36	3.08
Sarawak	59	6,324	3.2	1.82	5.58
WP Kuala Lumpur	17	-	1.3	0.61	2.88
WP Labuan	45	149	2.7	1.61	4.49
WP Putrajaya	16	-	0.9	0.40	1.96
Locality of school					
Urban	286	27,742	2.3	1.69	3.11
Rural	356	31,702	3.4	2.56	4.48
Sex					
Male	510	47,076	4.4	3.67	5.33
Female	132	12,369	1.1	0.81	1.61
Form					
Form 1	221	19,909	4.4	3.06	6.33
Form 2	132	9,999	2.3	1.70	3.22
Form 3	96	7,554	1.8	1.20	2.55
Form 4	106	10,518	2.5	1.65	3.90
Form 5	87	11,465	2.7	1.79	4.09
Ethnicity					
Malay	372	31,506	2.3	1.90	2.85
Chinese	92	9,442	2.6	1.73	3.99
Indian	82	10,773	7.2	4.30	11.90
Bumiputera Sabah	47	3,331	2.2	1.38	3.58
Bumiputera Sarawak	34	3,398	3.5	1.72	7.05
Others	15	-	2.6	1.41	4.81

Table 3.4.4: Prevalence of current marijuana use in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	574	54,163	2.5	2.08	3.06
State					
Johor	18	-	1.2	0.55	2.47
Kedah	34	3,137	2.0	1.12	3.64
Kelantan	35	2,986	2.5	1.12	5.31
Melaka	9	-	0.4	0.17	1.01
N. Sembilan	19	-	1.6	0.47	5.02
Pahang	61	4,412	4.3	2.02	8.78
Pulau Pinang	13	-	0.8	0.25	2.39
Perak	78	7,933	4.4	2.86	6.63
Perlis	54	940	3.5	2.12	5.69
Selangor	67	15,910	4.1	2.54	6.47
Terengganu	36	2,318	2.4	1.28	4.29
Sabah	32	3,652	1.8	1.16	2.89
Sarawak	57	6,189	3.1	1.84	5.28
WP Kuala Lumpur	9	-	0.7	0.32	1.49
WP Labuan	39	122	2.2	1.24	3.88
WP Putrajaya	13	59	0.7	0.30	1.63
Locality of school					
Urban	240	24,761	2.0	1.53	2.74
Rural	334	29,401	3.1	2.38	4.15
Sex					
Male	442	40,980	3.9	3.20	4.63
Female	132	13,183	1.2	0.88	1.69
Form					
Form 1	216	19,797	4.4	3.11	6.17
Form 2	127	9,702	2.3	1.63	3.17
Form 3	97	8,111	1.9	1.24	2.84
Form 4	87	8,867	2.1	1.38	3.32
Form 5	47	7,686	1.8	1.18	2.80
Ethnicity					
Malay	309	26,609	2.0	1.59	2.42
Chinese	93	9,271	2.6	1.81	3.68
Indian	78	10,464	7.0	4.31	11.25
Bumiputera Sabah	45	3,257	2.2	1.34	3.53
Bumiputera Sarawak	33	3,404	3.5	1.80	6.75
Others	16	-	3.0	1.78	5.16

Table 3.4.5: Prevalence of ever used amphetamines/metaphetamines in a life time among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	599	52,410	2.4	1.98	3.02
State					
Johor	14	-	0.9	0.41	1.99
Kedah	36	3,298	2.1	1.26	3.58
Kelantan	37	3,044	2.5	1.21	5.11
Melaka	14	-	0.7	0.31	1.51
N. Sembilan	29	-	2.3	0.90	5.79
Pahang	58	4,053	3.9	2.00	7.54
Pulau Pinang	17	-	1.0	0.49	2.03
Perak	76	7,796	4.3	3.01	6.11
Perlis	57	985	3.6	2.26	5.83
Selangor	63	13,359	3.4	1.78	6.48
Terengganu	38	2,471	2.5	1.43	4.38
Sabah	45	5,109	2.6	1.53	4.28
Sarawak	49	5,271	2.7	1.57	4.49
WP Kuala Lumpur	9	-	0.6	0.22	1.66
WP Labuan	42	135	2.4	1.50	3.96
WP Putrajaya	15	-	0.8	0.35	1.74
Locality of school					
Urban	254	21,657	1.8	1.30	2.47
Rural	345	30,753	3.3	2.49	4.34
Sex					
Male	441	38,411	3.6	2.93	4.45
Female	158	13,999	1.3	0.98	1.72
Form					
Form 1	238	20,985	4.7	3.26	6.63
Form 2	134	10,545	2.5	1.80	3.39
Form 3	93	7,501	1.7	1.12	2.69
Form 4	90	9,211	2.2	1.28	3.84
Form 5	44	4,169	1.0	0.61	1.60
18 years and older					
Ethnicity					
Malay	307	22,773	1.7	1.37	2.07
Chinese	113	11,387	3.2	2.32	4.35
Indian	80	10,364	7.0	3.90	12.12
Bumiputera Sabah	49	3,837	2.6	1.40	4.66
Bumiputera Sarawak	32	2,852	2.9	1.67	5.16
Others	18	-	3.1	1.82	5.39

Table 3.4.6: Source of getting drugs in the past 30 days among current drug users, Form 1 to Form 5 students in Malaysia, 2017

	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
I bought them from someone	202	18,724	25.9	21.71	30.59
I gave someone else money to buy it for me	118	9,636	13.3	10.74	16.44
I stole it or got it without permission	114	10,109	14.0	10.69	18.09
I got it from my friend	82	8,276	11.4	8.09	15.96

Table 3.4.7: Age of initiation of first use of drugs amongst ever drug users among Form 1 to Form 5 students in in Malaysia, 2017

	Total						Urban					
	Unweighted		Estimated Population	Prevalence (%)	95% CI		Unweighted		Estimated Population	Prevalence (%)	95% CI	
	Count	Population			Lower	Upper	Count	Population			Lower	Upper
7 years old or younger	175	15,707	17.1	13.7	21.0	73	6,842	15.6	10.62	22.32		
8 or 9 years old	82	7,110	7.7	5.7	10.4	23	-	4.3	2.31	7.84		
10 or 11 years old	89	7,948	8.6	6.8	11.0	32	2,450	5.6	3.91	7.92		
12 or 13 years old	82	7,167	7.8	5.8	10.4	39	3,478	7.9	4.69	12.10		
14 or 15 years old	70	5,466	5.9	4.4	8.0	41	3,118	7.1	5.27	9.51		
16 years old or older	85	8,794	9.6	6.5	13.8	42	5,458	12.4	6.95	21.28		

Table 3.4.7: Age of initiation of first use of drugs amongst ever drug users among Form 1 to Form 5 students in in Malaysia, 2017 (cont.)

	Rural					
	Unweighted		Estimated Population	Prevalence (%)	95% CI	
	Count	Population			Lower	Upper
7 years old or younger	102	8,865	18.4	14.46	23.18	
8 or 9 years old	59	5,225	10.9	8.10	14.41	
10 or 11 years old	57	5,498	11.4	9.78	14.75	
12 or 13 years old	43	3,688	7.7	5.66	10.31	
14 or 15 years old	29	-	4.9	2.86	8.22	
16 years old or older	43	3,336	6.9	5.23	9.14	

3.5 Hygiene (Including Oral Health)

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3.5.1 Introduction

Dental caries has substantial impact to children, families, and health systems, including dental and medical consequences, loss of working time on the part of caregivers and increased expenditures. It is a multi-factorial infectious disease that leads to pain and infection, consequently affecting the quality of life, general health, productivity and educational performance of the child.¹ Daily tooth brushing with a fluoridated toothpaste and regular dental check-up at least once a year can help prevent dental caries and periodontal disease.

Clean hands can stop spread of parasites from one person to another. These parasites consume nutrients from children they infect, causing abdominal pain and can impair learning by slowing cognitive development. Hand washing is one of the most effective ways to prevent the spread of parasites, especially during these key times: before, during and after preparing food, before eating and after using the toilet.^{2,3}

3.5.2 Objectives

To describe the prevalence of:

- i. Tooth brushing frequency in the past 30 days
- ii. Fluoridated toothpaste usage
- iii. Dental floss usage
- iv. Timing of last visit to a dentist or dental nurse
- v. Having missed class due to toothache in the past 12 months
- vi. Avoidance of smiling or laughing due to the appearance of their teeth
- vii. Using soap during hand washing in the past 30 days
- viii. Hand washing before eating in the past 30 days
- ix. Hand washing after using the toilet in the past 30 days

3.5.3 Variable Definitions

- **Clean or brush teeth:** Regular tooth brushing using toothbrush and toothpaste to keep the mouth, teeth and gums clean and healthy
- **Last saw a dentist or dental nurse:** Seen a dentist or dental nurse for a check-up, scaling or other dental treatment

3.5.4 Findings

Cleaning or brushing teeth during the past 30 days

Overall, 1.2% (95%CI: 0.99, 1.56) of students reported they had never cleaned or brushed their teeth during the past 30 days. About 2.4% (95%CI: 2.15, 2.76) reported they had cleaned or brushed their teeth less than once daily and 9.2% (95%CI: 8.55, 9.90) had cleaned or brushed their teeth once daily during the past 30 days. About 87.1% (95%CI: 86.24, 87.96) of students reported they had cleaned or brushed their teeth at least twice daily (**Table 3.5.1**).

By state, there was no significant difference in the prevalence of students who reported that they had never cleaned or brushed their teeth during the past 30 days in the state of Kedah [1.9% (95%CI: 1.02, 3.34)], Perak [1.9% (95%CI: 1.24, 3.01)], Selangor [1.9% (95%CI: 1.01, 3.52)] and Sarawak [1.9% (95%CI: 1.09, 3.31)]. No inference could be made for other states due to the low number of respondents (less than 30). More males [1.8% (95%CI: 1.47, 2.30)] than females [0.7% (95%CI: 0.44, 0.97)] and more students in Form 1 [1.8% (95%CI: 1.23, 2.77)] than Form 3 [0.8% (95%CI: 0.51, 1.13)] reported that they had never cleaned or brushed their teeth during the past 30 days. By ethnicity, more Indian [3.0% (95%CI: 1.62, 5.51)] than Malay students [0.9% (95%CI: 0.73, 1.16)] reported that they had never cleaned or brushed their teeth in the past 30 days. No significant difference in prevalence was observed by locality of school.

By state, no significant difference was observed in the prevalence of students who reported that they had cleaned or brushed their teeth less than once per day during the past 30 days. More males [3.9% (95%CI: 3.42, 4.34)] than females [1.0% (95%CI: 0.82, 1.30)] and more students in Form 1 [3.5% (95%CI: 2.81, 4.42)] than Form 4 [2.2% (95%CI: 1.73, 2.73)] and Form 5 [1.7% (95%CI: 1.11, 2.44)] had only cleaned or brushed their teeth less than once daily during

the past 30 days. No significant difference in prevalence was observed by school locality and ethnicity.

Use of fluoridated toothpaste

Overall, only 58.3% (95%CI: 56.68, 59.94) of students reported use of fluoridated toothpaste and 9.8% (95%CI: 8.96, 10.79) claimed that they were not using fluoridated toothpaste. About 31.8% (95%CI: 30.41, 33.30) of students reported not knowing whether their toothpaste contained fluoride (**Table 3.5.2**).

By state, there was a higher prevalence of students who reported non-usage of fluoridated toothpaste in Kelantan [13.3% (95%CI: 9.04, 19.25)], Pulau Pinang [12.9% (95%CI: 8.59, 18.92)] and Terengganu [12.3% (95%CI: 9.02, 16.67)] compared to WP Kuala Lumpur [5.1% (95%CI: 3.72, 6.92)] and WP Putrajaya [6.6% (95%CI: 5.17, 8.50)]. More males [11.2% (95%CI: 10.17, 12.33)] than females [8.5% (95%CI: 7.53, 9.57)] and more students in Form 1 [15.8% (95%CI: 13.43, 18.40)] and Form 2 [11.8% (95%CI: 9.85, 14.08)] compared to Form 3 [8.0% (95%CI: 6.80, 9.30)], Form 4 [7.7% (95%CI: 6.58, 9.08)] and Form 5 [5.5% (95%CI: 4.50, 6.78)] reported that they did not use fluoridated toothpaste. By ethnicity, more Chinese [13.4% (95%CI: 11.14, 15.94)] than Malay [8.3% (95%CI: 7.36, 9.32)] students reported not using fluoridated toothpaste. There was no difference in the prevalence of students who did not use fluoridated toothpaste by school locality.

The prevalence of students who reported that they were not aware whether their toothpaste contained fluoride was higher in Melaka [43.4% (95%CI: 41.58, 45.18)] compared to other states, except Johor [37.9% (95%CI: 31.81, 44.36)], Negeri Sembilan [39.6% (95%CI: 33.42, 46.10)] and Pulau Pinang [40.8% (95%CI: 36.63, 45.02)]. More students in the urban [34.1% (95%CI: 32.06, 36.27)] than in the rural [28.9% (95%CI: 26.62, 31.22)] reported that they did not know whether their toothpaste contained fluoride. A higher proportion of students in Form 2 [35.9% (95%CI: 33.08, 38.92)] than Form 1 [29.2% (95%CI: 26.87, 31.58)] and Form 5 [28.1% (95%CI: 25.18, 31.28)] were not aware whether their toothpaste contained fluoride. More students of Chinese [40.8% (95%CI: 37.85, 43.75)] ethnicity compared to other ethnic groups, except for those of 'Others' [40.2% (95%CI: 34.78, 45.91)] ethnicity reported that they

did not know whether their toothpaste contained fluoride. There was no significant difference by gender.

Use of dental floss for cleaning teeth

Overall, only 19.3% (95%CI: 18.34, 20.37) of students reported that they use dental floss for cleaning their teeth and 80.7% (95%CI: 79.63, 81.66) claimed that they did not use dental floss to clean their teeth (**Table 3.5.3**).

By state, the prevalence of students who did not use dental floss to clean their teeth was higher in Kelantan [86.9% (95%CI: 83.68, 89.54)] and Johor [86.3% (95%CI: 84.40, 88.05)] compared to Pahang [80.5% (95%CI: 77.19, 83.51)], Perak [77.9% (95%CI: 73.91, 81.48)], Perlis [78.8% (95%CI: 76.38, 81.08)], Selangor [77.7% (95%CI: 73.69, 81.32)], Sabah [77.3% (95%CI: 73.56, 80.70)], Sarawak [77.3% (95%CI: 73.99, 80.32)], WP Kuala Lumpur [80.3% (95%CI: 77.78, 82.67)] and WP Labuan [77.6% (95%CI: 74.42, 80.49)]. A higher prevalence of students who did not use dental floss was observed in Form 3 students [82.9% (95%CI: 81.20, 84.54)] compared to students in Form 1 [75.5% (95%CI: 73.62, 77.24)]. By ethnicity, a higher proportion of Malay students [83.8% (95%CI: 82.87, 84.67)] compared to other ethnicities reported that they did not use dental floss to clean their teeth. There was no significant difference in prevalence by school locality and gender.

Last dental visit

Overall, only 40.6% (95%CI: 38.83, 42.37) of students reported that they had their last dental visit (inclusive of both dental treatment and dental check-up) in the past 12 months. The prevalence of students who had their last dental visit between 12-24 months was 10.0% (95%CI: 9.40, 10.70) while those with last dental visit more than 24 months was 6.8% (95%CI: 6.00, 7.70). About 10.4% (95%CI: 9.57, 11.34) of students reported that they never ever had a dental visit while a substantial proportion [32.2% (95%CI: 30.73, 33.72)] did not know when was their last dental visit (**Table 3.5.4**).

By state, Sarawak [28.0% (95%CI: 24.30, 32.10)] had the lowest prevalence of students who had their last dental visit in the past 12 months compared to other states, except Kedah [35.6% (95%CI: 31.04, 40.40)] and Sabah [36.2% (95%CI: 30.33, 42.55)]. More females [43.8% (95%CI: 41.72, 45.90)] than males [37.3% (95%CI: 35.21, 39.50)] and more Form 5 [49.8% (95%CI:

46.13, 53.42)] students had their last dental visit in the past 12 months compared to students in other forms. By ethnicity, the prevalence of students who had their last dental visit in the past 12 months was lower for students of Bumiputera Sarawak [27.1% (95%CI: 22.26, 32.65)] ethnicity, compared to Malays [42.7% (95%CI: 40.53, 44.81)], Chinese [37.9% (95%CI: 34.23, 41.62)] and Indians [39.9% (95%CI: 35.02, 44.92)]. There was no difference in the prevalence of students who had their last dental visit in the past 12 months by school locality.

Missing class or school due to toothache

Overall, 8.8% (95% CI: 7.93, 9.72) of students had missed class or school due to toothache in the past 12 months (**Table 3.5.5**). The highest prevalence of students who had missed class or school due to toothache in the past 12 months was in Terengganu [14.2% (95%CI: 10.82, 18.35)], which was higher than Johor [4.3% (95%CI: 3.05, 6.16)], Kedah [8.2% (95%CI: 6.59, 10.12)], Melaka [4.4% (95%CI: 3.12, 6.07)], Pulau Pinang [6.3% (95%CI: 4.05, 9.65)], WP Kuala Lumpur [4.7% (95%CI: 3.39, 6.45)] and WP Putrajaya [3.8% (95%CI: 2.36, 5.99)]. More students in the rural [11.4% (95%CI: 10.10, 12.76)] than in the urban [6.8% (95%CI: 5.70, 8.08)], and more males [10.0% (95%CI: 8.85, 11.25)] than females [7.6% (95%CI: 6.72, 8.58)] had missed class or school due to toothache in the past 12 months. A higher proportion of students in Form 1 [10.8% (95%CI: 9.18, 12.73)] and Form 2 [9.6% (95%CI: 8.31, 11.12)] had missed class or school due to toothache in the past 12 months, compared to students in Form 5 [6.5% (95%CI: 5.16, 8.25)]. By ethnicity, there were more students of 'Bumiputera Sabah' [13.0% (95%CI: 9.42, 17.57)] and Indian [12.7% (95%CI: 9.67, 16.53)] ethnicity who had missed class or school due to toothache in the past 12 months, compared to Malay [8.3% (95%CI: 7.54, 9.21)] and Chinese [6.8% (95%CI: 5.47, 8.51)] students.

Avoid smiling or laughing due to the appearance of their teeth

Overall, 17.3% (95%CI: 16.56, 17.99) of students reported that they had avoided smiling or laughing due to the appearance of their teeth (**Table 3.5.6**). There was a higher proportion of students in Form 1 [19.1% (95%CI: 17.43, 20.84)] and Form 4 [18.7% (95%CI: 17.11, 20.39)] compared to students in Form 5 [15.8% (95%CI: 14.65, 17.03)] who had avoided smiling or laughing due to the appearance of their teeth. The prevalence of students who had avoided

smiling or laughing due to appearance of their teeth was not different amongst state, school locality, gender and ethnicity.

Use of soap when washing hands during the past 30 days

Overall in the past 30 days, about 11.6% (95%CI: 10.85, 12.37) of students never or rarely used soap when washing their hands, 25.6% (95%CI: 24.58, 26.59) reported they had only used soap sometimes when washing their hands while a fairly high proportion of 62.8% (95%CI: 61.39, 64.26) had always used soap when washing their hands (**Table 3.5.7**).

The prevalence of students who had never or rarely used soap when washing their hands was higher in Kelantan [19.0% (95%CI: 15.83, 22.68)] compared to other states except for Perak [14.5% (95%CI: 11.92, 17.61)] and Terengganu [14.2% (95%CI: 11.68, 17.20)]. A higher prevalence of students who had never or rarely used soap when washing their hands was observed in the rural [12.9% (95%CI: 11.86, 14.04)] than in the urban [10.6% (95%CI: 9.53, 11.71)] and in males [14.1% (95%CI: 13.03, 15.15)] compared to females [9.2% (95%CI: 8.32, 10.07)]. By ethnicity, there was a higher prevalence amongst Chinese students [14.6% (95%CI: 12.86, 16.58)] compared to Malay [11.2% (95%CI: 10.33, 12.16)] and Indian students [7.6% (95%CI: 5.88, 9.80)] except for other ethnic groups who reported that they had never or rarely used soap when washing their hands.

A higher prevalence of students who had only used soap sometimes when washing their hands was observed in Kelantan [30.3% (95%CI: 27.16, 33.66)] compared to students in Perak [24.1% (95%CI: 21.75, 26.64)], Perlis [22.7% (95%CI: 19.98, 25.57)] and WP Labuan [23.4% (95%CI: 20.68, 26.35)]. The prevalence of students who had only used soap sometimes when washing their hands was higher in males [27.2% (95%CI: 25.86, 28.61)] than females [24.0% (95%CI: 22.87, 25.08)]. It was also higher amongst Chinese students [29.1% (95%CI: 27.18, 31.13)] than Malay [25.5% (95%CI: 24.26, 26.78)] and Indian students [16.8% (95%CI: 14.20, 19.78)]. There was no difference in prevalence by locality of school and form of students.

Washing hand before eating during the past 30 days

Overall in the past 30 days, about 6.1% (95%CI: 5.47, 6.73) of students had never or rarely washed their hands before eating, 10.0% (95%CI: 9.19, 10.78) reported they had sometimes washed their hands before eating while a fairly high proportion of 84.0% (95%CI: 82.66, 85.22) had always washed their hands before eating (**Table 3.5.8**).

The prevalence of students who had never or rarely washed their hands before eating was higher in Perak [8.3% (95%CI: 5.41, 12.46)] compared to WP Putrajaya [2.0% (95%CI: 1.23, 3.23)]. A higher prevalence of students who had never or rarely washed their hands before eating was observed in males [8.0% (95%CI: 7.20, 8.82)] compared to females [4.2% (95%CI: 3.52, 4.99)]. The prevalence of students who had never or rarely washed their hands before eating was also higher among Form 1 students [7.8% (95%CI: 6.54, 9.18)] compared to students in Form 3 [5.3% (95%CI: 4.46, 6.18)], Form 4 [5.2% (95%CI: 4.17, 6.47)] and Form 5 [4.9% (95%CI: 4.08, 5.82)]. A higher prevalence of Chinese students [13.2% (95%CI: 11.38, 15.19)] had never or rarely washed their hands before eating compared to students of other ethnic groups. The prevalence did not differ by locality of school.

A higher prevalence of students who had only washed their hands sometimes before eating was observed in WP Kuala Lumpur [12.3% (95%CI: 9.01, 16.63)] compared to students in WP Putrajaya [6.0% (95%CI: 4.99, 7.31)]. The prevalence of students who had only washed their hands sometimes before eating was higher in males [11.1% (95%CI: 10.18, 12.15)] than females [8.8% (95%CI: 7.89, 9.79)]. A higher prevalence of Chinese students [20.8% (95%CI: 19.23, 22.45)] who had only washed their hands sometimes before eating compared to other ethnic groups. There was no difference in the prevalence of students who reportedly only washed their hands sometimes before eating by locality of school and form of students.

Washing hand after using the toilet or latrine during the past 30 days

Overall in the last 30 days, about 4.8% (95%CI: 4.44, 5.28) of students reported they had never or rarely washed their hands after using the toilet, 8.5% (95%CI: 8.00, 9.11) reported they had only washed their hands sometimes after using the toilet while 86.6% (95%CI: 85.85, 87.36)

of students claimed that they had always or most of the times washed their hands after using the toilet (**Table 3.5.9**).

The prevalence of students who had never or rarely washed their hands after using the toilet was higher in Kelantan [10.1% (95%CI: 7.93, 12.67)] compared to the other states except for Terengganu [7.5% (95%CI: 5.48, 10.31)], Perlis [6.2% (95%CI: 4.26, 9.00)], Perak [6.3% (95%CI: 4.95, 8.08)] and Pahang [5.8% (95%CI: 4.06, 8.13)]. A higher prevalence of students who had never or rarely washed their hands after using the toilet was observed in the rural [6.1% (95%CI: 5.44, 6.74)] than in the urban [3.9% (95%CI: 3.38, 4.50)] and in males [6.2% (95%CI: 5.64, 6.79)] than females [3.5% (95%CI: 3.05, 4.04)]. The prevalence of students who had never or rarely washed their hands after using the toilet was also higher among Form 1 students [7.0% (95%CI: 6.07, 8.07)] compared to students from other forms except for Form 2 students [5.5% (95%CI: 4.72, 6.45)]. There was no difference in prevalence by ethnicity.

A higher prevalence of students who had only washed their hands sometimes after using the toilet was observed in Kelantan [13.1% (95%CI: 11.14, 15.42)] than students in other states except for students in Kedah [10.6% (95%CI: 7.80, 14.23)], Terengganu [9.5% (95%CI: 8.08, 11.24)], WP Putrajaya [9.3% (95%CI: 7.43, 11.47)] and Perak [8.8% (95%CI: 6.82, 11.27)]. A higher prevalence of students who had only washed their hands sometimes after using the toilet was also observed in the rural [9.7% (95%CI: 8.87, 10.53)] than in the urban [7.7% (95%CI: 6.98, 8.41)] and in males [9.3% (95%CI: 8.57, 10.12)] than females [7.8% (95%CI: 7.13, 8.47)]. The prevalence of students who had only washed their hands sometimes after using the toilet was higher among students in Form 1 [10.1% (95%CI: 8.72, 11.58)] compared to Form 5 [6.9% (95%CI: 5.90, 7.96)] except for Form 2 to Form 4 students. There was also a higher prevalence of students who had only washed their hands sometimes after using the toilet amongst students of 'Others' ethnicity [14.0% (95%CI: 10.43, 18.55)] except for students of Bumiputera Sarawak ethnicity [6.8% (95%CI: 4.17, 10.77)].

3.5.5 Discussion

Overall, the prevalence of students who had cleaned/brushed their teeth less than one time per day during the past 30 days in Malaysia was slightly higher (2.4%) compared to the

Malaysian GSHS in 2012 (2.1%)⁴, Indonesian GSHS in 2015 (1.75%)⁵, Brunei GSHS 2014 (2.2%)⁶ and lower than the Philippines GSHS in 2011 (2.9%)⁷, Thailand GSHS in 2008 (2.6%)⁸, and the Vietnam GSHS 2013 (2.9%)⁹. This survey also found that an almost similar proportion (58.3%) of students use fluoridated toothpaste in comparison with the findings in the Malaysian GSHS in 2012 (57.2%).⁴ The survey findings also showed that a fairly low proportion of students (19.3%) reported use of dental floss to clean their teeth. The use of dental floss was not studied in the Malaysian GSHS in 2012.

Findings on the proportion of students who never or rarely used soap when washing their hands during the past 30 days in this study (11.6%) was lower than the Malaysian GSHS in 2012 (13.7%)⁴ but higher compared to the Indonesia GSHS in 2015 (3.9%)⁵, Philippines GSHS in 2011 (4.7%)⁷ and Thailand GSHS in 2008 (7.3%)⁸.

This study also found that the prevalence of students who never or rarely washed their hands before eating (6.1%) was slightly higher compared to the Malaysian GSHS in 2012 (5.0%)⁴ and the Indonesian GSHS in 2015 (2.5%)⁵.

The prevalence of students who never or rarely washed their hands after going to the toilet in this study (4.8%) was slightly lower compared to the Malaysian GSHS in 2012 (5.4%)⁴, the Thailand GSHS in 2015 (6.6%)¹⁰ but higher than the Indonesian GSHS in 2015 (2.4%)⁵, Brunei GSHS 2014 (2.8%)⁶, Philippines GSHS in 2011 (2.6%)⁷ and the Vietnam GSHS 2013 (2.1%)⁹.

3.5.6 Conclusion

These findings relate to the personal hygiene of adolescents in Malaysia. In terms of oral hygiene, only a very low proportion (2.4%) of students reported not cleaning/brushing their teeth less than once daily in the past 30 days. The use of fluoridated toothpaste was found to be moderately low, with only about 6 in 10 students (58.3%) reporting usage of fluoridated toothpaste. Similarly, there was a very low use of dental floss, with only about 1 in 5 (19.3%) students who claimed that they used dental floss to clean their teeth.

In terms of hand hygiene, about 1 in 10 students (11.6%) reported that they had never or rarely used soap when washing their hands in the past 30 days and a very low proportion (6.1%) of students reported they had never or rarely washed their hands before eating in the past 30 days. In addition, the proportion of students who never or rarely washed their hands after going to the toilet in the past 30 days was also considerably low (4.8%).

3.5.7 Recommendations

Taking cognizance of these findings, there is a need for more emphasis on promoting hygiene among school-going adolescents through attitude and behavioural changes in maintenance of personal hygiene. Thus, the following recommendations are made:

1. More effort is needed to strengthen health education on oral and hand hygiene habits in schools and at home.
2. There is a need to further promote toothpaste literacy in our oral health promotion efforts.
3. Surveillance of hygiene habits and practices among adolescents need to be continued at regular intervals.
4. Further studies are recommended to study the factors contributing to poor hygiene habits among adolescents.

3.5.8 References

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Table 3.5.1: Prevalence of brushing teeth in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Never clean or brush teeth					Less than 1 day				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper		
MALAYSIA	289	26,664	1.2	0.99 1.56	628	52,140	2.4	2.15 2.76		
State										
Johor	7	1,289	0.5	0.24 0.91	22	3,907	1.4	0.88 2.28		
Kedah	32	2,867	1.9	1.02 3.34	34	3,329	2.2	1.55 2.99		
Kelantan	16	1,348	1.1	0.53 2.30	39	3,335	2.7	1.74 4.30		
Melaka	4	141	0.2	0.07 0.63	23	732	1.1	0.62 1.90		
N. Sembilan	5	336	0.4	0.12 1.20	30	1,741	2.0	1.26 3.07		
Pahang	22	1,545	1.5	0.67 3.28	46	3,114	3.0	1.61 5.53		
Pulau Pinang	11	843	0.7	0.24 2.27	36	2,631	2.3	1.48 3.65		
Perak	34	3,513	1.9	1.24 3.01	64	6,789	3.7	2.33 5.96		
Perlis	22	391	1.4	1.01 2.06	48	839	3.1	1.85 5.18		
Selangor	34	7,398	1.9	1.01 3.52	50	10,873	2.8	2.07 3.72		
Terengganu	23	1,482	1.5	0.92 2.46	48	2,905	3.0	1.78 4.87		
Sabah	7	874	0.4	0.20 0.97	45	5,103	2.6	1.65 3.96		
Sarawak	33	3,771	1.9	1.09 3.31	37	4,085	2.1	1.56 2.74		
WP Kuala Lumpur	9	766	0.7	0.23 1.97	30	2,452	2.2	1.33 3.56		
WP Labuan	19	57	1.0	0.52 2.03	42	142	2.6	1.39 4.69		
WP Putrajaya	11	44	0.5	0.18 1.47	34	163	1.9	1.36 2.75		
Locality of school										
Urban	137	12,172	1.0	0.71 1.42	314	25,655	2.1	1.80 2.49		
Rural	152	14,492	1.6	1.14 2.11	314	26,486	2.8	2.34 3.44		
Sex										
Male	216	19,603	1.8	1.47 2.30	490	40,960	3.9	3.42 4.34		
Female	73	7,061	0.7	0.44 0.97	138	11,181	1.0	0.82 1.30		

Table 3.5.1: Prevalence of brushing teeth in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Never clean or brush teeth					Less than 1 day				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper		
Form										
Form 1	93	8,312	1.8	1.23 2.77	187	15,863	3.5	2.81 4.42		
Form 2	74	6,326	1.5	1.08 2.02	143	10,289	2.4	1.94 2.99		
Form 3	44	3,252	0.8	0.51 1.13	130	10,020	2.3	1.86 2.91		
Form 4	49	5,067	1.2	0.67 2.22	102	8,997	2.2	1.73 2.73		
Form 5	29	3,707	0.9	0.54 1.41	66	6,971	1.7	1.11 2.44		
Ethnicity										
Malay	159	12,443	0.9	0.73 1.16	398	29,930	2.2	1.87 2.62		
Chinese	68	6,966	1.9	1.26 2.98	93	8,722	2.4	1.85 3.19		
Indian	32	4,474	3.0	1.62 5.51	54	5,903	4.0	2.53 6.18		
Bumiputera Sabah	16	1,532	1.0	0.56 1.87	41	3,914	2.6	1.69 4.03		
Bumiputera Sarawak	6	794	0.8	0.30 2.23	24	2,327	2.4	1.81 3.21		
Others	8	454	1.2	0.48 2.99	18	1,345	3.6	2.14 5.86		

Table 3.5.1: Prevalence of brushing teeth in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Once per day					2 times or more per day (at least twice daily)				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper
MALAYSIA	2,385	1,972,129	9.2	8.55	9.90	24,171	1,867,951	87.1	86.24	87.96
State										
Johor	160	27,205	9.9	8.26	11.77	1,541	243,133	88.2	86.15	90.05
Kedah	124	11,494	7.4	6.03	9.16	1,499	136,742	88.5	85.98	90.70
Kelantan	160	11,835	9.7	8.06	11.74	1,413	104,883	86.4	84.25	88.29
Melaka	176	5,838	8.7	7.03	10.68	1,669	60,523	90.0	87.74	91.91
N. Sembilan	159	8,697	9.8	7.44	12.89	1,524	77,656	87.8	84.69	90.38
Pahang	110	6,373	6.1	4.81	7.83	1,606	92,598	89.4	85.42	92.32
Pulau Pinang	174	11,594	10.3	8.17	12.84	1,527	97,843	86.7	82.69	89.82
Perak	186	19,304	10.6	7.81	14.36	1,466	151,693	83.7	79.61	87.06
Perlis	100	1,755	6.5	5.19	8.10	1,497	24,027	89.0	85.81	91.47
Selangor	184	42,939	11.0	8.96	13.38	1,401	330,009	84.4	81.10	87.13
Terengganu	94	5,652	5.7	4.54	7.26	1,500	88,273	89.8	87.35	91.80
Sabah	104	12,711	6.4	4.61	8.81	1,529	180,134	90.6	87.09	93.23
Sarawak	140	14,575	7.4	5.54	9.76	1,566	175,185	88.6	86.42	90.55
WP Kuala Lumpur	220	15,914	14.2	11.85	16.89	1,460	93,080	82.9	79.37	86.02
WP Labuan	103	356	6.4	4.92	8.36	1,547	4,981	90.0	87.51	92.00
WP Putrajaya	191	980	11.7	9.60	14.18	1,426	7,190	85.8	83.12	88.19
Locality of school										
Urban	1,548	128,339	10.6	9.62	11.67	13,895	1,044,101	86.3	85.01	87.44
Rural	837	68,880	7.4	6.67	8.15	10,276	823,849	88.2	86.87	89.47
Sex										
Male	1,587	132,658	12.5	11.48	13.54	10,825	870,197	81.8	80.57	83.02
Female	798	64,561	6.0	5.19	6.87	13,346	997,754	92.3	91.29	93.26

Table 3.5.1: Prevalence of brushing teeth in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Once per day						2 times or more per day (at least twice daily)					
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper		
Form												
Form 1	474	41,481	9.2	8.11	10.46	4,940	384,425	85.4	83.20	87.38		
Form 2	496	38,219	9.0	7.98	10.03	4,787	371,982	87.2	85.59	88.57		
Form 3	522	40,275	9.4	8.16	10.70	5,136	377,044	87.6	85.97	89.00		
Form 4	500	39,351	9.5	8.28	10.88	4,878	360,771	87.1	85.38	88.65		
Form 5	393	37,894	9.0	7.50	10.71	4,430	373,729	88.5	86.52	90.22		
Ethnicity												
Malay	1,372	97,154	7.2	6.67	7.72	16,771	1,213,706	89.7	88.90	90.43		
Chinese	646	62,546	17.5	15.58	19.50	3,291	280,107	78.2	76.06	80.14		
Indian	173	20,638	13.9	11.06	17.27	1,165	117,725	79.1	74.57	83.09		
Bumiputera Sabah	113	9,994	6.7	4.67	9.50	1,611	133,914	89.7	85.74	92.60		
Bumiputera Sarawak	42	4,039	4.2	2.56	6.76	846	89,391	92.6	89.80	94.65		
Others	39	2,849	7.5	4.80	11.68	487	33,107	87.7	82.54	91.48		

Table 3.5.2: Prevalence of use of fluoridated toothpaste among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Yes						No					
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI			
				Lower	Upper				Lower	Upper		
MALAYSIA	16,326	1,249,848	58.3	56.68	59.94	2,577	210,876	9.8	8.96	10.79		
State												
Johor	933	150,538	54.7	47.79	61.42	126	20,442	7.4	5.56	9.86		
Kedah	1,089	99,857	64.7	59.60	69.43	159	14,198	9.2	6.88	12.18		
Kelantan	963	71,200	58.8	50.42	66.65	196	16,155	13.3	9.04	19.25		
Melaka	871	31,368	46.7	42.76	50.67	189	6,673	9.9	6.99	13.93		
N. Sembilan	933	47,342	53.6	47.19	59.79	107	6,068	6.9	4.52	10.28		
Pahang	1,108	62,723	60.7	52.92	67.89	155	9,987	9.7	6.51	14.11		
Pulau Pinang	801	52,326	46.3	40.93	51.84	204	14,562	12.9	8.59	18.92		
Perak	1,083	113,341	62.4	56.82	67.64	188	18,903	10.4	8.36	12.88		
Perlis	1,028	16,568	61.4	57.18	65.46	167	2,767	10.3	8.37	12.51		
Selangor	841	203,044	51.9	49.01	54.84	187	41,094	10.5	7.96	13.75		
Terengganu	971	57,114	58.0	54.31	61.52	197	12,166	12.3	9.02	16.67		
Sabah	1,100	129,241	65.2	58.55	71.29	170	20,372	10.3	7.02	14.80		
Sarawak	1,155	127,362	64.4	58.91	69.58	183	20,722	10.5	8.42	12.97		
WP Kuala Lumpur	1,207	78,560	69.9	64.30	75.03	87	5,716	5.1	3.72	6.92		
WP Labuan	1,164	3,752	67.8	60.53	74.30	150	496	9.0	6.91	11.55		
WP Putrajaya	1,079	5,515	65.9	56.25	74.40	112	556	6.6	5.17	8.50		
Locality of school												
Urban	9,378	688,318	56.9	54.57	59.24	1,328	108,214	8.9	7.72	10.35		
Rural	6,948	561,530	60.1	57.53	62.68	1,249	102,662	11.0	9.82	12.29		
Sex												
Male	7,562	607,681	57.2	55.27	59.06	1,423	119,111	11.2	10.17	12.33		
Female	8,764	642,167	59.4	57.27	61.59	1,154	91,765	8.5	7.53	9.57		

Table 3.5.2: Prevalence of use of fluoridated toothpaste among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Yes						No							
	Unweighted		Estimated Population	Prevalence (%)		95% CI		Unweighted		Estimated Population	Prevalence (%)		95% CI	
	Count	Count		Lower	Upper	Count	Count	Lower	Upper					
Form														
Form 1	3,243	247,899	247,899	55.1	51.84	58.26	789	70,916	70,916	15.8	13.43	18.40		
Form 2	2,960	222,808	222,808	52.3	49.22	55.27	639	50,327	50,327	11.8	9.85	14.08		
Form 3	3,453	250,530	250,530	58.2	55.39	60.90	467	34,274	34,274	8.0	6.80	9.30		
Form 4	3,374	248,429	248,429	60.1	57.37	62.72	403	32,009	32,009	7.7	6.58	9.08		
Form 5	3,296	280,181	280,181	66.3	63.14	69.40	279	23,350	23,350	5.5	4.50	6.78		
Ethnicity														
Malay	11,573	825,031	825,031	61.0	59.03	62.92	1,535	112,078	112,078	8.3	7.36	9.32		
Chinese	1,882	164,229	164,229	45.9	42.47	49.32	529	47,825	47,825	13.4	11.14	15.94		
Indian	680	72,772	72,772	48.9	45.39	52.48	228	25,144	25,144	16.9	14.40	19.75		
Bumiputera Sabah	1,233	101,540	101,540	68.2	62.50	73.33	163	14,207	14,207	9.5	6.22	14.36		
Bumiputera Sarawak	648	66,741	66,741	69.0	62.91	74.48	78	8,441	8,441	8.72	6.48	11.65		
Others	310	19,535	19,535	51.4	45.50	57.28	44	3,181	3,181	8.37	5.94	11.68		

Table 3.5.2: Prevalence of use of fluoridated toothpaste among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Don't Know				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper
MALAYSIA	8,555	682,376	31.8	30.41	33.30
State					
Johor	669	104,259	37.9	31.81	44.36
Kedah	441	40,351	26.1	21.11	31.86
Kelantan	464	33,794	27.9	22.86	33.55
Melaka	810	29,134	43.4	41.58	45.18
N. Sembilan	677	34,997	39.6	33.42	46.10
Pahang	517	30,697	29.7	24.81	35.08
Pulau Pinang	743	46,025	40.8	36.63	45.02
Perak	483	49,437	27.2	23.12	31.73
Perlis	470	7,647	28.3	24.86	32.10
Selangor	640	146,872	37.6	34.18	41.07
Terengganu	499	29,266	29.7	27.16	32.36
Sabah	411	48,636	24.5	20.81	28.68
Sarawak	439	49,620	25.1	20.63	30.16
WP Kuala Lumpur	426	28,059	25.0	20.12	30.56
WP Labuan	396	1,286	23.2	18.22	29.13
WP Putrajaya	470	2,297	27.4	19.25	37.52
Locality of school					
Urban	5,176	412,801	34.1	32.06	36.27
Rural	3,379	269,575	28.9	26.62	31.22
Sex					
Male	4,126	336,057	31.6	30.03	33.25
Female	4,429	346,319	32.1	30.12	34.06
Form					
Form 1	1,664	131,304	29.2	26.87	31.58
Form 2	1,897	153,284	35.9	33.08	38.92
Form 3	1,912	145,909	33.9	31.16	36.70
Form 4	1,741	133,088	32.2	29.90	34.56
Form 5	1,341	118,791	28.1	25.18	31.28
Ethnicity					
Malay	5,578	415,539	30.7	29.05	32.45
Chinese	1,686	145,951	40.8	37.85	43.75
Indian	516	50,818	34.2	30.73	37.78
Bumiputera Sabah	382	33,225	22.3	19.33	25.59
Bumiputera Sarawak	193	21,561	22.3	17.29	28.23
Others	200	15,281	40.2	34.78	45.91

Table 3.5.3: Prevalence of use of dental floss among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Yes				No					
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
MALAYSIA	5,199	413,990	19.3	18.34	20.37	22,231	1,727,197	80.7	79.63	81.66
State										
Johor	232	37,676	13.7	11.95	15.60	1,498	237,905	86.3	84.40	88.05
Kedah	315	27,980	18.1	15.81	20.68	1,374	126,454	81.9	79.32	84.19
Kelantan	214	15,886	13.1	10.46	16.32	1,409	105,204	86.9	83.68	89.54
Melaka	265	9,269	13.8	10.85	17.44	1,603	57,817	86.2	82.56	89.15
N. Sembilan	328	17,451	19.8	15.74	24.51	1,388	70,856	80.2	75.49	84.26
Pahang	328	20,023	19.5	16.49	22.81	1,445	82,888	80.5	77.19	83.51
Pulau Pinang	309	20,112	17.9	14.69	21.59	1,432	92,354	82.1	78.41	85.31
Perak	384	40,040	22.1	18.52	26.09	1,367	141,351	77.9	73.91	81.48
Perlis	346	5,687	21.2	18.92	23.62	1,312	21,176	78.8	76.38	81.08
Selangor	358	86,828	22.3	18.68	26.31	1,305	303,216	77.7	73.69	81.32
Terengganu	312	18,396	18.7	16.29	21.31	1,354	80,118	81.3	78.69	83.71
Sabah	379	45,028	22.7	19.30	26.44	1,304	153,591	77.3	73.56	80.70
Sarawak	401	44,850	22.7	19.68	26.01	1,376	152,802	77.3	73.99	80.32
WP Kuala Lumpur	343	22,086	19.7	17.33	22.22	1,377	90,240	80.3	77.78	82.67
WP Labuan	389	1,240	22.4	19.51	25.58	1,322	4,297	77.6	74.42	80.49
WP Putrajaya	296	1,439	17.2	14.32	20.51	1,365	6,929	82.8	79.49	85.68
Locality of school										
Urban	3,186	243,930	20.2	18.76	21.70	12,684	964,131	79.8	78.30	81.24
Rural	2,013	170,060	18.2	16.67	19.89	9,547	763,066	81.8	80.11	83.33
Sex										
Male	2,597	216,152	20.4	19.03	21.75	10,496	845,785	79.6	78.25	80.97
Female	2,602	197,837	18.3	17.05	19.69	11,735	881,412	81.7	80.31	82.95

Table 3.5.3: Prevalence of use of dental floss among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Yes						No						
	Unweighted Count	Estimated Population	Prevalence (%)		95% CI		Unweighted Count	Estimated Population	Prevalence (%)		95% CI		
			Lower	Upper	Lower	Upper			Lower	Upper	Lower	Upper	
Form													
Form 1	1,408	110,298	24.5	22.76	26.38	4,278	339,497	75.5	73.62	77.24			
Form 2	992	78,035	18.3	16.88	19.85	4,499	347,932	81.7	80.15	83.12			
Form 3	994	73,392	17.1	15.46	18.80	4,827	356,654	82.9	81.20	84.54			
Form 4	976	74,343	18.0	16.01	20.20	4,540	338,535	82.0	79.80	83.99			
Form 5	829	77,922	18.4	16.28	20.82	4,087	344,578	81.6	79.18	83.72			
Ethnicity													
Malay	3,104	219,051	16.2	15.33	17.13	15,562	1,132,302	83.8	82.87	84.67			
Chinese	961	85,615	23.9	21.67	26.35	3,130	272,203	76.1	73.65	78.33			
Indian	420	46,944	31.7	27.02	36.78	1,000	101,154	68.3	63.22	72.98			
Bumiputera Sabah	389	32,467	21.8	18.78	25.05	1,391	116,805	78.2	74.95	81.22			
Bumiputera Sarawak	200	21,143	21.9	17.96	26.32	720	75,609	78.1	73.68	82.04			
Others	125	8,769	23.1	17.28	30.27	428	29,123	76.9	69.73	82.72			

Table 3.5.4: Timing of last dental visit among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	During past 12 months				12-24 months					
	Unweighted Count	Estimated Population	Prevalence (%)		Unweighted Count	Estimated Population	Prevalence (%)			
			Lower	Upper			Lower	Upper		
MALAYSIA	11,761	869,643	40.6	38.83	42.37	2,745	214,441	10.0	9.40	10.70
State										
Johor	790	125,808	45.7	42.31	49.08	205	31,635	11.5	9.00	14.54
Kedah	604	55,027	35.6	31.04	40.40	190	17,138	11.1	8.31	14.63
Kelantan	746	54,794	45.1	36.51	54.08	151	11,600	9.6	7.48	12.13
Melaka	930	33,416	49.8	43.16	56.47	197	7,123	10.6	8.57	13.08
N. Sembilan	833	40,707	46.1	39.39	52.95	184	9,562	10.8	8.79	13.27
Pahang	839	47,235	45.6	38.70	52.71	195	11,305	10.9	8.92	13.30
Pulau Pinang	778	49,766	44.1	36.94	51.51	172	11,611	10.3	7.74	13.56
Perak	735	75,679	41.7	36.35	47.26	164	17,515	9.7	8.17	11.37
Perlis	748	11,862	44.0	37.29	50.87	146	2,425	9.0	7.09	11.34
Selangor	618	152,822	39.2	32.91	45.78	140	31,403	8.0	6.81	9.49
Terengganu	715	41,586	42.3	37.08	47.73	144	8,809	9.0	7.17	11.15
Sabah	611	71,938	36.2	30.33	42.55	139	16,593	8.4	6.90	10.08
Sarawak	497	55,406	28.0	24.30	32.10	207	22,475	11.4	9.02	14.25
WP Kuala Lumpur	752	46,737	41.7	36.22	47.37	202	13,904	12.4	10.29	14.88
WP Labuan	675	2,221	40.2	32.50	48.39	133	439	8.0	5.79	10.83
WP Putrajaya	890	4,639	55.4	43.19	66.96	176	904	10.8	8.75	13.25
Locality of school										
Urban	7,054	503,376	41.6	38.94	44.41	1,588	121,198	10.0	9.15	10.98
Rural	4,707	366,267	39.2	36.95	41.54	1,157	93,243	10.0	9.07	10.98
Sex										
Male	5,237	396,910	37.3	35.21	39.50	1,406	111,804	10.5	9.74	11.35
Female	6,524	472,733	43.8	41.72	45.90	1,339	102,637	9.5	8.72	10.36

Table 3.5.4: Timing of last dental visit among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	During past 12 months						12-24 months					
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI			
				Lower	Upper				Lower	Upper		
Form												
Form 1	2,125	159,678	35.5	33.19	37.96	639	52,876	11.8	10.40	13.20		
Form 2	2,034	150,294	35.2	32.74	37.81	500	37,837	8.9	7.80	10.00		
Form 3	2,436	172,941	40.2	37.14	43.28	552	41,160	9.6	8.60	10.70		
Form 4	2,556	176,408	42.7	39.92	45.43	536	41,446	10.0	8.80	11.40		
Form 5	2,610	210,322	49.8	46.13	53.42	518	41,122	9.7	8.40	11.20		
Ethnicity												
Malay	8,378	576,555	42.7	40.53	44.81	1,836	132,547	9.8	9.10	10.56		
Chinese	1,638	135,554	37.9	34.23	41.62	450	39,151	10.9	9.45	12.62		
Indian	590	59,473	39.9	35.02	44.92	174	17,620	11.8	9.36	14.80		
Bumiputera Sabah	699	57,351	38.5	31.15	46.50	158	12,968	8.7	6.96	10.86		
Bumiputera Sarawak	261	26,280	27.1	22.26	32.65	93	9,908	10.2	8.27	12.60		
Others	195	14,430	38.0	32.19	44.13	34	2,247	5.9	3.46	9.92		

Table 3.5.4: Timing of last dental visit among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	More than 24 months						Never					
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI			
				Lower	Upper				Lower	Upper		
MALAYSIA	1,633	145,182	6.8	6.00	7.70	2,522	223,265	10.4	9.57	11.34		
State												
Johor	99	16,727	6.1	4.67	7.87	166	26,978	9.8	6.89	13.75		
Kedah	147	13,652	8.8	6.32	12.20	188	17,067	11.0	8.49	14.22		
Kelantan	97	6,940	5.7	4.32	7.53	164	12,819	10.6	7.76	14.22		
Melaka	82	2,817	4.2	3.11	5.65	162	5,821	8.7	6.17	12.07		
N. Sembilan	69	3,753	4.2	3.26	5.53	164	10,164	11.5	7.29	17.71		
Pahang	84	5,214	5.0	3.35	7.50	138	8,507	8.2	5.93	11.28		
Pulau Pinang	114	7,347	6.5	5.17	8.17	175	11,768	10.4	7.16	14.95		
Perak	101	10,090	5.6	4.21	7.30	201	20,939	11.5	9.32	14.20		
Perlis	79	1,310	4.9	3.66	6.40	123	2,092	7.8	5.61	10.64		
Selangor	163	36,909	9.5	6.34	13.87	208	46,722	12.0	9.49	14.99		
Terengganu	89	5,523	5.6	4.15	7.56	104	6,615	6.7	5.33	8.47		
Sabah	109	12,456	6.3	4.14	9.39	138	16,617	8.4	5.88	11.77		
Sarawak	133	14,362	7.3	5.21	10.05	235	26,099	13.2	11.36	15.30		
WP Kuala Lumpur	101	7,396	6.6	4.60	9.38	153	10,301	9.2	7.54	11.15		
WP Labuan	87	295	5.3	3.53	7.98	124	393	7.1	5.35	9.42		
WP Putrajaya	79	393	4.7	3.24	6.73	79	362	4.3	2.85	6.50		
Locality of school												
Urban	950	88,305	7.3	6.09	8.75	1,391	122,905	10.2	8.93	11.55		
Rural	683	56,876	6.1	5.27	7.03	1,131	100,360	10.7	9.64	11.96		
Sex												
Male	993	92,746	8.7	7.55	10.05	1,380	126,225	11.9	10.97	12.84		
Female	640	52,435	4.9	4.20	5.61	1,142	97,040	9.0	7.96	10.14		

Table 3.5.4: Timing of last dental visit among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	More than 24 months						Never					
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI			
				Lower	Upper				Lower	Upper		
Form												
Form 1	347	31,011	6.9	5.80	8.20	623	52,611	11.7	10.30	13.28		
Form 2	339	29,534	6.9	5.70	8.40	555	50,067	11.7	10.13	13.57		
Form 3	356	29,324	6.8	5.50	8.50	509	41,607	9.7	8.58	10.87		
Form 4	319	27,026	6.5	5.50	7.70	520	45,724	11.1	9.64	12.65		
Form 5	272	28,288	6.7	5.20	8.60	315	33,255	7.9	6.45	9.57		
Ethnicity												
Malay	1,041	84,501	6.3	5.31	7.34	1,432	118,545	8.8	7.91	9.72		
Chinese	288	29,001	8.1	6.62	9.88	530	49,064	13.7	11.68	16.01		
Indian	109	13,507	9.1	6.07	13.29	236	25,389	17.0	13.79	20.81		
Bumiputera Sabah	93	8,741	5.9	4.15	8.25	147	12,495	8.4	5.77	12.07		
Bumiputera Sarawak	60	6,529	6.7	4.89	9.23	120	13,194	13.6	10.85	16.97		
Others	42	2,903	7.6	4.47	12.75	57	4,579	12.0	8.56	16.69		

Table 3.5.4: Timing of last dental visit among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Don't know				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	8,790	690,023	32.2	30.73	33.72
State					
Johor	469	74,309	27.0	22.79	31.62
Kedah	562	51,761	33.5	30.82	36.23
Kelantan	470	35,220	29.0	23.60	35.11
Melaka	497	17,906	26.7	23.26	30.43
N. Sembilan	465	24,120	27.3	23.63	31.34
Pahang	526	31,278	30.2	25.11	35.85
Pulau Pinang	508	32,353	28.7	23.07	35.01
Perak	551	57,250	31.5	28.66	34.58
Perlis	569	9,293	34.4	30.70	38.38
Selangor	536	122,440	31.4	26.12	37.14
Terengganu	610	35,745	36.4	32.35	40.59
Sabah	686	81,020	40.8	35.86	45.91
Sarawak	705	79,291	40.1	35.73	44.67
WP Kuala Lumpur	509	33,780	30.1	26.50	34.02
WP Labuan	689	2,178	39.4	32.90	46.31
WP Putrajaya	438	2,079	24.8	16.86	34.96
Locality of school					
Urban	4,889	372,884	30.9	28.62	33.17
Rural	3,901	317,139	34.0	31.99	35.98
Sex					
Male	4,099	335,569	31.6	29.83	33.35
Female	4,691	354,453	32.8	30.99	34.75
Form					
Form 1	1,951	153,180	34.1	31.81	36.45
Form 2	2,068	158,825	37.2	35.13	39.39
Form 3	1,975	145,462	33.8	31.35	36.32
Form 4	1,594	123,009	29.7	27.42	32.17
Form 5	1,202	109,547	25.9	22.99	29.09
Ethnicity					
Malay	5,990	439,520	32.5	30.88	34.20
Chinese	1,190	105,302	29.4	26.51	32.48
Indian	318	33,203	22.3	19.20	25.64
Bumiputera Sabah	679	57,246	38.5	32.80	44.48
Bumiputera Sarawak	387	40,913	42.3	34.81	50.07
Others	226	13,839	36.4	30.29	43.03

Table 3.5.4.1: Prevalence of last dental visit within the last 24 months Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	14,506	1,084,084	50.6	48.80	52.40
State					
Johor	995	157,443	57.2	52.60	61.60
Kedah	794	72,165	46.7	42.90	50.50
Kelantan	897	66,394	54.7	46.40	62.80
Melaka	1,127	40,540	60.4	53.80	66.70
N. Sembilan	1,017	50,269	56.9	48.70	63.80
Pahang	1,034	58,540	56.5	48.40	64.30
Pulau Pinang	950	61,377	54.4	45.40	63.10
Perak	899	93,194	51.4	46.70	56.00
Perlis	894	14,287	53.0	46.80	59.00
Selangor	758	50,395	47.2	40.80	53.70
Terengganu	859	50,395	51.3	46.60	55.90
Sabah	750	88,532	44.6	38.40	50.90
Sarawak	704	77,881	39.4	35.40	43.60
WP Kuala Lumpur	954	60,641	54.1	48.60	59.50
WP Labuan	808	2,660	48.1	40.00	56.40
WP Putrajaya	1,066	5,543	66.2	54.30	76.30
Locality of school					
Urban	8,642	624,574	51.7	48.80	54.50
Rural	5,864	459,510	49.2	47.00	51.40
Sex					
Male	6,643	508,714	47.8	45.70	50.00
Female	7,863	575,370	53.3	51.10	55.50
Form					
Form 1	2,764	212,555	47.3	44.80	49.80
Form 2	2,534	188,131	44.1	41.60	46.70
Form 3	2,988	214,101	49.7	46.70	52.70
Form 4	3,092	217,853	52.7	49.70	55.60
Form 5	3,128	251,444	59.5	55.90	63.00
Ethnicity					
Malay	10,214	709,102	52.5	50.30	54.60
Chinese	2,088	174,705	48.8	44.90	52.70
Indian	764	77,093	51.7	45.90	57.40
Bumiputera Sabah	857	70,319	47.3	39.80	54.80
Bumiputera Sarawak	354	36,188	37.4	32.60	42.40
Others	229	16,677	43.9	37.90	50.00

Table 3.5.5: Prevalence of having missed class due to toothache in the past 12 months among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Yes						No							
	Unweighted		Estimated Population	Prevalence (%)		95% CI		Unweighted		Estimated Population	Prevalence (%)		95% CI	
	Count	Count		Lower	Upper	Count	Count	Lower	Upper					
MALAYSIA	2,278	188,377	8.8	7.93	9.72	25,198	1,956,354	91.2	90.28	92.07				
State														
Johor	76	11,992	4.3	3.05	6.16	1,655	263,720	95.7	93.84	96.95				
Kedah	138	12,659	8.2	6.59	10.12	1,553	141,986	91.8	89.88	93.41				
Kelantan	156	12,409	10.2	7.28	14.13	1,473	109,163	89.8	85.87	92.72				
Melaka	82	2,929	4.4	3.12	6.07	1,789	64,268	95.6	93.93	96.88				
N. Sembilan	100	5,931	6.7	4.00	11.03	1,618	82,499	93.3	88.97	96.00				
Pahang	162	10,186	9.8	6.83	13.97	1,621	93,385	90.2	86.03	93.17				
Pulau Pinang	103	7,095	6.3	4.05	9.65	1,643	105,675	93.7	90.35	95.95				
Perak	190	19,638	10.8	8.24	14.11	1,560	161,696	89.2	85.89	91.76				
Perlis	184	3,148	11.7	8.65	15.55	1,482	23,849	88.3	84.45	91.35				
Selangor	164	36,290	9.3	6.56	12.96	1,506	355,086	90.7	87.04	93.44				
Terengganu	221	13,972	14.2	10.82	18.35	1,447	84,634	85.8	81.65	89.18				
Sabah	212	25,543	12.9	9.42	17.30	1,472	173,107	87.1	82.70	90.58				
Sarawak	190	20,523	10.4	7.73	13.80	1,587	177,140	89.6	86.20	92.27				
WP Kuala Lumpur	79	5,262	4.7	3.39	6.45	1,641	107,038	95.3	93.55	96.61				
WP Labuan	151	486	8.8	6.19	12.29	1,559	5,048	91.2	87.71	93.81				
WP Putrajaya	70	316	3.8	2.36	5.99	1,592	8,060	96.2	94.01	97.64				
Locality of school														
Urban	1,023	82,219	6.8	5.70	8.08	14,869	1,128,138	93.2	91.92	94.30				
Rural	1,255	106,159	11.4	10.10	12.76	10,329	828,217	88.6	87.24	89.90				
Sex														
Male	1,255	106,265	10.0	8.85	11.25	11,867	957,793	90.0	88.75	91.15				
Female	1,023	82,113	7.6	6.72	8.58	13,331	998,562	92.4	91.42	93.28				

Table 3.5.5: Prevalence of having missed class due to toothache in the past 12 months Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Yes						No											
	Unweighted		Estimated		Prevalence (%)		95% CI		Unweighted		Estimated		Prevalence (%)		95% CI			
	Count	Population	Count	Population	Lower	Upper	Lower	Upper	Count	Population	Count	Population	Lower	Upper	Lower	Upper		
Form																		
Form 1	574	48,790	10.8	9.18	12.73	5,123	401,777	89.2	87.27	90.82								
Form 2	481	41,068	9.6	8.31	11.12	5,016	385,608	90.4	88.88	91.69								
Form 3	448	34,151	7.9	6.60	9.50	5,386	396,678	92.1	90.50	93.40								
Form 4	449	36,743	8.9	7.22	10.87	5,077	377,177	91.1	89.13	92.78								
Form 5	326	27,626	6.5	5.16	8.25	4,596	395,114	93.5	91.75	94.84								
Ethnicity																		
Malay	1,509	112,819	8.3	7.54	9.21	17,190	1,240,593	91.7	90.79	92.46								
Chinese	262	24,480	6.8	5.47	8.51	3,835	333,723	93.2	91.49	94.53								
Indian	159	18,949	12.7	9.67	16.53	1,267	130,119	87.3	83.47	90.33								
Bumiputera Sabah	210	19,332	13.0	9.42	17.57	1,569	129,895	87.0	82.43	90.58								
Bumiputera Sarawak	84	8,481	8.8	5.94	12.73	837	88,342	91.2	87.27	94.06								
Others	54	4,316	11.4	7.56	16.73	500	33,682	88.6	83.27	92.44								

Table 3.5.6: Prevalence of avoidance of smiling or laughing due to the appearance of their teeth among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Yes						No					
	Unweighted Count	Estimated Population	Prevalence (%)		95% CI		Unweighted Count	Estimated Population	Prevalence (%)		95% CI	
			Prevalence (%)	Lower	Upper	Prevalence (%)			Lower	Upper		
MALAYSIA	4,766	369,720	17.3	16.56	17.99	22,672	1,772,038	82.7	82.01	83.44		
State												
Johor	268	42,320	15.4	13.45	17.55	1,459	232,722	84.6	82.45	86.55		
Kedah	290	26,521	17.2	15.32	19.23	1,397	127,765	82.8	80.77	84.68		
Kelantan	267	20,024	16.5	14.66	18.50	1,361	101,403	83.5	81.50	85.34		
Melaka	292	10,767	16.0	13.26	19.26	1,578	56,393	84.0	80.74	86.74		
N. Sembilan	299	15,492	17.5	15.02	20.40	1,416	72,788	82.5	79.60	84.98		
Pahang	348	20,492	19.8	16.21	23.94	1,435	83,062	80.2	76.06	83.79		
Pulau Pinang	278	18,288	16.2	13.58	19.27	1,467	94,436	83.8	80.73	86.42		
Perak	333	34,585	19.1	17.32	21.01	1,414	146,492	80.9	78.99	82.68		
Perlis	312	5,071	18.8	16.32	21.63	1,350	21,852	81.2	78.37	83.68		
Selangor	312	70,961	18.1	16.32	20.11	1,357	320,237	81.9	79.89	83.68		
Terengganu	294	17,561	17.9	15.43	20.61	1,367	80,667	82.1	79.39	84.57		
Sabah	290	34,600	17.5	13.97	21.58	1,391	163,669	82.5	78.42	86.03		
Sarawak	293	32,583	16.5	14.26	19.01	1,482	164,927	83.5	80.99	85.74		
WP Kuala Lumpur	281	17,968	16.0	14.33	17.86	1,438	94,216	84.0	82.14	85.67		
WP Labuan	312	1,000	18.1	15.26	21.32	1,396	4,526	81.9	78.68	84.74		
WP Putrajaya	297	1,485	17.7	15.34	20.44	1,364	6,883	82.3	79.56	84.66		
Locality of school												
Urban	2,701	202,497	16.8	15.92	17.63	13,169	1,005,943	83.2	82.37	84.08		
Rural	2,065	167,223	17.9	16.71	19.19	9,503	766,095	82.1	80.81	83.29		
Sex												
Male	2,180	178,366	16.8	15.80	17.84	10,919	883,779	83.2	82.16	84.20		
Female	2,586	191,354	17.7	16.82	18.66	11,753	888,260	82.3	81.34	83.18		

Table 3.5.6: Prevalence of avoidance of smiling or laughing due to the appearance of their teeth among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Yes			No						
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper
Form										
Form 1	1,065	85,800	19.1	17.43	20.84	4,623	363,941	80.9	79.16	82.57
Form 2	919	69,640	16.4	14.93	17.88	4,570	356,261	83.6	82.12	85.07
Form 3	975	70,175	16.3	15.06	17.68	4,845	359,677	83.7	82.32	84.94
Form 4	1,002	77,329	18.7	17.11	20.39	4,522	336,365	81.3	79.61	82.89
Form 5	805	66,775	15.8	14.65	17.03	4,112	355,795	84.2	82.97	85.35
Ethnicity										
Malay	3,318	235,581	17.4	16.73	18.16	15,353	1,115,534	84.2	82.19	86.08
Chinese	640	56,499	15.8	13.92	17.81	3,455	301,737	82.6	81.84	83.27
Indian	251	27,878	18.7	16.85	20.76	1,173	120,976	81.3	79.24	83.15
Bumiputera Sabah	299	25,800	17.3	13.59	21.79	1,479	123,267	82.7	78.21	86.41
Bumiputera Sarawak	160	16,979	17.6	14.74	20.81	758	79,648	82.4	79.19	85.26
Others	98	6,983	18.4	14.28	23.48	454	30,877	81.6	76.52	85.72

Table 3.5.7: Prevalence of use of soap during hand washing in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Never or rarely use soap during hand washing						Sometimes					
	Unweighted			95% CI			Unweighted			95% CI		
	Count	Estimated Population	Prevalence (%)	Lower	Upper	Count	Estimated Population	Prevalence (%)	Lower	Upper		
MALAYSIA	2,997	248,480	11.6	10.85	12.37	7,038	548,351	25.6	24.58	26.59		
State												
Johor	165	26,241	9.5	7.79	11.59	434	69,931	25.4	22.66	28.29		
Kedah	174	15,815	10.2	8.69	12.02	452	42,110	27.2	24.19	30.53		
Kelantan	301	23,108	19.0	15.83	22.68	502	36,831	30.3	27.16	33.66		
Melaka	136	4,827	7.2	6.06	8.50	476	16,721	24.9	22.30	27.68		
N. Sembilan	132	7,006	7.9	6.28	9.96	456	23,558	26.7	23.59	29.98		
Pahang	200	12,584	12.2	9.30	15.74	474	27,907	27.0	24.02	30.13		
Pulau Pinang	162	10,936	9.7	7.77	12.05	437	28,421	25.2	21.30	29.58		
Perak	254	26,371	14.5	11.92	17.61	423	43,748	24.1	21.75	26.64		
Perlis	150	2,495	9.2	7.08	11.97	372	6,116	22.7	19.98	25.57		
Selangor	203	46,710	11.9	9.65	14.70	419	93,632	23.9	20.42	27.85		
Terengganu	233	14,018	14.2	11.68	17.20	466	27,302	27.7	24.62	30.99		
Sabah	194	22,800	11.5	9.03	14.48	428	50,264	25.3	23.09	27.64		
Sarawak	221	24,129	12.2	9.99	14.83	450	49,706	25.1	22.49	28.00		
WP Kuala Lumpur	142	10,132	9.0	7.18	11.29	430	28,664	25.5	21.38	30.18		
WP Labuan	170	557	10.1	8.65	11.73	393	1,293	23.4	20.68	26.35		
WP Putrajaya	160	750	9.0	8.26	9.70	426	2,145	25.6	23.97	27.32		
Locality of school												
Urban	1,548	127,816	10.6	9.53	11.71	3,962	295,966	24.5	23.04	25.95		
Rural	1,449	120,663	12.9	11.86	14.04	3,076	252,384	27.0	25.80	28.25		
Sex												
Male	1,823	149,534	14.1	13.03	15.15	3,572	289,585	27.2	25.86	28.61		
Female	1,174	98,946	9.2	8.32	10.07	3,466	258,766	24.0	22.87	25.08		

Table 3.5.7: Prevalence of use of soap during hand washing in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Never or rarely use soap during hand washing						Sometimes						
	Unweighted			95% CI			Unweighted			95% CI			
	Count	Estimated Population	Prevalence (%)	Lower	Upper	Count	Estimated Population	Prevalence (%)	Lower	Upper			
Form													
Form 1	685	56,917	12.6	11.23	14.19	1,371	105,760	23.5	21.71	25.34			
Form 2	666	54,057	12.7	11.21	14.28	1,479	113,929	26.7	25.04	28.41			
Form 3	601	46,075	10.7	9.28	12.30	1,492	114,750	26.6	25.11	28.23			
Form 4	594	45,259	10.9	9.54	12.52	1,398	104,280	25.2	23.80	26.67			
Form 5	451	46,173	10.9	9.62	12.40	1,298	109,633	26.0	23.45	28.62			
Ethnicity													
Malay	1,999	151,706	11.2	10.33	12.16	4,772	344,961	25.5	24.26	26.78			
Chinese	540	52,409	14.6	12.86	16.58	1,210	104,339	29.1	27.18	31.13			
Indian	92	11,341	7.6	5.88	9.80	229	25,028	16.8	14.20	19.78			
Bumiputera Sabah	188	16,684	11.2	8.41	14.70	432	37,546	25.2	22.45	28.07			
Bumiputera Sarawak	115	12,249	12.7	10.09	15.75	245	26,174	27.0	21.88	32.89			
Others	63	4,092	10.8	7.93	14.46	150	10,303	27.1	22.69	32.05			

Table 3.5.7: Prevalence of use of soap during hand washing in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Most of the times or Always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	17,431	1,347,314	62.8	61.39	64.26
State					
Johor	1,131	179,430	65.1	61.35	68.68
Kedah	1,064	96,638	62.5	58.64	66.25
Kelantan	825	61,564	50.7	46.05	55.28
Melaka	1,258	45,628	67.9	64.74	70.95
N. Sembilan	1,129	57,787	65.4	61.40	69.21
Pahang	1,108	62,993	60.9	55.43	66.06
Pulau Pinang	1,146	73,360	65.1	59.90	69.93
Perak	1,075	111,338	61.4	56.94	65.60
Perlis	1,144	18,387	68.1	64.32	71.66
Selangor	1,047	250,797	64.1	58.55	69.34
Terengganu	969	57,285	58.1	54.13	61.96
Sabah	1,062	125,623	63.2	59.32	66.96
Sarawak	1,106	123,851	62.7	58.14	66.95
WP Kuala Lumpur	1,147	73,475	65.4	60.06	70.46
WP Labuan	1,144	3,676	66.5	62.43	70.37
WP Putrajaya	1,076	5,481	65.4	63.60	67.23
Locality of school					
Urban	10,372	785,907	65.0	62.83	67.04
Rural	7,059	561,407	60.1	58.25	61.88
Sex					
Male	7,725	624,864	58.7	56.63	60.80
Female	9,706	722,450	66.9	65.49	68.25
Form					
Form 1	3,637	287,776	63.9	61.79	65.93
Form 2	3,355	258,850	60.6	58.43	62.82
Form 3	3,740	269,925	62.7	60.28	64.99
Form 4	3,532	264,170	63.9	61.59	66.06
Form 5	3,167	266,592	63.1	60.40	65.75
Ethnicity					
Malay	11,919	856,112	63.3	61.42	65.11
Chinese	2,348	201,621	56.3	53.79	58.70
Indian	1,102	112,539	75.6	71.93	78.89
Bumiputera Sabah	1,160	95,038	63.7	58.92	68.16
Bumiputera Sarawak	561	58,401	60.3	52.72	67.45
Others	341	23,602	62.1	55.58	68.24

Table 3.5.8: Prevalence of handwashing before eating in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Never or rarely wash hands before eating				Sometimes					
	Unweighted Count	Estimated Population	Prevalence (%)		Unweighted Count	Estimated Population	Prevalence (%)			
			Lower	Upper			Lower	Upper		
MALAYSIA	1,508	130,152	6.1	5.47	6.73	2,592	213,477	10.0	9.19	10.78
State										
Johor	75	12,105	4.4	2.82	6.80	179	27,640	10.0	7.87	12.72
Kedah	85	7,795	5.0	3.66	6.90	168	15,440	10.0	7.64	12.94
Kelantan	107	8,650	7.1	5.22	9.63	137	10,645	8.8	6.24	12.14
Melaka	77	2,628	3.9	2.67	5.68	175	6,221	9.3	7.46	11.43
N. Sembilan	72	4,071	4.6	3.03	6.93	138	7,526	8.5	5.84	12.26
Pahang	125	7,931	7.7	4.69	12.26	144	8,828	8.5	5.95	12.07
Pulau Pinang	95	6,761	6.0	4.04	8.82	197	13,306	11.8	7.53	18.01
Perak	149	15,018	8.3	5.41	12.46	174	18,114	10.0	6.85	14.31
Perlis	78	1,374	5.1	3.54	7.27	106	1,802	6.7	4.87	9.10
Selangor	104	23,921	6.1	4.68	7.94	161	35,910	9.2	7.29	11.48
Terengganu	93	5,757	5.8	4.20	8.07	132	7,744	7.9	6.22	9.87
Sabah	97	11,501	5.8	4.23	7.87	202	23,964	12.1	10.03	14.44
Sarawak	137	15,180	7.7	6.17	9.51	193	21,430	10.8	9.22	12.68
WP Kuala Lumpur	94	7,030	6.3	4.24	9.13	210	13,850	12.3	9.01	16.63
WP Labuan	83	263	4.7	3.23	6.93	172	550	9.9	7.97	12.34
WP Putrajaya	37	168	2.0	1.23	3.23	104	506	6.0	4.99	7.31
Locality of school										
Urban	838	72,999	6.0	5.16	7.04	1,568	125,672	10.4	9.23	11.66
Rural	670	57,153	6.1	5.35	6.98	1,024	87,805	9.4	8.55	10.31
Sex										
Male	970	84,805	8.0	7.20	8.82	1,380	118,422	11.1	10.18	12.15
Female	538	45,347	4.2	3.52	4.99	1,212	95,054	8.8	7.89	9.79

Table 3.5.8: Prevalence of handwashing before eating in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Never or rarely wash hands before eating					Sometimes				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper
Form										
Form 1	388	34,989	7.8	6.54	9.18	593	50,102	11.1	9.85	12.51
Form 2	365	30,368	7.1	5.94	8.50	580	48,895	11.5	10.06	13.02
Form 3	301	22,630	5.3	4.46	6.18	525	40,276	9.4	8.21	10.64
Form 4	261	21,534	5.2	4.17	6.47	478	37,157	9.0	7.87	10.22
Form 5	193	20,631	4.9	4.08	5.82	416	37,046	8.8	7.59	10.10
Ethnicity										
Malay	708	47,200	4.0	3.56	4.51	1,258	74,532	6.8	6.13	7.54
Chinese	498	10,216	13.2	11.38	15.19	863	12,082	20.8	19.23	22.45
Indian	89	8,139	6.8	5.32	8.78	98	18,168	8.1	6.46	10.11
Bumiputera Sabah	98	8,059	5.5	4.21	7.05	204	11,990	12.2	9.88	14.93
Bumiputera Sarawak	79	2,275	8.3	6.15	11.17	107	4,692	12.4	10.12	15.07
Others	36	2,275	6.0	4.17	8.53	62	4,692	12.3	9.33	16.17

Table 3.5.8: Prevalence of handwashing before eating in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Most of the times or Always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	23,381	1,801,350	84.0	82.66	85.22
State					
Johor	1,475	235,643	85.6	81.29	89.00
Kedah	1,438	131,410	85.0	80.79	88.38
Kelantan	1,386	102,314	84.1	79.39	87.95
Melaka	1,620	58,385	86.8	83.45	89.62
N. Sembilan	1,507	76,782	86.9	81.27	90.99
Pahang	1,514	86,808	83.8	76.49	89.18
Pulau Pinang	1,454	92,717	82.2	73.96	88.26
Perak	1,429	148,356	81.7	74.00	87.57
Perlis	1,482	23,818	88.2	84.40	91.22
Selangor	1,405	331,545	84.7	80.99	87.82
Terengganu	1,443	85,104	86.3	83.20	88.92
Sabah	1,385	163,268	82.2	78.74	85.13
Sarawak	1,449	161,278	81.5	78.64	84.05
WP Kuala Lumpur	1,417	91,497	81.4	74.87	86.57
WP Labuan	1,456	4,723	85.3	81.41	88.51
WP Putrajaya	1,521	7,702	92.0	90.38	93.29
Locality of school					
Urban	13,487	1,011,628	83.6	81.55	85.43
Rural	9,894	789,722	84.5	82.97	85.90
Sex			0.0		
Male	10,773	860,737	80.9	79.36	82.35
Female	12,608	940,613	87.0	85.58	88.32
Form					
Form 1	4,719	365,747	81.1	78.92	83.15
Form 2	4,554	347,441	81.4	79.01	83.62
Form 3	5,008	367,767	85.4	83.59	87.03
Form 4	4,787	355,294	85.8	83.86	87.59
Form 5	4,313	365,099	86.4	84.56	87.97
Ethnicity					
Malay	16,735	1,207,134	89.2	88.13	90.17
Chinese	2,738	236,721	66.0	63.32	68.66
Indian	1,240	126,869	85.1	82.57	87.24
Bumiputera Sabah	1,477	122,820	82.4	79.11	85.20
Bumiputera Sarawak	735	76,775	79.3	75.44	82.68
Others	456	31,030	81.7	77.18	85.43

Table 3.5.9: Prevalence of handwashing after using the toilet in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Never or rarely wash hands after using the toilet						Sometimes										
	Unweighted Count		Estimated Population		Prevalence (%)		95% CI		Unweighted Count		Estimated Population		Prevalence (%)		95% CI		
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper	
MALAYSIA	1,319	103,739	4.8	4.44	5.28	2,292	182,939	8.5	8.00	9.11							
State																	
Johor	50	7,714	2.8	2.10	3.72	133	21,449	7.8	6.26	9.63							
Kedah	91	8,403	5.4	4.16	7.08	179	16,374	10.6	7.80	14.23							
Kelantan	152	12,216	10.1	7.93	12.67	215	15,960	13.1	11.14	15.42							
Melaka	52	1,917	2.9	2.06	3.95	142	5,111	7.6	6.22	9.32							
N. Sembilan	55	3,308	3.7	2.61	5.35	117	5,987	6.8	5.51	8.31							
Pahang	95	5,976	5.8	4.06	8.13	142	8,572	8.3	6.91	9.87							
Pulau Pinang	65	4,323	3.8	2.59	5.66	105	6,639	5.9	4.30	8.03							
Perak	108	11,472	6.3	4.95	8.08	152	15,922	8.8	6.82	11.27							
Perlis	97	1,679	6.2	4.26	9.00	125	2,119	7.9	6.80	9.05							
Selangor	78	17,624	4.5	3.39	5.99	161	35,950	9.2	7.83	10.80							
Terengganu	124	7,422	7.5	5.48	10.31	156	9,384	9.5	8.08	11.24							
Sabah	76	9,158	4.6	3.37	6.28	125	14,925	7.5	6.11	9.20							
Sarawak	72	8,067	4.1	3.18	5.22	123	13,836	7.0	5.21	9.34							
WP Kuala Lumpur	52	3,857	3.4	2.62	4.49	142	9,567	8.5	7.41	9.77							
WP Labuan	79	253	4.6	3.11	6.70	115	370	6.7	5.66	7.92							
WP Putrajaya	73	349	4.2	2.87	6.01	160	775	9.3	7.43	11.47							
Locality of school																	
Urban	630	47,158	3.9	3.38	4.50	1,189	92,642	7.7	6.98	8.41							
Rural	689	56,581	6.1	5.44	6.74	1,103	90,297	9.7	8.87	10.53							
Sex																	
Male	847	65,822	6.2	5.64	6.79	1,193	99,040	9.3	8.57	10.12							
Female	472	37,917	3.5	3.05	4.04	1,099	83,899	7.8	7.13	8.47							

Table 3.5.9: Prevalence of handwashing after using the toilet in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Never or rarely wash hands after using the toilet						Sometimes					
	Unweighted		Estimated		95% CI		Unweighted		Estimated		95% CI	
	Count	Population	Prevalence (%)	Lower	Upper	Count	Population	Prevalence (%)	Lower	Upper		
Form												
Form 1	386	31,506	7.0	6.07	8.07	571	45,265	10.1	8.72	11.58		
Form 2	301	23,555	5.5	4.72	6.45	524	40,626	9.5	8.43	10.74		
Form 3	258	17,579	4.1	3.36	4.95	428	33,998	7.9	6.85	9.08		
Form 4	214	17,342	4.2	3.29	5.33	441	34,095	8.2	7.30	9.29		
Form 5	160	13,757	3.3	2.55	4.16	328	28,955	6.9	5.90	7.96		
Ethnicity												
Malay	960	69,495	5.1	4.67	5.65	1,716	128,468	9.5	8.86	10.18		
Chinese	153	15,397	4.3	3.27	5.64	246	22,294	6.2	5.20	7.45		
Indian	59	6,433	4.3	3.11	5.97	82	9,635	6.5	4.95	8.41		
Bumiputera Sabah	70	5,941	4.0	2.54	6.20	123	10,673	7.2	5.55	9.18		
Bumiputera Sarawak	42	4,236	4.4	3.08	6.19	59	6,547	6.8	4.17	10.77		
Others	35	2,238	5.9	4.03	8.54	66	5,322	14.0	10.43	18.55		

Table 3.5.9: Prevalence of handwashing after using the toilet in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic characteristics	Most of the times or Always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	23,841	1,856,195	86.6	85.85	87.36
State					
Johor	1,547	246,439	89.4	87.10	91.36
Kedah	1,420	129,787	84.0	79.83	87.39
Kelantan	1,262	93,347	76.8	73.74	79.63
Melaka	1,672	59,994	89.5	87.68	91.10
N. Sembilan	1,544	79,031	89.5	86.78	91.68
Pahang	1,547	89,082	86.0	82.29	88.97
Pulau Pinang	1,574	101,686	90.3	87.03	92.76
Perak	1,488	153,667	84.9	81.27	87.88
Perlis	1,444	23,191	85.9	83.26	88.23
Selangor	1,428	336,987	86.3	84.13	88.19
Terengganu	1,384	81,529	82.9	79.99	85.48
Sabah	1,483	174,650	87.9	85.70	89.77
Sarawak	1,582	175,754	88.9	86.05	91.26
WP Kuala Lumpur	1,526	98,902	88.0	86.21	89.67
WP Labuan	1,511	4,895	88.7	85.93	91.01
WP Putrajaya	1,429	7,252	86.6	83.50	89.16
Locality of school					
Urban	14,056	1,068,985	88.4	87.39	89.40
Rural	9,785	787,210	84.3	83.09	85.39
Sex					
Male	11,076	898,687	84.5	83.48	85.46
Female	12,765	957,508	88.7	87.80	89.57
Form					
Form 1	4,732	373,036	82.9	80.93	84.77
Form 2	4,670	362,405	85.0	83.34	86.43
Form 3	5,144	379,046	88.0	86.67	89.26
Form 4	4,867	362,223	87.6	85.93	89.04
Form 5	4,428	379,484	89.9	88.44	91.16
Ethnicity					
Malay	16,006	1,154,060	85.4	84.44	86.23
Chinese	3,694	320,188	89.5	87.57	91.10
Indian	1,282	132,859	89.2	86.40	91.50
Bumiputera Sabah	1,586	132,610	88.9	86.35	90.97
Bumiputera Sarawak	820	86,041	88.9	84.02	92.37
Others	453	30,437	80.1	75.06	84.34

3.6 Internet Use and Addiction

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3.6.1 Introduction

Internet use has grown rapidly in Malaysia parallel with an increasing number of households having computers and mobile gadgets that are linked to internet access. It has been reported that the increase in internet use is more pronounced in urban than in rural areas. Major online activities include information seeking for educational, vocational and socializing purposes. Internet usage affects both adult and adolescent age groups equally compared to older age group.¹ Internet usage could be harmful to adolescents when it is not monitored or supervised by an adult. Uncontrolled use of internet has been linked to psychosocial problems such as addiction to online gaming, pornographic websites and social networking sites, not to mention exposing the adolescents to cyber-bullying environments. Excessive internet use and cyber bullying may in turn further worsen the mental health condition of these adolescents and predisposed them to depression, anxiety and stress.²

The terminology of internet addiction to describe excessive internet use has been debated and various tools have been developed to measure the internet addiction. The most widely used tool was the Internet Addiction Test (IAT) developed by Kimberly S. Young.³ The questionnaire consists of 20 items measured using a 5-point Likert scale (1=rarely, 2=occasionally, 3=frequently, 4=often and 5=always) with the highest possible score of 100. Internet addiction is defined as a person scoring of 43 points or above. This questionnaire was validated in Bahasa Malaysia by Chong Guan et al in 2012 and was named Malay Version Internet Addiction Test (MVIAT).⁴ The (MVIAT) showed a good internal consistency (Cronbach's $\alpha = 0.91$, $P < 0.001$), parallel reliability (intra-class coefficient correlation= 0.88, $P < 0.001$) and concurrent validity with Compulsive Internet Use Scale (Pearson's correlation= 0.84, $P < 0.001$).

3.6.2 Objectives

- i. To identify the prevalence of internet use among adolescents in the past 30 days
- ii. To identify the prevalence of internet addiction among adolescents
- iii. To identify the type of devices used by internet users and addicts

3.6.3 Variable Definitions

- **Internet Use:** Internet access using any internet connecting devices for the past 30 days.
- **Internet Addiction:** Using a self-administered 20-item Malay Version Internet Addiction Test (MVIAT) questionnaire, respondents with a total score of 43 or above (all items answered) were defined as having internet addiction.

3.6.4 Findings

There were 27,455 secondary school students responded to this module, of which 3,657 students were not surfing internet for the past 30 days and 23,206 students completed the MVIAT. The overall prevalence of internet use was 85.6% (95% CI: 84.28, 86.89) with an estimated projection to 1,835,343 school-going adolescents. The highest prevalence of internet use was in WP Kuala Lumpur 94.7% (95% CI: 92.30, 96.42), followed by WP Putrajaya 94.5% (95% CI: 90.51, 96.88) and Johor 93.0% (95% CI: 90.34, 94.97). The lowest prevalence of internet use was in Kelantan 72.5% (95% CI: 64.72, 79.09) and Sabah 75.9% (95% CI: 69.45, 81.42). In terms of school locality, students studying in urban areas had higher prevalence of internet use compared to students from rural areas. Being female and studying in higher-grade classes were reported to have a higher usage of internet. Students of Chinese ethnic group had a higher prevalence of internet use compared to other ethnic groups. **(Table 3.6.1)**

The overall prevalence of internet addiction was 29.0% (95% CI: 27.75, 30.37). The highest prevalence of internet addiction was observed in WP Kuala Lumpur 39.2% (95% CI: 37.35, 41.07), WP Putrajaya 38.6% (95% CI: 33.84, 43.59) and WP Labuan 34.0% (95% CI: 30.83, 37.23). The lowest prevalence of internet addiction was in Kelantan 17.4% (95% CI: 14.30, 21.07) and

Terengganu 19.8% (95% CI: 17.10, 22.72). Students in urban schools have a higher prevalence of internet addiction compared to students in rural schools. There was no significant gender difference with regards to internet addiction. Students from higher-grade classes were reported to have a higher prevalence of internet addiction. Those students of Chinese ethnic group were observed to have a higher prevalence of internet addiction compared to other ethnic groups **(Table 3.6.2)**. Smartphone was the most prevalent device used by internet users and addicts followed by the computer, laptop, or notebook group and tablet or iPad group. **(Table 3.6.4)**

3.6.5 Discussion

It was estimated that there were over 21 million internet users in Malaysia.⁵ In this study, 85.6% of the students identified themselves as internet users and majority of them came from urban areas and from states with high internet penetration rate. Female students and students studying in higher-grade classes reported spending more time on internet. It was observed that internet use was more prevalent among the Chinese than other ethnic groups. The finding of overall internet use among school-going adolescents in Malaysia was comparable to that of Japanese adolescents (12-19 years) where there was a higher internet use among female students and students in higher-grade classes.⁶

The overall prevalence of internet addiction among students was 29.0%. Its socio-demographic distribution followed the pattern of internet usage whereby it is more prevalent in the states with high internet penetration rate, urban areas, Chinese ethnic group and those in higher-grade classes. Higher use of internet among Chinese students may explain the higher rate of internet addiction among them as observed in previous study.⁷ A study involving Nigerian adolescents in urban areas showed that those from a higher-grade classes have a higher internet addiction.⁸ Gender distribution showed a higher inclination of male students to be addicted to internet as compared to females in previous study, however in this study the difference is insignificant.^{9,10} Internet addiction showed a wide variation of prevalence globally in view of its conceptualization in its terminology and instruments used in its measurement. Based on the systematic review by Kuss et al (2014), the tools are classified into 3 major groups which are IAT and Internet Addiction

Diagnostic Questionnaires (IADQ) group, Chen 's Internet Addiction scale and Miscellaneous Diagnostic Assessment Tools group.¹¹ The prevalence of internet addiction using IAT with different cut-off scores ranged from 0.8% to 20.3% among adolescents and children aged 8 to 24 years with sample sizes ranging from 1,618 to 17,599 respondents in seven studies as reported by Kuss et al.¹¹ Similarly, the results echoed the findings that reflected various prevalence rates of internet addiction using IAT in Malaysian adolescents which ranged from 2.4% to 43.0% resulting from the use of various cut-off scores and different target groups of adolescents.^{4,9,12} The findings have an implication on the review of internet addiction terminology that needs further refinement in order to define internet addiction accurately.

3.6.6 Conclusion

Internet is widely accessed by adolescents mainly via smartphone. Students who were females, studying in urban schools, from higher-grade classes in school and of Chinese ethnicity had a higher usage of internet. Internet addiction is a new emerging problem among adolescents in urbanised states and urban areas which needs further in-depth study. The prevalence of internet addiction is higher in urban areas, increasing grade in school and Chinese ethnicity. There was no significant difference in prevalence of internet addiction between males and females.

3.6.7 Recommendations

1. The internet addiction problems among Malaysian students is considered as new health risk behaviour that needs further in-depth understanding on internet accessibility, usage, difference in type of content viewed by age, gender and ethnicity, psychosocial factors and role of significant adult supervision, peers and environment to assist in designing specific strategies in prevention program.
2. As internet use and addiction increase with age, it is important that adolescents develop self-awareness on sign of internet addiction and develop self-control against excessive internet usage. It is proposed that the component of self-awareness and control against

excessive internet usage is to be integrated into the 'Click Wisely Program' which was introduced by the Malaysian Communication Multimedia Commission (MCMC).

3. Parents should be made aware on dangers of excessive internet usage by secondary students and its detrimental effects on students' health and social development. It is proposed that development of health-related information on the internet addiction should be designed specifically for students and parents. To ensure wide circulation of the messages, it is recommended that the Ministry of Health to collaborate with MCMC in disseminating the information through MCMC social network and Malaysian ICT volunteer (MIV) programs.
4. Smart partnerships with various agencies (governments, NGOs and private sectors) need to be enhanced to disseminate greater awareness on dangers of internet addiction and safe usage of internet to children, adolescents, parents, teachers and the community at large to assist in promotive, preventive and early intervention of internet addiction.

3.6.8 References

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Table 3.6.1: Prevalence of internet use in the past 30 days among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic characteristics	Internet Users				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	23,798	1,835,343	85.6	84.28	86.89
State					
Johor	1,611	256,415	93.0	90.34	94.97
Kedah	1,439	132,191	85.6	81.78	88.66
Kelantan	1,224	87,934	72.5	64.72	79.09
Melaka	1,719	61,713	91.9	87.06	94.99
N. Sembilan	1,608	81,926	92.6	89.30	95.00
Pahang	1,596	91,197	88.0	82.59	91.90
Pulau Pinang	1,555	99,708	88.5	84.05	91.84
Perak	1,444	149,309	82.4	77.51	86.34
Perlis	1,431	23,023	85.4	80.10	89.49
Selangor	1,442	341,546	87.4	83.00	90.73
Terengganu	1,382	81,192	82.4	77.29	86.48
Sabah	1,274	150,314	75.9	69.45	81.42
Sarawak	1,431	159,765	80.8	74.85	85.60
WP Kuala Lumpur	1,630	106,451	94.7	92.30	96.42
WP Labuan	1,454	4,743	86.0	79.43	90.74
WP Putrajaya	1,558	7,916	94.5	90.51	96.88
Locality of school					
Urban	14,272	1,077,370	89.1	87.11	90.74
Rural	9,526	757,973	81.2	79.06	83.17
Sex					
Male	11,082	891,767	83.8	82.35	85.24
Female	12,716	943,576	87.4	85.83	88.81
Form					
Form 1	4,343	334,079	74.2	71.39	76.86
Form 2	4,592	350,960	82.3	79.56	84.72
Form 3	5,176	380,321	88.3	86.28	90.12
Form 4	5,064	374,948	90.7	88.56	92.47
Form 5	4,623	395,034	93.5	91.51	95.03
Ethnicity					
Malay	16,320	1,171,002	86.6	85.22	87.83
Chinese	3,747	326,720	91.3	89.07	93.06
Indian	1,161	116,662	78.3	73.26	82.70
Bumiputera Sabah	1,404	115,549	77.6	69.67	83.90
Bumiputera Sarawak	727	75,540	78.0	69.72	84.54
Others	439	29,870	78.6	67.96	86.43

Table 3.6.2: Prevalence of positive Malay Version Internet Addiction Test (MVIAT) among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic characteristics	Positive MVIAT				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	8,049	622,418	29.0	27.75	30.37
State					
Johor	580	93,372	33.9	30.84	37.03
Kedah	425	39,538	25.6	22.33	29.15
Kelantan	298	21,143	17.4	14.30	21.07
Melaka	566	19,753	29.4	26.17	32.86
N. Sembilan	519	25,933	29.3	27.09	31.67
Pahang	564	31,813	30.7	26.99	34.68
Pulau Pinang	581	37,080	32.9	27.67	38.62
Perak	448	46,210	25.5	21.14	30.39
Perlis	434	7,051	26.2	21.76	31.09
Selangor	492	119,227	30.5	26.19	35.18
Terengganu	334	19,481	19.8	17.10	22.72
Sabah	490	57,849	29.2	24.44	34.52
Sarawak	487	54,817	27.7	22.84	33.20
WP Kuala Lumpur	656	44,045	39.2	37.35	41.07
WP Labuan	568	1,872	34.0	30.83	37.23
WP Putrajaya	607	3,233	38.6	33.84	43.59
Locality of school					
Urban	5,149	390,106	32.2	30.53	34.01
Rural	2,900	232,312	24.9	23.13	26.74
Sex					
Male	3,942	318,301	29.9	28.32	31.59
Female	4,107	304,116	28.2	26.58	29.81
Form					
Form 1	1,078	82,852	18.4	16.64	20.32
Form 2	1,353	100,273	23.5	21.55	25.59
Form 3	1,815	135,206	31.4	29.22	33.67
Form 4	1,942	143,767	34.8	32.89	36.71
Form 5	1,861	160,320	37.9	35.14	40.82
Ethnicity					
Malay	5,373	380,890	28.2	26.63	29.74
Chinese	1,383	122,868	34.3	31.95	36.78
Indian	320	35,287	23.7	20.28	27.50
Bumiputera Sabah	557	45,597	30.6	24.56	37.41
Bumiputera Sarawak	266	28,052	29.0	21.73	37.48
Others	150	9,724	25.6	20.51	31.44

Table 3.6.3: Percentage of reported devices used by internet users among Form 1 to Form 5 students Malaysia, 2017

Type of Devices	Unweighted Count	Percentage (%)	95% CI	
			Lower	Upper
Smartphone	22,274	93.7	93.14	94.31
Computer, Laptop, Notebook	13,737	57.0	55.16	58.76
Tablet, Ipad use	6,222	26.1	24.58	27.74

Table 3.6.4: Percentage of reported devices used by internet addicts among Form 1 to Form 5 students Malaysia, 2017

Type of Devices	Unweighted Count	Percentage (%)	95% CI	
			Lower	Upper
Smartphone	7,623	94.4	93.28	95.40
Computer, Laptop, Notebook	5,077	62.2	60.21	64.19
Tablet, Ipad use	2,559	31.1	29.26	33.09

3.7 Mental Health Problems

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3.7.1 Introduction

The World Health Organisation (WHO) estimates that one in five adolescents and children suffer from mental health problem and half of all mental illnesses begin by the age of 14.¹ In Malaysia, the National Health and Morbidity Survey (NHMS) 2015 reported prevalence of mental health problems among 16 to 19 years old of 34.7%, while among 10-15 years the prevalence was 11.4%.² In particular, WHO reported that suicide is the second leading cause of death among those youth.³ In 2011, NHMS observed that 2.4% of youth 16-24 years reported suicidal ideation.⁴

3.7.2 Objectives

- i. To identify the prevalence of loneliness in the past 12 months
- ii. To identify the prevalence of inability to sleep due to worry in the past 12 months
- iii. To identify the prevalence of suicidal ideation in the past 12 months
- iv. To identify the prevalence of suicidal plan in the past 12 months
- v. To identify the prevalence of suicidal attempt in the past 12 months
- vi. To identify the prevalence of not having close friend

3.7.3 Variable definitions

- **Lonely “most of the time or always”:** Responded either “most of the time” or “always” for felt lonely during past 12 months prior to the survey.
- **Unable to sleep “most of the time or always” due to worry:** Responded either “most of the time” or “always” for being worried about something that he/she could not sleep at night during past 12 months prior to the survey.

- **Suicidal ideation:** ever seriously considered attempting suicide in the past 12 months prior to the survey.
- **Suicidal plan:** made a plan of attempted suicide in the past 12 months prior to the survey.
- **Suicidal attempt:** attempted suicide at least once in the past 12 months prior to the survey.
- **No close friend:** Do not have any close friend

3.7.4 Findings

Overall, 9.3% (95%CI: 8.75, 9.91) of secondary school students in Malaysia reported feeling lonely “most of the time or always”. By state, “felt lonely” was highest in WP Kuala Lumpur; 13.4% (95% CI: 11.31, 15.71). The prevalence was significantly higher in urban areas and among female students. The prevalence increased with age and highest among Indians (**Table 3.7.1**). A total of 7.1% (95%CI: 6.52, 7.73) students reported unable to sleep “most of the time or always” due to worry. The prevalence was highest in WP Kuala Lumpur; 9.8% (95%CI: 7.80, 12.21). By locality, it was higher in urban areas as compared to the rural area while by ethnicity, the prevalence was highest amongst Indians. There was no difference detected by sex or age (**Table 3.7.2**). In the past 12 months prior to the survey, suicidal ideation, plan and attempt, were reported by 10.0% (95%CI: 9.24,10.79), 7.3% (95%CI: 6.67, 8.05), and 6.9% (95%CI: 6.24, 7.71) students, respectively. By state, suicidal ideation was highest in WP Kuala Lumpur (**Table 3.7.3**), while Selangor was noted as highest for suicidal plan (**Table 3.7.4**). Table 6.5 described that suicidal attempt as highest in Perak (9.3%, 95%CI: 6.83, 12.51), and amongst Indian ethnicity (17.9%, 95% CI: 14.27, 22.15). There was no difference in the prevalence of suicidal ideation, plan or attempt by sex or age. The survey also observed that 3.6% (95%CI: 3.20, 4.07) of the students had no close friends, with Pahang noted having the highest prevalence (5.2%, 95%CI: 4.17, 6.56). The prevalence was significantly higher among males as compared to the females; 4.5% (95%CI: 3.93, 5.14) vs 2.7% (95%CI: 2.30, 3.26), while Indian students reported highest prevalence of having no close friend (**Table 3.7.6**).

3.7.5 Discussion

Suicidal ideation among secondary school students in Malaysia increased from 7.9% in Malaysia GSHS 2012⁵ to 10.0% in this current survey. In comparison to our neighbouring countries, this figure was higher compared to the prevalence in Indonesia GSHS 2015⁶ and Brunei GSHS 2014⁷, 5.4% and 9.2%, respectively, but lower compared to Thailand GSHS 2015 (12.5%)⁸. Comparing to developed countries, suicidal ideation in Malaysia was higher compared to the prevalence among Canadian youth in 2012 with 5.8%⁹ but much lower compared to findings in United States (US) from their Youth Risk Behaviour Surveillance Study (YRBSS) 2015 with 17.7%¹⁰. Prevalence of suicidal plan in this survey was also higher compared to the prevalence in Malaysia GSHS 2012 (6.4%).⁵ This prevalence was observed as higher compared to the prevalence in Canada (2.2%) but lower compared to US YRBSS with 14.6% suicidal plan.^{9,10} Suicidal attempts among students did not demonstrate any significant difference compared to previous Malaysia GSHS 2012 (6.8%).⁵ However, this prevalence is higher compared to Brunei GSHS 2014 (5.7%) and Indonesia GSHS 2015 (3.9%), but lower than the prevalence in Thailand GSHS 2015 (13.3%).⁶⁻⁸ Compared to Canada with only 1.0% of suicidal attempts among youth 15 to 24 years, our prevalence was alarmingly high.⁹ However, our prevalence is lower than the prevalence in US YRBSS in 2015 with 8.6% reported suicidal attempts.¹⁰ In addition to these, more students reported as having no close friend as compared to previous Malaysia GSHS 2012 (3.6% vs 3.1%). This figure also higher compared to 3.0% in both Brunei GSHS 2014 and Indonesia GSHS 2015, but lower than Thailand GSHS 2015 (6.4%).⁶⁻⁸

3.7.6 Conclusion

Overall, 9.3% of students reported felt lonely with 7.1% unable to sleep at night due to worry. Suicidal ideation, plan and attempt were observed among 10.0%, 7.3%, and 6.9% of students, respectively. About 3.6% revealed having no close friend.

3.7.7 Recommendations

1. Screening of at-risk students by School Health Teams and referral for further management
2. Holistic intervention programmes targeted to students at risk of suicide
3. Strengthen students coping skills and resilience through interactive health promotion activities

3.7.8 References

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Table 3.7.1: Prevalence of loneliness "most of the time or always" in the past 12 months among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	2,482	199,551	9.3	8.75	9.91
State					
Johor	158	24,420	8.9	7.20	10.86
Kedah	133	12,477	8.1	6.47	10.04
Kelantan	114	8,478	7.0	5.49	8.87
Melaka	120	4,425	6.6	5.48	7.89
N. Sembilan	143	7,228	8.2	6.54	10.19
Pahang	176	10,390	10.0	8.35	12.01
Pulau Pinang	161	10,335	9.2	6.97	11.99
Perak	161	16,973	9.4	7.61	11.51
Perlis	134	2,079	7.7	6.64	8.94
Selangor	162	39,611	10.1	8.26	12.39
Terengganu	113	6,676	6.8	5.71	8.07
Sabah	168	20,085	10.1	8.78	11.58
Sarawak	174	20,027	10.1	8.67	11.82
WP Kuala Lumpur	232	14,994	13.4	11.31	15.71
WP Labuan	173	540	9.8	7.99	11.89
WP Putrajaya	160	813	9.7	7.99	11.76
Locality of school					
Urban	1,552	122,382	10.1	9.32	10.98
Rural	930	77,169	8.3	7.58	9.02
Sex					
Male	960	83,004	7.8	7.12	8.58
Female	1,522	116,547	10.8	10.04	11.57
Form					
Form 1	477	35,238	7.8	6.90	8.87
Form 2	471	37,890	8.9	7.89	10.01
Form 3	522	40,740	9.5	8.37	10.69
Form 4	530	42,098	10.2	9.19	11.28
Form 5	482	43,585	10.3	9.05	11.73
Ethnicity					
Malay	1,575	115,079	8.5	7.77	9.31
Chinese	359	32,082	9.0	7.69	10.43
Indian	193	20,773	14.0	11.03	17.65
Bumiputera Sabah	192	16,444	11.0	9.04	13.35
Bumiputera Sarawak	102	10,735	11.1	8.80	13.88
Others	61	4,440	11.7	8.48	15.96

Table 3.7.2: Prevalence of inability to sleep "most of time or always" due to worry in the past 12 months among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	1,890	152,041	7.1	6.52	7.73
State					
Johor	111	17,813	6.5	4.84	8.57
Kedah	94	8,531	5.5	4.47	6.83
Kelantan	73	5,482	4.5	3.28	6.23
Melaka	92	3,260	4.8	4.10	5.72
N. Sembilan	124	6,706	7.6	5.82	9.85
Pahang	112	6,488	6.3	4.90	7.98
Pulau Pinang	120	7,900	7.0	5.27	9.28
Perak	127	13,459	7.4	5.94	9.31
Perlis	105	1,706	6.3	5.07	7.86
Selangor	127	32,373	8.3	6.22	10.99
Terengganu	86	5,057	5.1	4.23	6.22
Sabah	133	15,974	8.0	6.38	10.08
Sarawak	130	15,201	7.7	6.32	9.36
WP Kuala Lumpur	175	10,986	9.8	7.80	12.21
WP Labuan	163	517	9.4	6.98	12.49
WP Putrajaya	118	588	7.0	5.14	9.50
Locality of school					
Urban	1,218	96,482	8.0	7.09	8.98
Rural	672	55,559	6.0	5.43	6.54
Sex					
Male	803	68,336	6.4	5.75	7.21
Female	1,087	83,705	7.7	6.85	8.76
Form					
Form 1	391	31,403	7.0	6.18	7.87
Form 2	346	27,013	6.3	5.39	7.44
Form 3	403	28,560	6.7	5.74	7.71
Form 4	373	29,337	7.1	6.20	8.13
Form 5	377	35,729	8.5	6.81	10.46
Ethnicity					
Malay	1,127	77,081	5.7	5.21	6.24
Chinese	255	24,177	6.8	5.82	7.84
Indian	218	24,455	16.5	13.68	19.84
Bumiputera Sabah	163	14,427	9.7	7.52	12.33
Bumiputera Sarawak	85	8,378	8.7	7.40	10.09
Others	42	3,523	9.3	6.32	13.47

Table 3.7.3: Prevalence of suicidal ideation in the past 12 months among students Form 1 to Form 5, Malaysia 2017

Socio-demographic Characteristics	Unweighted Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	2607	213602	10.0	9.24	10.79
State					
Johor	135	20659	7.5	6.00	9.35
Kedah	172	15881	10.3	7.84	13.40
Kelantan	97	7749	6.4	4.81	8.48
Melaka	116	4318	6.4	5.44	7.61
N. Sembilan	153	8343	9.5	6.96	12.76
Pahang	150	9346	9.1	6.69	12.16
Penang	156	10713	9.5	6.22	14.34
Perak	196	20145	11.1	9.02	13.69
Perlis	141	2374	8.8	7.05	10.96
Selangor	201	49880	12.8	10.00	16.23
Terengganu	112	6966	7.1	5.56	9.00
Sabah	162	19522	9.8	8.72	11.07
Sarawak	195	21432	10.9	9.33	12.65
WP Kuala Lumpur	243	14770	13.2	11.29	15.32
WP Labuan	213	680	12.3	10.05	15.08
WP Putrajaya	165	824	9.8	8.09	11.93
Locality of the school					
Urban	1649	131762	10.9	9.81	12.13
Rural	958	81840	8.8	7.85	9.82
Sex					
Male	1132	96764	9.1	8.27	10.07
Female	1475	116838	10.8	9.76	12.00
Form					
Form 1	622	50328	11.2	9.56	13.06
Form 2	518	41633	9.8	8.73	10.94
Form 3	551	40732	9.5	8.22	10.93
Form 4	494	40153	9.7	8.40	11.27
Form 5	422	40756	9.7	8.08	11.52
Ethnicity					
Malay	1464	105391	7.8	7.12	8.56
Chinese	513	48802	13.7	12.07	15.43
Indian	261	28635	19.3	16.48	22.54
Bumiputera Sabah	198	15080	10.1	8.77	11.63
Bumiputera Sarawak	103	10480	10.8	8.99	13.02
Others	68	5214	13.8	9.70	19.14

Table 3.7.4: Prevalence of suicidal plan in the past 12 months among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	1,852	157,097	7.3	6.67	8.05
State					
Johor	101	15,681	5.7	4.35	7.42
Kedah	136	12,252	7.9	5.87	10.62
Kelantan	68	5,322	4.4	3.44	5.58
Melaka	64	2,392	3.6	2.59	4.87
N. Sembilan	111	6,010	6.8	4.61	9.92
Pahang	124	7,796	7.5	5.48	10.26
Pulau Pinang	114	7,843	7.0	4.37	10.93
Perak	144	14,759	8.1	6.31	10.43
Perlis	81	1,392	5.2	3.62	7.30
Selangor	155	37,224	9.5	7.12	12.64
Terengganu	102	6,083	6.2	4.83	7.87
Sabah	120	14,558	7.3	6.21	8.61
Sarawak	141	15,680	7.9	6.21	10.08
WP Kuala Lumpur	156	9,203	8.2	6.09	10.98
WP Labuan	149	465	8.4	6.51	10.84
WP Putrajaya	86	438	5.2	4.34	6.30
Locality of school					
Urban	1,148	95,052	7.9	6.87	8.98
Rural	704	62,045	6.6	5.85	7.55
Sex					
Male	811	72,506	6.8	5.90	7.87
Female	1,041	84,591	7.8	7.06	8.68
Form					
Form 1	462	40,473	9.0	7.45	10.81
Form 2	375	30,703	7.2	6.16	8.42
Form 3	381	29,132	6.8	5.61	8.15
Form 4	350	29,966	7.2	5.83	8.95
Form 5	284	26,823	6.3	5.30	7.59
Ethnicity					
Malay	995	73,295	5.4	4.94	5.94
Chinese	368	36,245	10.1	8.62	11.90
Indian	224	25,302	17.0	14.25	20.13
Bumiputera Sabah	137	11,248	7.5	6.55	8.66
Bumiputera Sarawak	75	7,156	7.4	5.22	10.40
Others	53	3,851	10.1	7.10	14.27

Table 3.7.5: Prevalence of suicidal attempt "at least once" in the past 12 months among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	1,755	148,510	6.9	6.24	7.71
State					
Johor	81	12,699	4.6	3.11	6.77
Kedah	107	9,916	6.4	4.86	8.44
Kelantan	76	6,108	5.0	3.13	8.04
Melaka	71	2,511	3.7	2.78	4.99
N. Sembilan	108	6,363	7.2	3.92	12.88
Pahang	138	9,202	8.9	5.61	13.82
Pulau Pinang	101	6,722	6.0	3.51	10.01
Perak	165	16,802	9.3	6.83	12.51
Perlis	100	1,675	6.2	4.20	9.11
Selangor	144	32,723	8.4	6.20	11.27
Terengganu	90	5,493	5.6	4.09	7.58
Sabah	103	12,454	6.3	4.58	8.54
Sarawak	156	17,369	8.8	6.85	11.22
WP Kuala Lumpur	128	7,750	6.9	5.40	8.81
WP Labuan	121	382	6.9	5.53	8.67
WP Putrajaya	66	340	4.1	3.13	5.25
Locality of school					
Urban	993	81,228	6.7	5.80	7.78
Rural	762	67,282	7.2	6.13	8.47
Sex					
Male	866	74,279	7.0	6.08	8.04
Female	889	74,232	6.9	6.18	7.66
Form					
Form 1	510	45,302	10.1	8.20	12.30
Form 2	384	31,673	7.4	6.29	8.79
Form 3	355	26,918	6.3	5.06	7.74
Form 4	306	25,682	6.2	4.92	7.84
Form 5	200	18,935	4.5	3.66	5.48
Ethnicity					
Malay	873	62,063	4.6	4.12	5.11
Chinese	400	38,247	10.7	9.33	12.26
Indian	226	26,472	17.9	14.27	22.15
Bumiputera Sabah	123	9,090	6.1	4.33	8.53
Bumiputera Sarawak	82	9,060	9.4	7.24	12.11
Others	51	3,578	9.4	6.83	12.85

**Table 3.7.6: Prevalence of not having any close friend among Form 1 to Form 5 students
Malaysia, 2017**

Socio-demographic characteristics	Unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	942	77,104	3.6	3.20	4.07
State					
Johor	53	8,569	3.1	2.27	4.28
Kedah	52	4,708	3.1	2.10	4.47
Kelantan	43	3,362	2.8	1.95	3.96
Melaka	42	1,485	2.2	1.58	3.09
N. Sembilan	49	2,536	2.9	2.31	3.59
Pahang	89	5,410	5.2	4.17	6.56
Pulau Pinang	52	3,657	3.3	2.41	4.38
Perak	82	8,456	4.7	3.51	6.22
Perlis	61	1,034	3.8	2.76	5.31
Selangor	75	16,285	4.2	2.66	6.52
Terengganu	54	3,295	3.4	2.36	4.77
Sabah	42	4,848	2.4	1.45	4.10
Sarawak	80	8,506	4.3	3.32	5.58
WP Kuala Lumpur	69	4,558	4.1	3.30	5.00
WP Labuan	63	201	3.7	2.63	5.05
WP Putrajaya	36	195	2.3	1.36	3.96
Locality of school					
Urban	531	42,140	3.5	3.01	4.04
Rural	411	34,964	3.8	3.08	4.60
Sex					
Male	550	47,616	4.5	3.93	5.14
Female	392	29,487	2.7	2.30	3.26
Form					
Form 1	235	21,107	4.7	3.62	6.10
Form 2	152	11,967	2.8	2.22	3.57
Form 3	209	16,428	3.8	3.18	4.61
Form 4	196	15,003	3.6	3.00	4.41
Form 5	150	12,598	3.0	2.22	4.01
Ethnicity					
Malay	524	37,594	2.8	2.46	3.17
Chinese	219	20,315	5.7	4.67	6.92
Indian	86	9,931	6.7	4.43	10.10
Bumiputera Sabah	51	4,443	3.0	1.88	4.71
Bumiputera Sarawak	30	2,781	2.9	2.12	3.92
Others	32	2,040	5.4	3.24	8.86

3.8 Physical Activity

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3.8.1 Introduction

Physical inactivity is a public health problem worldwide and is the fourth leading cause of death worldwide.¹ It is an important contributor to major non-communicable diseases.^{2,3} Sufficient physical activity has substantial health benefits for children and adolescents in terms of improving cardiovascular health⁴, mental health⁵ and academic performance⁶. Despite these established benefits, a substantial proportion of young people fail to meet physical activity guidelines.

3.8.2 Objectives

1. To identify the prevalence of being physically active for a total of at least 60 minutes daily for five days or more in the past seven days,
2. To identify the prevalence of spending at least three hours in sitting activities in a typical or usual day

3.8.3 Variable Definitions

☒ **Physical activity:** any activity that increases the heart rate and makes one breathe hard. Examples of physical activities include sports, playing with friends, walking to school, running, fast walking, biking or dancing.

☒ **Physically active:** physically active for at least 60 minutes per day, for a minimum of five days per week (sum of all the time spent in any kind of physical activity each day).

3.8.4 Findings

There were 27,411 secondary school students responded to this module. The prevalence of being physically active for a total of at least 60 minutes daily for 5 days or more in the past 7 days was 19.8% (95% CI: 19.21, 20.40) with an estimated projection to 423,605 school-going adolescents. The highest prevalence was observed in WP Putrajaya [30.0% (95% CI: 27.88, 32.25)], followed by Negeri Sembilan [25.6% (95% CI: 23.52, 27.77)] and Johor [25.3% (95% CI: 23.30, 27.50)]. In terms of school locality, the prevalence was significantly higher in urban [20.7% (95% CI: 19.90, 21.58)] compared to rural [18.6% (95% CI: 17.80, 19.43)]. By sex, it was significantly higher in males [25.0% (95% CI: 24.10, 25.93)] than females [14.7% (95% CI: 13.94, 15.45)]. By form, Form 5 showed the highest prevalence [21.2% (95% CI: 19.69, 22.86)], followed by Form 4 [20.8% (95% CI: 19.54, 22.04)] and Form 3 [19.9% (95% CI: 18.72, 21.20)]. By ethnicity, the highest prevalence was observed in Malays [21.3% (95% CI: 20.57, 22.07)], followed by Bumiputera Sabah [21.0% (95% CI: 18.81, 23.30)] and Bumiputera Sarawak [19.6% (95% CI: 17.00, 22.50)]. **(Table 3.8.1)**

Regarding sitting activities, a total of 50.1% (95% CI: 49.38, 50.85) had spent at least three hours in a typical or usual day in sitting activities. The highest prevalence was observed in WP Kuala Lumpur [62.1% (95% CI: 59.68, 64.46)], followed by Johor [60.7% (95% CI: 58.36, 62.93)] and WP Putrajaya [59.7% (95% CI: 57.32, 62.09)]. In terms of school locality, the prevalence was significantly higher in urban [55.1% (95% CI: 54.06, 56.10)] compared to rural [43.7% (95% CI: 42.65, 44.72)] areas. By sex, it was significantly higher in females [52.3% (95% CI: 51.27, 53.33)] than males [47.9% (95% CI: 46.85, 48.94)]. By form, Form 5 showed the highest prevalence [59.5% (95% CI: 57.60, 61.33)], followed by Form 4 [55.2% (95% CI: 53.58, 56.72)] and Form 3 [53.6% (95% CI: 52.08, 55.17)]. **(Table 3.8.2)**

3.8.5 Discussion

Across all states, majority of school-going adolescents did not engage in a sufficient amount of physical activity. The prevalence of students who were physically active for a total of at least 60 minutes daily for five days or more in the past seven days was lower [19.8% (95% CI: 19.21, 20.40)] compared to the previous study [22.7% (95% CI: 21.50-23.90)].⁷ In addition, the prevalence of students who spent at least three hours in sitting activities in a typical or usual day

on sedentary activities was higher [50.1% (95% CI: 49.38, 50.85)] compared to the previous study [47.3% (95% CI: 45.80, 48.80)].⁷

3.8.6 Conclusion

The low level of physical activity (19.8%) and the high level of sitting activities (50.1%) among school-going adolescents aged 13 to 17 years old should be given more attention. Both lack of physical activity and increased sitting activities have been shown to have negative health effects. Thus, effective strategies to increase physical activity levels and to decrease sitting activities must be implemented urgently.

3.8.7 Recommendations

Schools represent an important setting for promoting physical activity as the adolescents spend approximately half of their waking day at school. Development of creative and innovative “school-based interventions” such as engaging social media to promote healthy lifestyles particularly on increasing physical activity need to be explored.

3.8.8 References

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Table 3.8.1: Prevalence of being physically active (60 minutes daily) for a total of at least 5 days or more Form 1 to Form 5 students Malaysia, 2017

Socio-demographic characteristics	Physically Active for at least 5 days or more				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	5,802	423,606	19.8	19.21	20.40
State					
Johor	417	69,680	25.3	23.30	27.50
Kedah	317	28,586	18.6	16.76	20.49
Kelantan	291	21,038	17.4	15.60	19.27
Melaka	454	15,407	22.9	21.12	24.83
N. Sembilan	430	22,521	25.6	23.52	27.77
Pahang	384	21,949	21.3	19.44	23.25
Pulau Pinang	384	24,143	21.5	19.61	23.45
Perak	304	31,509	17.4	15.67	19.26
Perlis	342	5,707	21.2	19.28	23.26
Selangor	271	64,523	16.5	14.71	18.52
Terengganu	323	19,579	19.9	18.01	21.93
Sabah	308	36,521	18.4	16.65	20.35
Sarawak	295	31,791	16.1	14.49	17.90
WP Kuala Lumpur	379	26,815	23.9	21.80	26.12
WP Labuan	404	1,323	24.0	22.03	26.15
WP Putrajaya	499	2,513	30.0	27.88	32.25
Locality of school					
Urban	3,556	250,285	20.7	19.90	21.58
Rural	2,246	173,321	18.6	17.80	19.43
Sex					
Male	3,547	265,286	25.0	24.10	25.93
Female	2,255	158,320	14.7	13.94	15.45
Form					
Form 1	1,118	82,440	18.4	17.14	19.66
Form 2	1,126	80,076	18.8	17.59	20.10
Form 3	1,244	85,750	19.9	18.72	21.20
Form 4	1,226	85,769	20.8	19.54	22.04
Form 5	1,088	89,571	21.2	19.69	22.86
Ethnicity					
Malay	4,252	287,853	21.3	20.57	22.07
Chinese	587	50,611	14.2	12.95	15.49
Indian	270	28,420	19.1	16.57	22.01
Bumiputera Sabah	408	31,230	21.0	18.81	23.30
Bumiputera Sarawak	192	18,948	19.6	17.00	22.50
Others	93	6,544	17.3	13.18	22.38

Table 3.8.2: Prevalence of spending at least 3 hours in sitting activities among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic characteristics	Spending at least 3 hours on sedentary activities				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	13,756	1,071,189	50.1	49.38	50.85
State					
Johor	1,057	166,990	60.7	58.36	62.93
Kedah	777	72,103	46.8	44.44	49.22
Kelantan	670	48,183	39.8	37.43	42.18
Melaka	1,017	36,279	54.0	51.78	56.27
N. Sembilan	918	45,618	51.7	49.34	54.13
Pahang	898	50,335	48.7	46.37	50.98
Pulau Pinang	1,003	63,932	56.8	54.43	59.16
Perak	830	84,989	47.0	44.65	49.31
Perlis	755	12,079	44.9	42.49	47.25
Selangor	826	201,326	51.8	49.38	54.30
Terengganu	678	39,097	39.7	37.37	42.13
Sabah	726	85,398	43.1	40.78	45.42
Sarawak	780	87,547	44.5	42.15	46.79
WP Kuala Lumpur	1,062	69,733	62.1	59.68	64.46
WP Labuan	784	2,576	46.9	44.58	49.32
WP Putrajaya	975	5,003	59.7	57.32	62.09
Locality of school					
Urban	8,650	664,300	55.1	54.06	56.10
Rural	5,106	406,889	43.7	42.65	44.72
Sex					
Male	6,285	507,717	47.9	46.85	48.94
Female	7,471	563,472	52.3	51.27	53.33
Form					
Form 1	2,101	168,130	37.5	35.93	39.05
Form 2	2,587	194,553	45.7	44.11	47.37
Form 3	3,108	230,622	53.6	52.08	55.17
Form 4	3,087	227,476	55.2	53.58	56.72
Form 5	2,873	250,407	59.5	57.60	61.33
Ethnicity					
Malay	9,202	660,393	49.0	48.05	49.89
Chinese	2,534	222,641	62.3	60.50	64.01
Indian	570	60,961	41.1	37.88	44.47
Bumiputera Sabah	814	67,062	45.1	42.33	47.84
Bumiputera Sarawak	408	43,660	45.2	41.86	48.66
Others	228	16,472	43.5	37.99	49.21

3.9. Protective Factors

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3.9.1 Introduction

According to Centre for Disease Control and Prevention (CDC), protective factors are individual or environmental characteristics, conditions, or behaviours that reduce the effects of stressful life events.¹ Important protective factors such as parental attachment and peer support especially for adolescence could influence their attitude and behaviour. Research has shown that adolescent attachment and relationships with parents and peers as well as schools they attend is a predictor of their psychological well-being.² Protective factor could help avoid unhealthy behaviours such as violence, sexual risk behaviours, tobacco use and drug abuse.³ In order to measure the level of protective factors among school students, truancy is seen as an indicator, which is monitored by lower prevalence, as truancy often acts as the initial behaviour that can lead to other risky behaviour.⁴

3.9.2 Objectives

To identify prevalence of:

- i. Truancy in the past 30 days
- ii. Peer support in the past 30 days
- iii. Parental or guardian supervision in the past 30 days
- iv. Parental or guardian connectedness in the past 30 days
- v. Parental or guardian bonding in the past 30 days,
- vi. Parental or guardian respect for privacy in the past 30 days,

3.9.3 Variable Definitions

- **Truancy:** missed class or school without permission for at least one day in the past 30 days. (This variable is monitored with lower prevalence to define as protective factors)
- **Peer support:** students in their school were kind and helpful most of the time or always during the past 30 days.
- **Parental or guardian supervision:** parents or guardians had always or most of the time, checked to see if their homework was done in the past 30 days.
- **Parental or guardian connectedness:** parents or guardians had always or most of the time, understood their problems and worries in the past 30 days.
- **Parental or guardian bonding:** parents or guardians had always or most of the time, really knew what they were doing with their free time in the past 30 days.
- **Parental or guardian respect for privacy:** parents or guardians had never or rarely gone through their things without their approval in the past 30 days.

3.9.4 Findings

Truancy

Prevalence of truancy among students in the past 30 days was 29.4% (95% CI: 27.78, 31.06) which was significantly higher in males [32.6% (95% CI: 30.61, 34.65)] than females [26.2% (95% CI: 24.46, 28.10)]. More than one third of student in Terengganu [35.9% (95% CI: 29.56, 42.73)], Sabah [35.6% (95% CI: 28.75, 43.17)] and Perlis [35.1% (95% CI: 28.09, 42.92)] had high prevalence of truancy. School locality, forms and ethnicity show no significant different in prevalence of truancy (**Table 3.9.1**).

Having Peer Support

About, 44.2% (95% CI: 42.61, 45.75) was reported of having peer support and this was significantly higher among females [51.4% (95% CI: 49.46, 53.30)] than males [36.9% (95% CI: 35.10, 38.65)]. By state, more than 50% of students in Wilayah Persekutuan Putrajaya [52.4% (95% CI: 45.57, 59.12)] reports to have peer support compare to students in Selangor [38.9% (95% CI: 33.89, 44.19)] and there was no significant difference by locality, forms and ethnicity **(Table 3.9.2)**.

Having parental or guardian supervision

Parental or guardian supervision was reported by 13.2% (95% CI: 12.40, 14.03) and is higher in males [14.4% (95% CI: 13.40, 15.51)] than females [12.0% (95% CI: 11.11, 12.92)], rural [15.0% (95% CI: 14.07, 16.04)] compared to urban [11.8% (95% CI: 10.66, 13.00)] and Form 1 students [19.6% (95% CI: 17.96, 21.25)] among other forms. Chinese [6.4% (95% CI: 5.43, 7.54)] and Wilayah Persekutuan Kuala Lumpur [10.7% (95% CI: 8.69, 13.02)] show lower prevalence of having parental or guardian supervision **(Table 3.9.3)**.

Having parental or guardian connectedness

Overall, 32.0% (95% CI: 30.72, 33.33) reported of having parental or guardian connectedness with no significant difference by sex, school strata and forms. High prevalence of having parental or guardian connectedness was observed in Perlis [36.7% (95% CI: 31.43, 42.23)] and amongst Indians [36.9% (95% CI: 31.80, 42.25)] **(Table 3.9.4)**.

Having parental or guardian bonding

A total of 42.6% (95% CI: 41.42, 43.71) students reported having parental or guardian bonding with significantly higher in females [44.4% (95% CI: 42.86, 45.86)] than males [40.7% (95% CI: 39.27, 42.24)] and no significant difference by state, locality, forms and ethnicity **(Table 3.9.5)**.

Having parental or guardian respect for privacy

Majority of the students 74.4% (95% CI: 73.42, 75.37) reported of having parental or guardian respect for privacy with higher prevalence in urban [76.3% (95% CI: 74.97, 77.51)] compared to rural areas [72.0% (95% CI: 70.58, 73.37)], higher in females [77.1% (95% CI: 75.97, 78.23)] compared to males [71.7% (95% CI: 70.40, 72.87)], higher in Chinese [80.1% (95% CI: 77.99, 82.00)] than other ethnicities and higher in Form 5 [77.4% (95% CI: 75.55, 79.07)] students compare to other forms. No significant differences in prevalence of having parental or guardian respect for privacy were observed by states (**Table 3.9.6**).

3.9.5 Discussion

Prevalence of truancy in secondary school students in Malaysia showed no significant change between Global School-Based Health Survey (GSHS) 2012 [30.9% (95% CI: 29.34, 32.44)] and this study in 2017 [29.4% (95% CI: 27.78, 31.06)].⁵ It also was observed to be lower than Brunei [37.3% (95% CI: 34.3, 40.5)] in 2014 but much higher than Thailand GSHS [20.4% (95% CI: 18.1, 22.8)] in 2015.^{6,7} Study done by Organization for Economic Co-operation & Development (OECD), through Programmed for International Student Assessment (PISA), Spain was reported to have high rate of truancy; of more than 34% among the OECD countries.⁸ Similar trends of parental or guardian connectedness prevalence was observed in 2017 [32.0% (95% CI: 30.72, 33.33)] and GSHS 2012 [31.5% (95% CI: 30.09, 33.00)] but higher prevalence compare to Philippines GSHS [27.0% (95% CI: 24.2, 29.9)], Thailand GSHS [28.1% (95% CI: 25.4, 30.9)] and Brunei [28.4% (95% CI: 26.6, 30.3)].^{5-7,9} There was no difference on prevalence of parental or guardian bonding between study done on 2017 [42.61% (95% CI: 41.42, 43.71)] and 2012 [43.1% (95% CI: 41.79, 44.33)].⁵ However, it was quite similar with Brunei GSHS [40.8% (95% CI: 38.5, 43.3)] and Thailand GSHS [42.3% (95% CI: 39.5, 45.1)] but higher than Philippines GSHS [32.0% (95% CI: 28.1, 36.1)].^{6-7,9}

3.9.6 Conclusion

Findings show that male students and students from rural areas are observed having higher prevalence of truancy. There is no significant change in the trends of truancy in Malaysia between

2012 and 2017. In addition, parental attachment and peer support were observed to be at lower figure, which might contribute to the exposure of various mischievous behaviors among the students.

3.9.7 Recommendations

1. Monitoring attendance closely by participation of schools, parent and local organizations through enforcement of mandatory attendance law allows identification of at risk and truancy behaviour among school students.
2. Positive reinforcement which focuses on the positive points of behavior will encourage children to improve peer support, self-control and respect for others.
3. Establishment of school programs that need parent's supervision will help in improving the parenting skills especially in parental attachment.
4. Development of interventions that strengthen the protective factors among school students is important and more effective in reducing risk in order to improve the outcomes experienced by the students

3.9.8 References

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Table 3.9.1 : Prevalence of truancy in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Truancy				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	7,985	630,101	29.4	27.78	31.06
State					
Johor	401	66,742	24.2	18.87	30.54
Kedah	491	45,523	29.4	24.33	35.12
Kelantan	496	37,390	30.8	25.16	37.04
Melaka	465	16,593	24.7	20.13	29.87
N. Sembilan	511	27,621	31.3	26.30	36.73
Pahang	529	32,011	30.9	24.40	38.28
Pulau Pinang	408	27,265	24.2	17.08	33.08
Perak	565	59,089	32.6	28.10	37.35
Perlis	573	9,481	35.1	28.09	42.92
Selangor	503	116,104	29.7	25.68	34.12
Terengganu	573	35,368	35.9	29.56	42.73
Sabah	591	70,853	35.6	28.75	43.17
Sarawak	451	49,584	25.1	21.13	29.54
WP Kuala Lumpur	481	32,681	29.1	25.17	33.33
WP Labuan	545	1,773	32.2	25.47	39.66
WP Putrajaya	402	2,023	24.2	16.51	33.89
Locality of school					
Urban	4,312	333,338	27.6	25.32	29.94
Rural	3,673	296,763	31.8	29.40	34.20
Sex					
Male	4,188	346,690	32.6	30.61	34.65
Female	3,797	283,411	26.2	24.46	28.10
Form					
Form 1	1,482	119,793	26.6	24.28	29.09
Form 2	1,527	118,534	27.8	25.38	30.31
Form 3	1,610	118,631	27.5	24.95	30.28
Form 4	1,874	142,772	34.5	31.56	37.66
Form 5	1,492	130,371	30.8	27.75	34.11
Ethnicity					
Malay	5,455	394,238	29.1	27.51	30.81
Chinese	1,068	99,325	27.7	24.12	31.69
Indian	447	48,280	32.5	27.36	38.11
Bumiputera Sabah	577	51,636	34.6	26.93	43.11
Bumiputera Sarawak	226	22,567	23.3	19.50	27.66
Others	212	14,055	37.2	31.84	42.82

Table 3.9.2 : Prevalence of having peer support in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic characteristics	Having peer support				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	12,505	1,196,320	44.2	42.61	45.75
State					
Johor	872	137,358	49.9	44.90	54.81
Kedah	774	70,849	45.8	41.10	50.66
Kelantan	766	55,842	45.9	39.72	52.25
Melaka	878	32,259	48.0	43.98	52.05
N. Sembilan	846	41,696	47.2	41.63	52.81
Pahang	768	42,431	41.1	33.67	48.87
Pulau Pinang	865	54,169	48.1	40.75	55.53
Perak	701	72,934	40.2	34.90	45.76
Perlis	696	10,940	40.5	34.81	46.51
Selangor	625	152,008	38.9	33.89	44.19
Terengganu	785	44,766	45.4	40.18	50.76
Sabah	755	88,381	44.5	40.62	48.50
Sarawak	793	88,079	44.6	40.50	48.74
WP Kuala Lumpur	766	48,186	42.9	38.38	47.50
WP Labuan	766	2,479	45.0	37.59	52.63
WP Putrajaya	849	4,388	52.4	45.57	59.12
Locality of school					
Urban	7,351	539,247	44.6	42.22	46.97
Rural	5,154	407,518	43.7	41.53	45.80
Sex					
Male	4,933	391,834	36.9	35.10	38.65
Female	7,572	554,931	51.4	49.46	53.30
From					
Form 1	2,284	178,938	39.8	37.27	42.30
Form 2	2,327	171,468	40.2	37.74	42.77
Form 3	2,700	191,639	44.5	41.90	47.11
Form 4	2,619	190,134	46.0	43.11	48.88
Form 5	2,575	214,585	50.8	47.48	54.10
Ethnicity					
Malay	8,736	611,450	45.2	43.48	46.97
Chinese	1,529	134,197	37.5	33.80	41.28
Indian	723	70,322	47.2	41.08	53.42
Bumiputera Sabah	844	67,831	45.5	41.25	49.87
Bumiputera Sarawak	440	46,327	47.9	43.39	52.42
Others	233	16,637	43.8	38.34	49.38

Table 3.9.3 : Prevalence of having parental or guardian supervision in the past 30 days among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic Characteristics	Having parental or guardian supervision				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	3,713	282,898	13.2	12.40	14.03
State					
Johor	209	33,967	12.3	10.68	14.18
Kedah	232	20,779	13.5	11.54	15.63
Kelantan	232	17,626	14.5	12.75	16.43
Melaka	284	10,101	15.0	12.95	17.37
N. Sembilan	233	12,568	14.2	11.94	16.88
Pahang	229	14,125	13.6	11.43	16.19
Pulau Pinang	212	13,283	11.8	8.69	15.82
Perak	203	20,955	11.6	9.32	14.24
Perlis	278	4,569	16.9	14.48	19.71
Selangor	209	46,886	12.0	9.44	15.11
Terengganu	243	14,573	14.8	12.65	17.24
Sabah	247	29,700	15.0	12.14	18.28
Sarawak	277	30,028	15.2	12.08	18.95
WP Kuala Lumpur	183	11,979	10.7	8.69	13.02
WP Labuan	228	723	13.1	10.81	15.84
WP Putrajaya	214	1,037	12.4	9.51	15.97
Locality of school					
Urban	1,939	142,482	11.8	10.66	13.00
Rural	1,774	140,416	15.0	14.07	16.04
Sex					
Male	1,915	153,485	14.4	13.40	15.51
Female	1,798	129,413	12.0	11.11	12.92
Form					
Form 1	1,095	88,033	19.6	17.96	21.25
Form 2	905	67,368	15.8	14.48	17.20
Form 3	731	51,193	15.8	14.48	17.20
Form 4	570	42,679	10.3	9.15	11.62
Form 5	412	33,626	8.0	6.72	9.39
Ethnicity					
Malay	2,610	178,520	13.2	12.38	14.06
Chinese	249	22,929	6.4	5.43	7.54
Indian	377	38,037	25.5	21.57	29.92
Bumiputera Sabah	241	20,981	14.1	11.18	17.58
Bumiputera Sarawak	156	16,797	17.4	13.29	22.37
Others	80	5,634	14.8	10.92	19.83

Table 3.9.4 : Prevalence of having parental or guardian connectedness in the past 30 days among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic Characteristics	Having parental or guardian connectedness				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	9,118	685,882	32.0	30.72	33.33
State					
Johor	601	96,067	34.9	31.37	38.52
Kedah	556	50,102	32.4	29.52	35.48
Kelantan	559	40,642	33.5	31.35	35.65
Melaka	674	24,432	36.4	33.06	39.85
N. Sembilan	627	31,485	35.6	31.18	40.29
Pahang	630	35,365	34.2	28.27	40.70
Pulau Pinang	608	38,071	33.8	27.10	41.17
Perak	453	47,015	25.9	21.79	30.54
Perlis	612	9,877	36.7	31.43	42.23
Selangor	528	121,226	31.0	26.43	36.02
Terengganu	584	33,709	34.2	29.78	38.95
Sabah	548	64,211	32.4	29.37	35.62
Sarawak	495	54,495	27.6	24.35	31.13
WP Kuala Lumpur	537	34,619	30.8	28.62	33.08
WP Labuan	537	1,735	31.5	25.25	38.56
WP Putrajaya	569	2,830	33.8	28.60	39.45
Locality of school					
Urban	5,137	374,166	30.9	29.17	32.78
Rural	3,981	311,716	33.4	31.56	35.29
Sex					
Male	4,126	328,078	30.9	29.17	32.61
Female	4,992	357,804	33.1	31.68	34.64
Form					
Form 1	1,917	147,736	32.8	30.68	35.06
Form 2	1,883	137,072	32.2	30.22	34.20
Form 3	1,931	139,864	32.5	29.84	35.22
Form 4	1,789	131,245	31.8	29.85	33.74
Form 5	1,598	129,964	30.8	28.15	33.50
Ethnicity					
Malay	6,622	464,818	34.4	32.80	36.00
Chinese	896	77,102	21.5	19.57	23.64
Indian	550	54,926	36.9	31.80	42.25
Bumiputera Sabah	581	46,699	31.4	27.75	35.23
Bumiputera Sarawak	290	30,379	31.4	28.39	34.63
Others	179	11,959	31.5	26.31	37.15

Table 3.9.5 : Prevalence having parental or guardian bonding in the past 30 days among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic Characteristics	Having parental or guardian bonding				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	11,823	910,748	42.6	41.42	43.71
State					
Johor	889	140,444	51.0	47.24	54.77
Kedah	760	68,873	44.6	40.85	48.48
Kelantan	675	49,069	40.4	36.10	44.89
Melaka	957	34,509	51.5	47.08	55.80
N. Sembilan	811	41,297	46.8	42.09	51.57
Pahang	742	42,312	41.0	35.07	47.12
Pulau Pinang	812	51,766	46.1	41.23	50.98
Perak	654	66,993	37.0	32.69	41.44
Perlis	698	11,136	41.3	37.07	45.71
Selangor	671	159,442	40.8	37.53	44.18
Terengganu	651	37,829	38.5	34.87	42.35
Sabah	625	73,677	37.3	34.15	40.46
Sarawak	699	77,212	39.2	35.72	42.77
WP Kuala Lumpur	788	50,339	44.9	41.81	47.99
WP Labuan	636	2,089	38.0	35.25	40.86
WP Putrajaya	755	3,761	45.1	41.79	48.42
Locality of school					
Urban	7,006	530,147	43.9	42.09	45.72
Rural	4,817	380,601	40.8	39.23	42.45
Sex					
Male	5,374	432,654	40.7	39.27	42.24
Female	6,449	478,093	44.4	42.86	45.86
Form					
Form 1	2,374	184,468	41.0	38.88	43.23
Form 2	2,320	172,146	40.4	38.31	42.59
Form 3	2,499	184,788	42.9	40.92	44.98
Form 4	2,445	182,421	44.2	42.12	46.30
Form 5	2,185	186,925	44.4	41.81	46.94
Ethnicity					
Malay	8,201	588,263	43.6	42.28	44.86
Chinese	1,669	146,410	40.9	37.67	44.22
Indian	701	67,874	45.6	40.12	51.22
Bumiputera Sabah	649	54,542	36.8	33.47	40.23
Bumiputera Sarawak	371	38,212	39.6	36.11	43.24
Others	232	15,447	40.7	32.99	48.80

Table 3.9.6 : Prevalence of having parental or guardian respect for privacy in the past 30 days among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic Characteristics	Having parental or guardian respect for privacy				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	20,394	1,591,176	74.4	73.42	75.37
State					
Johor	1,353	213,949	77.6	74.86	80.19
Kedah	1,222	111,626	72.4	68.63	75.93
Kelantan	1,218	91,143	75.2	71.82	78.36
Melaka	1,407	50,782	75.7	72.79	78.43
N. Sembilan	1,312	66,758	75.8	72.84	78.50
Pahang	1,318	75,412	73.2	69.96	76.21
Pulau Pinang	1,282	83,224	74.2	71.23	76.92
Perak	1,336	137,930	76.4	72.31	80.00
Perlis	1,182	18,871	70.3	67.77	72.71
Selangor	1,245	293,939	75.1	72.01	78.03
Terengganu	1,183	69,821	71.0	67.88	74.02
Sabah	1,214	142,381	72.1	69.14	74.89
Sarawak	1,235	137,914	70.1	65.90	73.92
WP Kuala Lumpur	1,340	86,792	77.3	74.61	79.87
WP Labuan	1,270	4,140	75.2	71.66	78.41
WP Putrajaya	1,277	6,494	77.6	74.86	80.13
Locality of school					
Urban	12,056	920,428	76.3	74.97	77.51
Rural	8,338	670,748	72.0	70.58	73.37
Sex					
Male	9,401	760,510	71.7	70.40	72.87
Female	10,993	830,667	77.1	75.97	78.23
Form					
Form 1	4,057	322,675	71.9	70.42	73.39
Form 2	3,955	306,464	72.1	70.43	73.70
Form 3	4,420	325,899	75.8	74.03	77.47
Form 4	4,138	310,030	75.0	73.07	76.88
Form 5	3,824	326,108	77.4	75.55	79.07
Ethnicity					
Malay	13,785	1,003,171	74.3	73.27	75.33
Chinese	3,309	285,945	80.1	77.99	82.00
Indian	991	103,911	69.9	66.34	73.25
Bumiputera Sabah	1,295	107,348	72.2	68.74	75.49
Bumiputera Sarawak	612	63,974	66.4	60.81	71.61
Others	402	26,827	70.8	65.87	75.30

3.10 Sexual Behaviours that contribute to HIV Infection, Other STIs and Unintended Pregnancy

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3.10.1 Introduction

The WHO reported that 10% to 40% of young unmarried girls aged 13 to 19 years to have had an unintended pregnancy.¹ It was also reported that the highest rate of Sexual Transmitted Illness (STI) worldwide are among young people aged 15 to 24 years.² In Malaysia, Ministry of Health revealed that 12,492 teenage pregnancies were recorded in 2016. Therefore, sexual intercourse among school aged students is a public health concern in Malaysia due to the alarming numbers of the teenage unintended pregnancies and Sexual Transmitted Illness (STI) from this age group.^{2,3}

3.10.2 Objectives

To identify prevalence of:

- i. Current sexual intercourse in the past 30 days among Form 1 to Form 5 students in Malaysia.
- ii. Ever having sexual intercourse among Form 1 to Form 5 students in Malaysia.
- iii. First sexual experience before the age 14 years among those who ever had sex.
- iv. Having at least two sexual partners among those who ever had sex.
- v. Condom use during the last sexual intercourse among those who ever had sex.
- vi. Use of "other birth control methods" during the last sexual intercourse among those who ever had sex.

3.10.3 Variable Definitions

- **Sexual intercourse:** sexual acts of penetration of penis into vagina or anus.
- **Safe sexual practice:** sexual contact that doesn't involve the exchange of semen, vaginal fluids or blood between partners.

3.10.4 Findings

Prevalence of ever had sex among Form 1 to Form 5 students in Malaysia was 7.3% (95% CI: 6.67, 8.03) of which the highest was in Pahang with prevalence of 9.5% (95% CI: 7.30, 12.24). Male students showed significantly higher prevalence [8.8% (95% CI: 7.83, 9.93)] compared to females, [5.8% (95% CI: 5.31, 6.42)] (**Table 3.10.1**). Prevalence of current sexual intercourse among Form 1 to Form 5 students in Malaysia was 5.4% (95% CI: 4.96, 5.99) and the highest in Selangor with prevalence of 7.1% (95% CI: 5.38, 9.27). There was no significant difference between urban and rural areas. In term of ethnicity, the highest prevalence was seen among Indian students which was 6.9% (95% CI: 4.69, 10.07) and the least was Bumiputera Sarawak with 4.6% (95% CI: 3.39, 6.23). Male students had significantly higher prevalence of currently having sexual intercourse which was 6.3% (95% CI: 5.54, 7.16) compared to female; 4.6% (95% CI: 4.11, 5.16) (**Table 3.10.2**). Of those who ever had sex, 31.9% (95% CI: 28.57, 35.39) had sex before the age of 14. By locality, students from rural areas showed higher prevalence of ever had sex before the age of 14 years at 38.7% (95% CI: 33.89, 43.77) while in urban areas, prevalence was 25.7% (95% CI: 21.51, 30.44). Male students who ever had sex before the age of 14 showed higher prevalence compared to females with 35.0% (95% CI: 30.52, 39.81) and 27.2% (95% CI: 23.10, 31.80) respectively (**Table 3.10.3**). It was noted that 16.6% (95% CI: 14.04, 19.57) of those who ever had sex, had at least two sexual partners. In which, male students were 20.7% (95% CI: 17.21, 24.71) and females were 10.6% (95% CI: 7.64, 14.44) (**Table 3.10.4**). Only 12.7% (95% CI: 10.58, 15.18) of those who ever had sex used condom during their last sexual intercourse while 10.3% (95% CI: 8.47, 12.47) used other birth control methods. The percentage of male students who used

condom was 15.6% (95% CI: 12.79, 18.82) while 12.3% (95% CI: 9.95, 15.05) of male students or their partners used other birth control methods (**Table 3.10.5 & Table 3.10.6**).

3.10.5 Discussion

Prevalence of sexual activity amongst Malaysian students (Form 1 to Form 5) was relatively low compared to developed country such as in USA which was 41% among their youth aged 13-24 years.⁴ The prevalence of ever had sex which was 7.3% noted to have mildly decreased from the Malaysian (GSHS) 2012 (8.3%).⁴ Neighbouring countries such as Brunei, prevalence of ever had sexual intercourse was 11.2% (95% CI: 9.8, 12.9).⁵ while in Thailand, prevalence was 18.7% (95% CI: 16.4, 21.1).⁶ In this survey, prevalence of males who ever had sex and currently having sexual intercourse was found to be higher as compared to females. This finding was similar as other surveys done in neighbouring countries. For risky sexual behaviour, i.e having at least two sexual partners and having sex before the age of 14, male students and living in rural areas were identified to have higher prevalence. Decreasing numbers of safe sex practise among students was identified in this survey compared to previous GSHS 2012 with the percentage of condom use was 32.2% (95% CI: 27.64, 37.13), has reduced to 12.7% (95% CI: 10.58, 15.18). Similar to usage of other birth methods had decreased from 43.7% (95% CI: 38.21, 49.42) to 10.3% (95% CI: 8.47, 12.47) from the same study.⁴

3.10.6 Conclusion

There were still reported cases of secondary school aged students (Form 1 to Form 5) in Malaysia who were actively having sexual intercourse and ever had sexual intercourse. However, most of them were not practising safe sex which could lead to HIV and other STI as well as unintended pregnancy in future.

3.10.7 Recommendations

1. To strengthen sexual health education especially among students and to educate them regarding the complications of unsafe sex.

2. To conduct more studies especially qualitative studies in exploring the sexual orientation of the students, abortion and unintended pregnancy.
3. To strengthen and actively provide services of our adolescent health screening (BSSK) in schools.

3.10.8 References

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3. Family Health Development Division, Ministry of Health Malaysia, 2016.
4. Institute for Public Health(IPH) 2012.The National Health and Morbidity Survey: Malaysia Global School Based Student Health Survey 2012.Kuala Lumpur: Ministry of Health Malaysia
5. Global School Based Student Health Survey 2014.Fact sheet. Brunei Darussalam
6. Global School Based Student Health Survey 2015.Fact sheet. Thailand

Table 3.10.1 : Prevalence of ever had sexual intercourse among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic characteristics	ever had sexual intercourse				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	
MALAYSIA	1,914	156,618	7.3	6.67	8.03
State					
Johor	97	15,849	5.7	4.66	7.07
Kedah	115	10,747	7.0	5.17	9.30
Kelantan	109	8,544	7.0	4.99	9.85
Melaka	96	3,370	5.0	4.16	6.04
N. Sembilan	90	4,800	5.5	3.94	7.59
Pahang	157	9,771	9.5	7.30	12.24
Pulau Pinang	115	7,817	6.9	5.18	9.23
Perak	154	15,993	8.9	6.76	11.51
Perlis	136	2,275	8.4	6.65	10.64
Selangor	151	34,537	8.9	6.51	11.95
Terengganu	118	7,281	7.4	5.56	9.78
Sabah	126	14,813	7.5	6.20	8.96
Sarawak	137	15,068	7.6	5.52	10.44
WP Kuala Lumpur	71	4,817	4.3	2.70	6.76
WP Labuan	145	466	8.4	7.04	10.09
WP Putrajaya	97	470	5.6	3.90	8.02
Locality of school					
Urban	1,025	82,519	6.8	5.88	7.91
Rural	889	74,099	8.0	7.13	8.87
Sex					
Male	1,123	93,571	8.8	7.83	9.93
Female	791	63,047	5.8	5.31	6.42
Form					
Form 1	492	41,765	9.3	7.98	10.90
Form 2	377	29,311	6.9	5.84	8.08
Form 3	361	26,130	6.1	5.18	7.10
Form 4	366	30,251	7.3	5.86	9.10
Form 5	318	29,162	6.9	5.86	8.11
Ethnicity					
Malay	1,240	94,253	7.0	6.33	7.67
Chinese	268	24,359	6.8	5.59	8.33
Indian	146	16,297	11.0	8.46	14.29
Bumiputera Sabah	149	12,045	8.1	6.40	10.16
Bumiputera Sarawak	69	6,947	7.2	5.13	9.97
Others	42	2,717	7.2	5.08	9.97

Table 3.10.2 Prevalence of current sexual intercourse in the past 30 days among Form 1 to Form 5 students Malaysia, 2017

Socio-demographic characteristics	current sexual intercourse				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	
MALAYSIA	1435	116839	5.4	4.96	5.99
State					
Johor	70	11678	4.2	3.18	5.63
Kedah	85	8112	5.2	3.65	7.49
Kelantan	72	5493	4.5	3.27	6.24
Melaka	74	2567	3.8	2.97	4.89
N. Sembilan	71	3573	4.0	3.22	5.06
Pahang	119	7214	7.0	5.13	9.42
Pulau Pinang	90	6269	5.6	4.07	7.54
Perak	110	11724	6.5	5.10	8.15
Perlis	89	1456	5.4	4.16	6.97
Selangor	123	27683	7.1	5.38	9.27
Terengganu	87	5165	5.2	4.09	6.68
Sabah	84	9963	5.0	3.87	6.46
Sarawak	109	11900	6.0	4.37	8.22
WP Kuala Lumpur	52	3274	2.9	1.82	4.64
WP Labuan	118	378	6.8	5.68	8.21
WP Putrajaya	82	390	4.7	3.48	6.20
Locality of school					
Urban	821	65535	5.4	4.70	6.22
Rural	614	51304	5.5	4.82	6.25
Sex					
Male	799	67048	6.3	5.54	7.16
Female	636	49791	4.6	4.11	5.16
Form					
Form 1	348	29882	6.6	5.64	7.78
Form 2	288	21364	5.0	4.19	5.97
Form 3	284	20897	4.9	4.13	5.69
Form 4	276	22424	5.4	4.29	6.83
Form 5	239	22272	5.3	4.36	6.35
Ethnicity					
Malay	949	72336	5.3	4.80	5.94
Chinese	197	18738	5.2	4.29	6.38
Indian	96	10288	6.9	4.69	10.07
Bumiputera Sabah	115	8890	6.0	4.43	7.97
Bumiputera Sarawak	46	4457	4.6	3.39	6.23
Others	32	2131	5.6	3.80	8.21

Table 3.10.3 : Percentage of first sex before the age of 14 years among those who ever had sex among students Form 1 to Form 5, Malaysia 2017

Socio-demographic characteristics	Percentage of first sex before the age 14 years among those who ever had sex				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	582	49,597	31.9	28.57	35.39
State					
Johor	28	4,421	27.9	21.14	35.82
Kedah	36	3,203	29.8	20.88	40.60
Kelantan	37	3,135	36.7	26.85	47.80
Melaka	21	743	22.0	15.64	30.15
N. Sembilan	18	1,229	26.1	11.12	49.90
Pahang	53	3,592	36.8	25.80	49.29
Pulau Pinang	29	1,782	22.8	15.16	32.81
Perak	64	6,209	38.8	26.71	52.49
Perlis	60	1,019	45.7	35.25	56.49
Selangor	49	10,608	31.3	22.56	41.66
Terengganu	42	2,796	38.6	29.25	48.96
Sabah	42	4,912	33.4	22.84	45.87
Sarawak	43	4,650	31.1	22.28	41.57
WP Kuala Lumpur	14	1,129	23.4	10.91	43.37
WP Labuan	34	106	23.0	13.35	36.57
WP Putrajaya	12	63	13.3	8.22	20.82
Locality of school					
Urban	245	21,030	25.7	21.51	30.44
Rural	337	28,567	38.7	33.89	43.77
Sex					
Male	391	32,537	35.0	30.52	39.81
Female	191	17,060	27.2	23.10	31.80
Form					
Form 1	215	18,711	45.9	39.37	52.61
Form 2	120	10,278	35.1	28.10	42.86
Form 3	87	6,265	24.0	17.10	32.54
Form 4	102	9,571	31.6	24.57	39.67
Form 5	58	4,771	16.4	11.74	22.35
Ethnicity					
Malay	339	25,615	27.2	23.80	30.89
Chinese	93	8,885	37.2	31.02	43.74
Indian	65	7,460	46.6	36.12	57.47
Bumiputera Sabah	46	4,197	34.9	23.16	48.81
Bumiputera Sarawak	26	2,641	39.3	24.77	55.94
Others	13	797	29.3	15.74	48.01

Table 3.10.4 : Percentage of having at least two sexual partners among students who ever had sex Form 1 to Form 5 students Malaysia, 2017

Socio-demographic characteristics	Percentage of having at least two sexual partners among those who ever had sex				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	291	26,009	16.6	14.04	19.57
State					
Johor	13	2,198	13.9	7.69	23.72
Kedah	20	1,829	17.0	10.92	25.53
Kelantan	24	1,964	23.3	14.04	36.08
Melaka	11	374	11.2	5.78	20.62
N. Sembilan	14	886	18.5	8.47	35.66
Pahang	25	1,641	16.8	11.03	24.74
Pulau Pinang	7	537	6.9	2.95	15.15
Perak	29	2,991	18.7	13.45	25.41
Perlis	24	418	18.5	9.77	32.16
Selangor	24	5,306	15.4	8.37	26.51
Terengganu	19	1,163	16.0	9.57	25.47
Sabah	29	3,239	21.9	15.59	29.79
Sarawak	26	2,856	19.0	11.04	30.57
WP Kuala Lumpur	7	538	11.2	6.04	19.74
WP Labuan	17	58	12.5	8.08	18.70
WP Putrajaya	2	11	2.2	0.68	7.16
Locality of school					
Urban	128	12,498	15.1	11.70	19.39
Rural	163	13,512	18.3	14.56	22.67
Sex					
Male	225	19,346	20.7	17.21	24.71
Female	66	6,664	10.6	7.64	14.44
Form					
Form 1	88	8,588	20.6	15.56	26.81
Form 2	51	4,698	16.0	10.90	22.95
Form 3	48	3,183	12.2	8.43	17.31
Form 4	48	4,493	14.9	8.86	23.84
Form 5	56	5,048	17.3	12.44	23.58
Ethnicity					
Malay	148	11,276	12.0	9.71	14.70
Chinese	56	5,775	23.7	16.82	32.33
Indian	32	3,934	24.2	16.07	34.69
Bumiputera Sabah	30	2,660	22.1	15.23	30.90
Bumiputera Sarawak	16	1,798	25.9	14.09	42.63
Others	9	566	20.8	8.47	42.80

Table 3.10.5 : Percentage of reported condom use during the last sexual intercourse among who ever had sex Form 1 to Form 5 students Malaysia, 2017

Socio-demographic characteristics	condom use			
	Unweighted Count	Percentage (%)	95% CI	
			Lower	Upper
MALAYSIA	233	12.7	10.58	15.18
State				
Johor	5	5.4	2.80	10.10
Kedah	11	9.0	5.49	14.47
Kelantan	22	22.2	13.74	33.77
Melaka	6	5.6	2.37	12.75
N. Sembilan	10	11.6	7.15	18.15
Pahang	25	17.6	10.31	28.35
Pulau Pinang	10	7.8	3.95	14.90
Perak	28	17.2	10.58	26.77
Perlis	19	13.7	8.94	20.35
Selangor	17	11.6	6.27	20.58
Terengganu	19	17.3	12.60	23.26
Sabah	21	15.9	9.82	24.77
Sarawak	19	13.8	7.48	24.17
WP Kuala Lumpur	3	5.4	1.92	14.35
WP Labuan	16	10.8	7.35	15.49
WP Putrajaya	2	3.2	0.55	16.11
Locality of school				
Urban	92	9.7	7.06	13.14
Rural	141	16.1	12.78	20.01
Sex				
Male	173	15.6	12.79	18.82
Female	60	8.5	6.16	11.52
Form				
Form 1	77	16.5	12.49	21.51
Form 2	40	11.5	8.03	16.23
Form 3	38	8.9	5.45	14.18
Form 4	40	12.3	8.10	18.19
Form 5	38	12.3	7.23	20.24
Ethnicity				
Malay	129	10.3	8.11	12.96
Chinese	42	15.4	11.16	20.76
Indian	25	20.5	10.89	35.24
Bumiputera Sabah	20	11.5	6.81	18.78
Bumiputera Sarawak	11	17.5	9.16	30.85
Others	6	18.8	7.29	40.45

Table 3.10.6 : Percentage of reported using " other birth control methods" during the last sexual intercourse among who ever had sex Form 1 to Form 5 students Malaysia, 2017

Socio-demographic characteristics	other birth control methods			
	Unweighted Count	Percentage (%)	95% CI	
			Lower	Upper
MALAYSIA	198	10.3	8.47	12.47
State				
Johor	8	8.1	4.39	14.61
Kedah	9	8.6	3.01	22.04
Kelantan	15	14.9	10.72	20.40
Melaka	8	8.3	4.14	16.13
N. Sembilan	12	14.8	8.59	24.26
Pahang	15	10.4	5.70	18.25
Pulau Pinang	13	10.5	6.17	17.20
Perak	24	13.9	8.53	21.90
Perlis	16	12.0	6.95	20.04
Selangor	12	7.8	3.43	16.78
Terengganu	12	10.6	7.06	15.62
Sabah	21	16.6	10.51	25.27
Sarawak	11	7.6	3.88	14.38
WP Kuala Lumpur	3	3.5	1.11	10.64
WP Labuan	16	12.4	6.79	21.51
WP Putrajaya	3	4.7	1.45	14.46
Locality of school				
Urban	85	8.4	5.96	11.73
Rural	113	12.4	9.75	15.67
Sex				
Male	145	12.3	9.95	15.05
Female	53	7.4	5.30	10.22
Form				
Form 1	52	10.8	7.79	14.66
Form 2	33	10.4	6.85	15.34
Form 3	42	9.9	6.07	15.79
Form 4	32	9.5	6.46	13.83
Form 5	39	10.7	6.89	16.36
Ethnicity				
Malay	113	8.1	6.37	10.19
Chinese	28	10.4	6.47	16.17
Indian	21	17.1	11.14	25.32
Bumiputera Sabah	23	15.6	8.64	26.54
Bumiputera Sarawak	6	10.3	3.88	24.82
Others	7	22.5	9.55	44.32

3.11 Tobacco Use

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3.11.1 Introduction

Most smokers experimented and started smoking during their school aged days. For example, in Malaysian Global Adults Tobacco Survey (GATS) 2011, 51.8% of the smokers started smoking daily before the age of 18.¹ Therefore, monitoring tobacco use among Malaysian adolescents is an important process in tobacco control. Malaysia is committed with the implementation of the WHO Framework Convention on Tobacco Control to achieve targeted lower smoking prevalence and creating smokefree Malaysian generations.

3.11.2 Objectives

To identify the prevalence of:

- i. Current smokers
- ii. Current cigarette smokers
- iii. Current E-cigarette/vape users
- iv. Current any tobacco product users
- v. Current smoke and smokeless tobacco product use by types
- vi. Having tried a cigarette before the age of 14 years, among ever cigarette smokers
- vii. Having tried E-cigarettes or vape before the age of 14 years, among ever E-cigarette or vape users
- viii. Quit smoking attempt in the past 12 months among those who ever smoked cigarettes
- ix. Quit E-cigarettes or vape attempt in the past 12 months among those who ever used E-cigarettes or vape

- x. Having been exposed to people smoking in their presence for at least one day in the past seven days
- xi. Having parents or guardians who used any form of tobacco products
- xii. Having parents or guardians who used E-cigarettes or vape

3.11.3 Variable Definitions

- **Current smoker:** Used any smoked tobacco products in the past 30 days (Manufactured cigarette, Roll-your-own cigarette, Traditional hand-rolled cigarette, Shisha, Cigar, or Pipe).
- **Current cigarette smoker:** smoked manufactured cigarette, rolled-your-own, or traditional hand roll cigarette in the past 30 days.
- **Current E-cigarette/Vape user:** Used E-cigarette/Vape in the past 30 days.
- **Current any tobacco product user:** Used any tobacco products in the past 30 days (Manufactured cigarette, Roll-your-own cigarette, Traditional hand-rolled cigarette, Shisha, Cigar, and Pipe, E-cigarette/Vape, Chewing tobacco or Snuff)

3.11.4 Findings

The prevalence of current smokers was 15.9% (95% CI: 14.72, 17.26) (**Table 3.11.1**). The highest prevalence was seen in Sabah (20.5%; 95% CI: 16.72, 24.88), followed by Kelantan (20.4%; 95% CI: 15.51, 26.27), and WP Labuan (20.3%; 95% CI: 15.32, 26.50). Rural areas showed significantly higher prevalence (18.9%; 95% CI: 17.07, 20.98) as compared to urban areas (13.6%; 95% CI: 12.07, 15.35). The prevalence was significantly higher among males (25.3%; 95% CI: 23.28, 27.50) as compared to females (6.7%; 95% CI 5.83, 7.71). Form 4 students had the highest prevalence of 17.8% (95% CI: 15.31, 20.61) with no significant difference across all forms. Bumiputera Sarawak reported the highest prevalence of 24.9% (95% CI: 19.74, 30.98), followed by Bumiputera Sabah (21.3%; 95% CI: 17.67, 25.46.)

The prevalence of current cigarettes smokers was 13.8% (95% CI: 12.67, 14.97) (**Table 3.11.2**). WP Labuan showed the highest prevalence (19.2%; 95% CI 14.29, 25.19) followed by Sabah (18.8%; 95% CI 15.03, 23.19) and Sarawak (17.7%; 95% CI 13.25, 23.33). Rural areas showed significantly higher (17.0%; 95% CI 15.18, 18.92) prevalence as compared to urban areas (11.3%; 95% CI 10.03, 12.74). The prevalence was significantly higher in males (22.4%; 95% CI: 20.45, 24.38) than females (5.3%; 95% CI: 4.63, 6.13). Form 4 students reported highest prevalence (15.3%; 95% CI 12.98, 17.91) compared to the other forms. Bumiputera Sarawak (22.2%; 95% CI 17.21, 28.11) had the highest prevalence followed by Bumiputera Sabah (19.8%; 95% CI 16.29, 23.92) and Others (17.9%; 95% CI 14.14, 22.46). Among those who ever smoked cigarettes, 68.4% (95%CI: 65.11, 71.54) had first tried a cigarette before the age of 14 years, with no significant difference by gender (**Table 3.11.6**).

Overall, 20.9% (95% CI: 19.53, 22.34) currently use any tobacco products (**Table 3.11.3**). By state, Sabah (29.1%; 95% CI 24.38, 34.37) reported to have the highest prevalence followed by WP Labuan (28.8%; 95% CI 22.48, 36.03) and Kelantan (26.7%; 95% CI 22.32, 31.59). The prevalence in rural areas (24.2%; 95% CI 22.17, 26.44) was significantly higher than urban areas (18.3%; 95% CI 16.51, 20.30). Males (32.4%; 95% CI: 30.10, 34.74) had significantly higher prevalence compared to females (9.6%; 95% CI: 8.67, 10.64). Form 4 students reported highest prevalence (22.8%; 95% CI 20.09, 25.72) compared to the other forms. Bumiputera Sarawak (29.6%; 95% CI 24.37, 35.47) had the highest prevalence followed by Bumiputera Sabah (28.8%; 95% CI 24.82, 33.13) and Others (26.5%; 95% CI 21.47, 32.12).

Prevalence of using shisha/hookah in the past 30 days was 6.9% (95% CI: 6.24, 7.68) was higher amongst males (10.2%; 95% CI: 9.01, 11.43) than females (3.7%; 95% CI: 3.13, 4.45) (**Table 3.11.5**). Prevalence of traditional rolled cigarette use was 5.4% (95% CI: 4.83, 5.96), and higher in males (8.1%; 95% CI: 7.17, 9.04) than females (2.7%; 95% CI: 2.36, 3.12) (**Table 3.11.5**). Prevalence of rolled your own (cigarettes) was 4.2% (95% CI: 3.80, 4.63) and higher in males (5.7%; 95% CI: 5.00, 6.42) than in females (2.7%; 95% CI: 2.31, 3.25) (**Table 3.11.5**). A total of 3.5% (95% CI: 3.07, 3.95) students smoked **cigars** and was higher in males (4.6%; 95% CI: 3.95, 5.24) compared to

females (2.4%; 95% CI: 2.00, 2.94) (**Table 3.11.5**). Prevalence of using smoking pipes was 3.1% (95% CI: 2.76, 3.53) and higher in males 3.9% (95% CI: 3.31, 4.55) than in females 2.4% (95% CI: 1.99, 2.84) (**Table 3.11.5**).

Among those who ever smoked cigarettes, 71.0% (95% CI: 67.47, 74.29) had tried to stop smoking in the past 12 months (**Table 3.11.8**). Melaka had the highest prevalence (85.4%; 95% CI 80.74, 89.13) followed by Sabah (83.5%; 95% CI 75.76, 89.12) and WP Putrajaya (83.0%; 95% CI 76.44, 87.99). There is no significant difference between rural (74.1%; 95% CI 69.78, 78.05) and urban areas (68.0%; 95% CI 62.23, 73.29). Males reported significantly higher prevalence (77.7%; 95% CI 74.55, 80.54) than females (38.2%; 95% CI 31.45, 45.49). Form 4 students had the highest prevalence (75.0%; 95% CI 68.51, 80.53) compared to other forms. By ethnicity, the highest prevalence was observed in Bumiputera Sabah (86.1%; 95% CI 80.88, 90.00), followed by Others (85.5%; 95% CI 71.25, 93.37) and Malays (77.2%; 95% CI 74.54, 79.71).

A total of 42.0% (95% CI: 40.53, 43.54) reported having been exposed to people who smoked in their presence in the past 7 days (**Table 3.11.10**). By state, Sabah (48.1%; 95% CI 42.43, 53.73) had the highest prevalence followed by Kelantan (46.6%; 95% CI 41.85, 51.44) and Johor (46.5%; 95% CI 40.79, 52.36). Rural areas had higher prevalence (43.3%; 95% CI 40.90, 45.80) compared to urban areas (41.0%; 95% CI 39.02, 43.04). Males reported significantly higher prevalence (49.3%; 95% CI 46.97, 51.62) than females (34.9%; 95% CI 33.34, 36.43). Form 5 students reported highest prevalence (50.9%; 95% CI 48.19, 53.59) compared to other forms. The prevalence was the highest among Bumiputera Sabah (51.7%; 95% CI 46.53, 56.92), followed by Malays (45.1%; 95% CI 43.24, 46.88) and Bumiputera Sarawak (44.7%; 95% CI 39.17, 50.32).

Overall, 42.2% (95% CI: 40.74, 43.60) of students reported having parents or guardian who used any form of tobacco products (**Table 3.11.11**). The highest prevalence was observed in Kelantan (51.6%; 95% CI 47.93, 55.29) followed by Perlis (47.9%; 95% CI 42.18, 53.72) and Pahang (47.2%; 95% CI 41.23, 53.31). Rural areas had significantly higher prevalence (46.8%; 95% CI 44.85, 48.84) compared to urban areas (38.6%; 95% CI 36.81, 40.37). Females reported higher prevalence

(42.9%; 95% CI 41.29, 44.59) compared to males (41.4%; 95% CI 39.35, 43.38). Form 3 students had the highest prevalence (43.7%; 95% CI 41.38, 46.07) compared to other forms. Malays had the highest prevalence (46.2%; 95% CI 44.51, 47.94) followed by Bumiputera Sabah (42.9%; 95% CI 39.17, 46.66) and Bumiputera Sarawak (38.6%; 95% CI 34.48, 42.96).

The prevalence of current E-cigarette use was 9.8% (95% CI: 9.00, 10.75) (**Table 3.11.4**). By state, WP Labuan (15.1%; 95% CI 10.10, 22.10) had the highest prevalence followed by Sabah (13.8%; 95% CI 10.87, 17.44) and Pahang (12.4%; 95% CI 7.81, 19.01). The prevalence in rural areas (11.2%; 95% CI 9.94, 12.65) was higher compared to urban areas (8.8%; 95% CI 7.66, 10.03). Males reported significantly higher prevalence 17.0% (95% CI: 15.54, 18.51) compared to females 2.8% (95% CI: 2.38, 3.33). Form 4 students had the highest prevalence (10.6%; 95% CI 9.05, 12.47) compared to other forms. The highest prevalence was reported by Bumiputera Sarawak (15.2%; 95% CI 12.11, 18.84), followed by Bumiputera Sabah (13.6%; 95% CI 11.02, 16.78) and Others (12.5%; 95% CI 9.14, 16.83). Among those who ever smoked e-cigarette/vape, 42.2% (95% CI: 38.79, 45.74) had first tried e-cigarette/vape before the age of 14 years, with no significant difference by gender (**Table 3.11.7**).

Among those who ever used e-cigarette/vape, 60.9% (95% CI: 57.70, 64.09) had tried to stop using e-cigarette/vape in the past 12 months (**Table 3.11.9**). The prevalence was reported highest in WP Putrajaya (75.5%; 95% CI 64.81, 83.71) followed by WP Labuan (70.5%; 95% CI 64.37, 75.89) and Johor (68.7%; 95% CI 55.92, 79.16). Urban areas had the highest prevalence (62.7%; 95% CI 58.50, 66.76) as compared to rural areas (59.0%; 95% CI 54.11, 63.78). The prevalence was significantly higher in males (64.9%; 95% CI: 61.69, 67.89) than females (44.6%; 95% CI: 37.83, 51.67). Form 3 students had the highest prevalence (64.2%; 95% CI 59.31, 68.90) compared to other forms. Bumiputera Sabah reported the highest prevalence (72.6%; 95% CI 68.07, 76.70) followed by Malays (65.1%; 95% CI 61.78, 68.21) and Others (59.5%; 95% CI 42.42, 74.59).

Overall, 13.7% (95% CI: 12.84, 14.60) of students reported having parents or guardian who used e-cigarette/vape (**Table 3.11.12**). By state, highest prevalence was observed in Terengganu

(18.4%; 95% CI 15.17, 22.20) followed by Pahang (17.2%; 95% CI 13.27, 22.06) and Sabah (16.4%; 95% CI 13.16, 20.36). Rural areas had significantly higher prevalence (16.0%; 95% CI 14.85, 17.25) compared to urban areas (12.0%; 95% CI 10.84, 13.24). Females had significantly higher prevalence (14.9%; 95% CI 13.77, 16.10) compared to males (12.5%; 95% CI 11.45, 13.57). Form 1 students had the highest prevalence (16.3%; 95% CI 14.57, 18.22) compared to other form. Malays had the highest prevalence (15.6%; 95% CI 14.60, 16.72) followed by Bumiputera Sabah (15.3 %; 95% CI 12.68, 18.42) and Others (11.8%; 95% CI 8.62, 15.82).

The prevalence of chewing tobacco was 2.8% (95% CI: 2.44, 3.22), significantly higher in males (3.3%; 95% CI: 2.76, 4.02) than in females (2.3%; 95% CI: 1.94, 2.70) (**Table 3.11.5**). The prevalence of snuff use was 6.3% (95% CI: 5.77, 6.77), significantly higher in males (8.2%; 95% CI: 7.45, 9.03) than in females (4.3 %; 95% CI: 3.84, 4.88) (**Table 3.11.5**).

3.11.5 Discussion

This study indicated that smoking is prevalent among adolescents in Malaysia. One in four male students smoked cigarette and although the prevalence among females was low at 5.3%, this is more than doubled the prevalence of 2.1% in 2012.² Overall, the prevalence of current cigarette smokers was 13.8%, which is higher than 11.5% in 2012, however the difference is not significant.² The prevalence of current cigarette smokers among adolescents in Malaysia is higher than Thailand (10.4%), Philippines (11.0%), Brunei (11.4%) and Indonesia (12.5%).³⁻⁶ There was no significant change in the percentage of students who had their first cigarette before the age of 14 year old, among ever smoker; which was 68.4% in the current survey versus 70.8% in 2012.² Prevalence of being exposed to people smoking in their presence for at least one day in the past 7 days among Malaysian adolescents was 42.0%, which is similar to Thailand (42.7%) and Brunei (41.1%) but lower than Philippines (50.0) and Indonesia (79.0%).³⁻⁶

3.11.6 Conclusion

Smoking is still a major health problem among adolescents in Malaysia, even though the overall trend of current smokers is declining from year 2003 to 2017. Although the prevalence among male is significantly higher than female, special concern should be given to female adolescents as the prevalence of current cigarette smoking has doubled since 2012. The use of other tobacco products such as shisha and electronic cigarettes also contributed to the overall prevalence of tobacco use. The prevalence of exposure to cigarette smoke is still high among Malaysian adolescents.

3.11.7 Recommendations

All screening, prevention and intervention programmes among adolescents must be strengthened and delivered in synergy by all governmental and non-governmental agencies. Interventions should also be targeted to higher risk groups such as states with high prevalence, males and Form 1 students. The rise of prevalence of smoking among females should also be a concern for additional interventions to halt this increment. Overall national tobacco control programmes have to be amplified to achieve denormalization of public smoking, and to help reduce exposure to cigarette smoke among our youth. These would help to achieve the medium and long-term targets as stipulated in the National Strategic Plan for Tobacco Control.

3.11.8 References

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Table 3.11.1: Prevalence of current smokers among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Current Smokers				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	4,140	342,210	15.9	14.72	17.26
State					
Johor	163	29,327	10.6	7.33	15.20
Kedah	233	21,337	13.8	10.63	17.73
Kelantan	335	24,785	20.4	15.51	26.27
Melaka	209	6,633	9.9	5.92	15.99
N. Sembilan	223	13,187	14.9	10.25	21.19
Pahang	308	19,009	18.3	12.56	25.99
Pulau Pinang	189	13,318	11.8	7.05	19.16
Perak	278	29,328	16.1	11.73	21.80
Perlis	277	4,830	17.9	13.64	23.09
Selangor	292	67,458	17.2	13.33	22.00
Terengganu	255	16,605	16.8	13.30	21.07
Sabah	337	40,784	20.5	16.72	24.88
Sarawak	372	39,673	20.1	15.31	25.82
WP Kuala Lumpur	183	14,014	12.5	8.33	18.26
WP Labuan	331	1,125	20.3	15.32	26.50
WP Putrajaya	155	796	9.5	5.81	15.16
Locality of school					
Urban	2,074	165,019	13.6	12.07	15.35
Rural	2,066	177,191	18.9	17.07	20.98
Sex					
Male	3,292	269,690	25.3	23.28	27.50
Female	848	72,520	6.7	5.83	7.71
Form					
Form 1	762	65,780	14.6	12.35	17.15
Form 2	758	59,841	14.0	12.24	16.02
Form 3	909	70,883	16.4	14.15	19.02
Form 4	925	73,735	17.8	15.31	20.61
Form 5	786	71,971	17.0	14.59	19.77
Ethnicity					
Malay	2,888	219,227	16.2	14.94	17.53
Chinese	297	29,801	8.3	6.67	10.32
Indian	241	29,910	20.0	15.29	25.82
Bumiputera Sabah	369	31,819	21.3	17.67	25.46
Bumiputera Sarawak	232	24,127	24.9	19.74	30.98
Others	113	7,325	19.3	15.48	23.75

Table 3.11.2: Prevalence of current cigarette smokers among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Current Cigarette Smokers				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper
MALAYSIA	3,595	295,664	13.8	12.67	14.97
State					
Johor	141	25,386	9.2	6.27	13.32
Kedah	208	18,929	12.2	9.10	16.27
Kelantan	268	20,098	16.5	12.41	21.64
Melaka	188	5,943	8.8	5.28	14.43
N. Sembilan	189	11,327	12.8	8.66	18.54
Pahang	281	17,503	16.9	11.47	24.16
Pulau Pinang	142	9,723	8.6	4.99	14.52
Perak	255	26,806	14.8	10.61	20.16
Perlis	246	4,311	16.0	12.17	20.66
Selangor	250	56,662	14.5	11.13	18.62
Terengganu	226	14,760	15.0	11.67	18.98
Sabah	307	37,346	18.8	15.03	23.19
Sarawak	330	35,077	17.7	13.25	23.33
WP Kuala Lumpur	125	10,077	9.0	5.51	14.27
WP Labuan	310	1,059	19.2	14.29	25.19
WP Putrajaya	129	656	7.8	4.66	12.87
Locality of school					
Urban	1,755	137,011	11.3	10.03	12.74
Rural	1,840	158,653	17.0	15.18	18.92
Sex					
Male	2,937	238,000	22.4	20.45	24.38
Female	658	57,663	5.3	4.63	6.13
Form					
Form 1	677	57,526	12.8	10.68	15.16
Form 2	680	53,669	12.6	10.88	14.49
Form 3	796	61,746	14.3	12.25	16.68
Form 4	780	63,288	15.3	12.98	17.91
Form 5	662	59,435	14.1	12.07	16.31
Ethnicity					
Malay	2,507	190,451	14.1	12.91	15.31
Chinese	242	24,917	7.0	5.51	8.74
Indian	187	22,408	15.0	10.60	20.85
Bumiputera Sabah	345	29,620	19.8	16.29	23.92
Bumiputera Sarawak	209	21,458	22.2	17.21	28.11
Others	105	6,810	17.9	14.14	22.46

Table 3.11.3: Prevalence of current any tobacco products use among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	5,530	448,565	20.9	19.53	22.34
State					
Johor	231	41,053	14.9	10.68	20.38
Kedah	306	27,914	18.1	14.07	22.86
Kelantan	436	32,492	26.7	22.32	31.59
Melaka	301	9,730	14.5	9.11	22.22
N. Sembilan	298	17,373	19.6	14.33	26.34
Pahang	399	24,322	23.5	16.26	32.64
Pulau Pinang	226	15,842	14.1	8.92	21.47
Perak	339	35,682	19.6	14.82	25.56
Perlis	365	6,355	23.5	18.40	29.56
Selangor	375	85,698	21.9	18.03	26.32
Terengganu	345	22,175	22.5	18.13	27.51
Sabah	477	57,936	29.1	24.38	34.37
Sarawak	458	48,707	24.6	19.57	30.49
WP Kuala Lumpur	266	20,482	18.2	11.56	27.54
WP Labuan	471	1,592	28.8	22.48	36.03
WP Putrajaya	237	1,212	14.5	9.17	22.09
Locality of school					
Urban	2,848	221,881	18.3	16.51	20.30
Rural	2,682	226,685	24.2	22.17	26.44
Sex					
Male	4,250	344,666	32.4	30.10	34.74
Female	1,280	103,899	9.6	8.67	10.64
Form					
Form 1	1,003	86,171	19.1	16.65	21.83
Form 2	1,073	85,234	20.0	17.71	22.45
Form 3	1,232	93,247	21.6	19.13	24.36
Form 4	1,206	94,355	22.8	20.09	25.72
Form 5	1,016	89,559	21.2	18.56	24.07
Ethnicity					
Malay	3,975	297,369	22.0	20.53	23.46
Chinese	374	36,888	10.3	8.42	12.51
Indian	267	32,602	21.8	16.92	27.74
Bumiputera Sabah	489	43,005	28.8	24.82	33.13
Bumiputera Sarawak	278	28,650	29.6	24.37	35.47
Others	147	10,051	26.5	21.47	32.12

Table 3.11.4: Prevalence of current E-cigarettes/Vape use among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Current e-Cigarette Users				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	2,547	211,084	9.8	9.00	10.75
State					
Johor	99	18,217	6.6	4.70	9.21
Kedah	137	12,759	8.3	6.00	11.24
Kelantan	192	13,961	11.5	8.61	15.15
Melaka	142	4,506	6.7	4.06	10.86
N. Sembilan	130	7,994	9.0	6.08	13.23
Pahang	206	12,800	12.4	7.81	19.01
Pulau Pinang	79	5,839	5.2	2.87	9.20
Perak	146	15,344	8.5	5.77	12.21
Perlis	140	2,484	9.2	6.27	13.33
Selangor	202	44,758	11.4	8.76	14.82
Terengganu	137	9,046	9.2	6.29	13.21
Sabah	225	27,522	13.8	10.87	17.44
Sarawak	221	23,733	12.0	9.41	15.23
WP Kuala Lumpur	123	10,603	9.4	4.98	17.16
WP Labuan	239	837	15.1	10.10	22.10
WP Putrajaya	129	681	8.1	4.77	13.52
Locality of school					
Urban	1,365	106,181	8.8	7.66	10.03
Rural	1,182	104,904	11.2	9.94	12.65
Sex					
Male	2,188	180,620	17.0	15.54	18.51
Female	359	30,464	2.8	2.38	3.33
Form					
Form 1	423	38,583	8.6	6.84	10.69
Form 2	507	40,545	9.5	8.08	11.14
Form 3	553	43,446	10.1	8.39	12.07
Form 4	562	44,040	10.6	9.05	12.47
Form 5	502	44,470	10.5	8.67	12.70
Ethnicity					
Malay	1,797	138,875	10.3	9.33	11.27
Chinese	166	16,176	4.5	3.50	5.80
Indian	133	16,264	10.9	7.27	16.07
Bumiputera Sabah	241	20,384	13.6	11.02	16.78
Bumiputera Sarawak	139	14,640	15.2	12.11	18.84
Others	71	4,746	12.5	9.14	16.83

Table 3.11.5: Prevalence of current smoke and smokeless tobacco product use by types (except manufactured cigarette and E-cigarette/Vape) among Form 1 to Form 5 students in Malaysia, 2017

Tobacco Products	Total						Male						Female					
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI				
				Lower	Upper				Lower	Upper				Lower	Upper	Lower	Upper	
Shisha Use	1,724	148,025	6.9	6.24	7.68	1,235	107,770	10.2	9.01	11.43	489	40,255	3.7	3.13	4.45			
Traditional Rolled Cigarette	1,411	114,824	5.4	4.83	5.96	1,060	85,527	8.1	7.17	9.04	351	29,297	2.7	2.36	3.12			
Roll-Your-Own" With	1,036	89,770	4.2	3.80	4.63	696	60,200	5.7	5.00	6.42	340	29,571	2.7	2.31	3.25			
Cigar Use	846	74,544	3.5	3.07	3.95	544	48,367	4.6	3.95	5.24	302	26,178	2.4	2.00	2.94			
Pipe Smoking Use	772	66,815	3.1	2.76	3.53	471	41,177	3.9	3.31	4.55	301	25,638	2.4	1.99	2.84			
Chewing Tobacco Use	696	60,037	2.8	2.44	3.22	395	35,365	3.3	2.76	4.02	301	24,672	2.3	1.94	2.70			
Snuff Use	1,683	133,681	6.3	5.77	6.77	1,068	86,963	8.2	7.45	9.03	615	46,718	4.3	3.84	4.88			

Table 3.11.6: Prevalence of having tried a cigarette before the age of 14 years among ever cigarette smokers among Form 1 to Form 5 students in Malaysia, 2017

Prevalence	Total						Male						Female					
	Unweighted Count	Estimated Population	Prevalence (%)	Lower	Upper	95% CI	Unweighted Count	Estimated Population	Prevalence (%)	Lower	Upper	95% CI	Unweighted Count	Estimated Population	Prevalence (%)	Lower	Upper	95% CI
Yes	2,646	205,215	68.4	65.11	71.54	2,375	186,311	69.9	66.62	72.96	271	18,904	56.7	45.68	67.09			
No	1,058	94,734	31.6	28.46	34.89	930	80,297	30.1	27.04	33.38	128	14,437	43.3	32.91	54.32			

Table 3.11.7: Prevalence of having tried a E-cigarette/Vape before the age of 14 years among ever E-cigarette/Vape users among Form 1 to Form 5 students in Malaysia,

Prevalence	Total						Male						Female					
	Unweighted Count	Estimated Population	Prevalence (%)	Lower	Upper	95% CI	Unweighted Count	Estimated Population	Prevalence (%)	Lower	Upper	95% CI	Unweighted Count	Estimated Population	Prevalence (%)	Lower	Upper	95% CI
Yes	1,463	118,122	42.2	38.79	45.74	1,275	103,572	42.9	39.18	46.65	188	14,551	38.1	31.56	45.17			
No	1,992	161,605	57.8	54.26	61.21	1,714	137,997	57.1	53.35	60.82	278	23,608	61.9	54.83	68.44			

Table 3.11.8: Prevalence of quit smoking attempt in the past 12 month among those who ever smoked cigarettes among Form 1 to Form 5 students in Malaysia,2017

Socio-demographic Characteristics	Quit Smoking Attempts In The Past 12 Months Among Those Who Ever Smoked Cigarettes				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	2,451	199,992	71.0	67.47	74.29
State					
Johor	116	21,600	74.6	59.31	85.54
Kedah	134	12,487	71.7	62.91	79.12
Kelantan	166	11,825	71.8	61.66	80.11
Melaka	176	5,580	85.4	80.74	89.13
N. Sembilan	141	8,348	71.2	58.56	81.25
Pahang	195	11,807	70.1	58.56	79.52
Pulau Pinang	95	6,244	64.5	46.63	79.07
Perak	114	12,245	53.8	38.63	68.28
Perlis	142	2,543	72.7	61.26	81.84
Selangor	149	33,640	62.3	48.91	74.02
Terengganu	120	8,450	74.9	69.95	79.29
Sabah	250	30,204	83.5	75.76	89.12
Sarawak	231	24,767	75.1	66.91	81.87
WP Kuala Lumpur	106	8,945	76.1	59.30	87.40
WP Labuan	211	741	78.7	70.86	84.92
WP Putrajaya	105	568	83.0	76.44	87.99
Locality of school					
Urban	1,263	98,206	68.0	62.23	73.29
Rural	1,188	101,787	74.1	69.78	78.05
Sex					
Male	2,240	181,739	77.7	74.55	80.54
Female	211	18,254	38.2	31.45	45.49
Form					
Form 1	323	27,119	60.3	54.32	65.94
Form 2	448	35,909	69.8	63.61	75.40
Form 3	549	43,070	74.0	69.65	77.97
Form 4	598	46,167	75.0	68.51	80.53
Form 5	533	47,727	72.8	64.79	79.60
Ethnicity					
Malay	1,785	137,068	77.2	74.54	79.71
Chinese	104	9,679	32.7	25.58	40.69
Indian	75	9,024	43.0	32.07	54.64
Bumiputera Sabah	264	24,128	86.1	80.88	90.00
Bumiputera Sarawak	159	16,230	77.1	68.87	83.69
Others	64	3864	85.5	71.25	93.37

Table 3.11.9: Prevalence of quit E-cigarette/ Vape attempt in the past 12 month among those who ever used E-Cigarette/Vape among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Stop Using e-Cigarettes In The Past 12 Months Among Those Who Ever Smoked e-Cigarettes				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	2,016	161,481	60.9	57.70	64.09
State					
Johor	97	17,864	68.7	55.92	79.16
Kedah	97	9,026	64.3	53.13	74.16
Kelantan	146	10,185	58.4	47.16	68.91
Melaka	136	4,283	68.3	60.00	75.62
N. Sembilan	115	6,790	62.3	46.92	75.48
Pahang	141	8,572	59.1	48.75	68.65
Pulau Pinang	74	4,949	57.0	47.26	66.16
Perak	94	10,169	48.2	37.65	58.99
Perlis	90	1,611	53.0	39.12	66.37
Selangor	144	30,914	57.9	45.35	69.47
Terengganu	112	7,264	64.3	53.69	73.63
Sabah	183	22,059	68.6	61.36	75.04
Sarawak	169	18,062	58.5	48.23	68.09
WP Kuala Lumpur	102	8,428	62.5	56.26	68.38
WP Labuan	196	676	70.5	64.37	75.89
WP Putrajaya	120	628	75.5	64.81	83.71
Locality of school					
Urban	1,137	86,019	62.7	58.50	66.76
Rural	879	75,462	59.0	54.11	63.78
Sex					
Male	1,749	138,590	64.9	61.69	67.89
Female	267	22,891	44.6	37.83	51.67
Form					
Form 1	286	24,456	53.5	47.54	59.33
Form 2	401	32,032	61.1	56.35	65.59
Form 3	443	34,236	64.2	59.31	68.90
Form 4	501	36,581	60.9	54.27	67.14
Form 5	385	34,177	64.0	56.39	70.90
Ethnicity					
Malay	1,503	114,887	65.1	61.78	68.21
Chinese	101	9,103	38.4	30.22	47.21
Indian	59	7,016	38.9	30.80	47.61
Bumiputera Sabah	201	17,063	72.6	68.07	76.70
Bumiputera Sarawak	102	10,504	57.7	45.48	68.98
Others	50	2,908	59.5	42.42	74.59

Table 3.11.10: Prevalence of being exposed to people smoking in their presence for at least one day in the past 7 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Having Been Exposed To People Smoking In Their Presence For At Least One Days In The Past 7 Days				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	11,385	900,561	42.0	40.53	43.54
State					
Johor	780	128,215	46.5	40.79	52.36
Kedah	636	58,499	38.0	34.40	41.64
Kelantan	782	56,692	46.6	41.85	51.44
Melaka	872	30,717	45.7	39.05	52.52
N. Sembilan	722	37,462	42.4	34.31	50.84
Pahang	811	47,478	45.9	38.55	53.38
Pulau Pinang	600	39,803	35.4	30.08	41.00
Perak	658	69,162	38.1	32.02	44.63
Perlis	737	12,171	45.1	38.27	52.03
Selangor	644	153,723	39.3	34.93	43.93
Terengganu	629	39,286	39.9	34.28	45.73
Sabah	795	95,362	48.1	42.43	53.73
Sarawak	696	76,840	38.9	33.64	44.43
WP Kuala Lumpur	757	49,942	44.5	39.98	49.06
WP Labuan	725	2,425	44.0	34.60	53.77
WP Putrajaya	541	2,784	33.2	24.01	43.98
Locality of school					
Urban	6,370	496,050	41.0	39.02	43.04
Rural	5,015	404,511	43.3	40.90	45.80
Sex					
Male	6,435	524,065	49.3	46.97	51.62
Female	4,950	376,496	34.9	33.34	36.43
Form					
Form 1	1,750	138,662	30.8	28.84	32.80
Form 2	2,002	158,889	37.3	34.94	39.66
Form 3	2,476	189,060	44.0	41.32	46.62
Form 4	2,628	198,787	48.1	45.53	50.67
Form 5	2,529	215,163	50.9	48.19	53.59
Ethnicity					
Malay	8,278	609,364	45.1	43.24	46.88
Chinese	1,212	111,184	31.1	28.54	33.68
Indian	406	43,875	29.5	25.66	33.57
Bumiputera Sabah	848	77,223	51.7	46.53	56.92
Bumiputera Sarawak	408	43,031	44.7	39.17	50.32
Others	233	15,884	42.0	36.50	47.61

Table 3.11.11: Prevalence of having father or mother or guardian who used any form of tobacco product among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Either Father Or Mother Or Guardian				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	10,762	837,386	42.2	40.74	43.60
State					
Johor	704	112,294	42.8	38.30	47.32
Kedah	649	58,805	40.6	34.55	46.92
Kelantan	793	59,023	51.6	47.93	55.29
Melaka	801	29,103	45.2	39.47	51.15
N. Sembilan	690	35,678	43.1	36.24	50.29
Pahang	777	44,992	47.2	41.23	53.31
Pulau Pinang	524	34,159	32.9	26.78	39.57
Perak	709	74,007	44.5	38.95	50.26
Perlis	739	11,967	47.9	42.18	53.72
Selangor	604	142,924	39.6	34.33	45.16
Terengganu	706	42,502	46.8	41.57	52.13
Sabah	656	77,346	43.5	40.16	47.00
Sarawak	622	67,942	37.9	34.35	41.65
WP Kuala Lumpur	643	42,030	39.9	35.84	44.08
WP Labuan	642	2,087	41.2	36.99	45.62
WP Putrajaya	503	2,526	31.2	24.63	38.59
Locality of school					
Urban	5,668	434,032	38.6	36.81	40.37
Rural	5,094	403,354	46.8	44.85	48.84
Sex					
Male	5,015	402,288	41.4	39.35	43.38
Female	5,747	435,098	42.9	41.29	44.59
Form					
Form 1	2,141	171,422	41.9	39.48	44.39
Form 2	2,089	164,188	42.0	39.65	44.37
Form 3	2,311	175,620	43.7	41.38	46.07
Form 4	2,235	163,170	42.4	40.13	44.69
Form 5	1,986	162,985	40.8	38.66	42.96
Ethnicity					
Malay	8,049	589,600	46.2	44.51	47.94
Chinese	1,159	106,009	32.9	30.24	35.78
Indian	330	36,620	28.2	23.88	32.88
Bumiputera Sabah	698	58,099	42.9	39.17	46.66
Bumiputera Sarawak	324	34,268	38.6	34.48	42.96
Others	202	12790	37.0	30.39	44.10

Table 3.11.12: Prevalence of having father or mother or guardian who used E-cigarette/Vape among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Either Father Or Mother Or Guardian				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	3,374	260,221	13.7	12.84	14.60
State					
Johor	172	26,613	10.5	8.58	12.77
Kedah	171	15,390	11.2	8.94	13.82
Kelantan	217	16,775	16.1	12.63	20.33
Melaka	224	8,376	13.7	10.72	17.34
N. Sembilan	244	12,362	15.5	12.44	19.19
Pahang	255	15,354	17.2	13.27	22.06
Pulau Pinang	114	7,427	7.4	5.41	10.10
Perak	231	24,063	15.3	12.17	19.15
Perlis	210	3,446	14.9	11.85	18.58
Selangor	206	48,860	13.8	10.73	17.61
Terengganu	264	15,832	18.4	15.17	22.20
Sabah	236	28,077	16.4	13.16	20.36
Sarawak	201	22,086	13.1	10.94	15.64
WP Kuala Lumpur	225	13,926	13.6	10.96	16.78
WP Labuan	209	669	13.7	10.93	16.98
WP Putrajaya	195	968	12.22	8.26	17.71
Locality of school					
Urban	1,790	131,147	12.0	10.84	13.24
Rural	1,584	129,073	16.0	14.85	17.25
Sex					
Male	1,486	117,370	12.5	11.45	13.57
Female	1,888	142,851	14.9	13.77	16.10
Form					
Form 1	794	64,157	16.3	14.57	18.22
Form 2	679	52,811	14.3	12.51	16.25
Form 3	718	54,551	14.2	12.58	15.92
Form 4	652	46,713	12.7	11.47	14.07
Form 5	531	41,988	10.9	9.24	12.88
Ethnicity					
Malay	2,593	188,483	15.6	14.60	16.72
Chinese	282	24,251	7.6	6.51	8.94
Indian	112	14,024	10.8	7.92	14.48
Bumiputera Sabah	238	20,019	15.3	12.68	18.42
Bumiputera Sarawak	93	9,628	11.6	9.18	14.55
Others	56	3,815	11.8	8.62	15.82

3.12 Violence and Unintentional Injury

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3.12.1 Introduction

The World Health Assembly through WHA 49.25 had declared violence to be a public health problem globally. Malaysia is committed towards resolving this issue, covering various aspects of interpersonal violence.¹ The prevalence of bullying varies between 9% to 25% in school-going adolescents in Western countries², and 10.8% to 17.6% locally³, differences largely explained by linguistic and cultural factors.

Injuries are inevitable among anyone, including adolescents. Injuries however, may be due to intentional or unintentional causes. Unintentional injuries are caused by various factors and this leads to health problems and disability in an otherwise healthy population. Conflicts happen due to a wide spectrum ranging from physical fights to bullying. These may affect the mental health, well-being and healthy development of the adolescent.

This survey aims to examine the prevalence and distribution of unintentional injuries, physical attacks, physical fights, bullying, as well as physical and verbal abuse experienced by adolescents in Form 1 to Form 5 in Malaysia.

3.12.2 Objectives

To describe the prevalence of:

- i. Having been physically attacked at least once in the past 12 months
- ii. Involvement in a physical fight at least once in the past 12 months
- iii. Having been bullied at least once in the past 30 days
- iv. Physical abuse at home at least once in the past 30 days
- v. Verbal abuse at home at least once in the past 30 days
- vi. Having had a serious injury at least once in the past 12 months

3.12.3 Variable Definitions

- **Physical attack:** when one or more persons hurt another person with or without a weapon such as sticks or knives in the past 12 months. It is NOT a physical attack when two individuals or students of about the same strength or power choose to fight each other.
- **Physical fight:** when two individuals or students of about the same strength or power choose to fight each other in the past 12 months.
- **Bullying:** when a student or group of students say or do bad and unpleasant things to another student, such as teasing a lot in an unpleasant way or leaving out of things on purpose in the past 30 days. It is NOT bullying when two students of about the same strength or power argue or fight or when teasing is done in a friendly and fun way.
- **Physical abuse at home:** when someone is hit so hard that it left a mark OR caused an injury in the past 30 days
- **Verbal abuse at home:** when someone has had hurtful or insulting things said to them in the past 30 days
- **Unintentional injury:** a serious injury which makes the student miss at least one full day of usual activity (such as school, sports or a job) OR requires treatment by a doctor or a medical personnel in the past 12 months

3.12.4 Findings

Among the adolescents in this survey, 25.3% (95% CI: 24.13, 26.54) of them had been physically attacked, which was significantly higher in males [31.4% (95%CI: 30.01, 32.78)] compared to females [19.3% (95%CI: 17.78, 21.00)]. This was highest in WP Kuala Lumpur [30.0% (95% CI: 26.21, 34.06)] and lowest in Terengganu [19.2% (95% CI 16.25, 22.48)]. There was no significant difference between urban [25.2% (95% CI: 23.48, 26.96)] and rural [25.5% (95% CI: 23.86, 27.19)] localities. Adolescents from Form 1 had highest prevalence of being physically attacked at 32.6% (95% CI: 30.44, 34.87). Among various ethnicities, Indians were reported as having the highest prevalence of being physically attacked [35.3% (95% CI: 29.79, 41.15)], while Malays had the lowest prevalence [24.1% (95% CI: 22.76, 25.52)] (**Table 3.12.1**).

Similarly, 24.9% (95% CI: 23.50, 26.21) of adolescents claimed to have been involved in physical fight(s), with significantly more males [32.0% (95% CI: 30.49, 33.53)] than females [17.9% (95%CI: 16.08, 19.83)] involved. The highest was reported in WP Kuala Lumpur [28.2% (95% CI: 23.25, 33.72)] and lowest in Kedah [21.0%, 95% CI: 18.39, 23.86)]. There was no significant difference between urban and rural localities, with a reported prevalence of 24.2% (95% CI: 22.20, 26.35) and 25.7% (95% CI: 23.91, 27.64) respectively. Adolescents from Form 1 had the highest prevalence at 33.9 % (95% CI: 31.45, 36.54). Indians reported the highest prevalence at 36.2% (95% CI: 30.62, 42.08) and Chinese with lowest prevalence at 22.0% (95% CI: 19.61, 24.55) (**Table 3.12.1**).

With regards to bullying, 16.2% (95%CI: 15.28, 17.14) of adolescents reported to have been bullied and this was significantly higher among males [18.7% (95%CI: 17.48, 19.99)] compared to females [13.7% (95%CI: 12.70, 14.81)]. This was highest in Pahang [22.0% (95% CI: 16.56, 28.55)] and lowest in Kelantan [12.5% (95% CI: 10.00, 15.42)]. There was no difference between urban [15.3% (95% CI: 14.06, 16.70)] and rural [17.3% (95% CI: 16.06, 18.62)] localities. Adolescents from Form 1 had the highest prevalence of having been bullied at 22.8% (95% CI: 20.66, 25.10). Among various ethnicities, Indians were reported as having highest prevalence of having been bullied [26.0% (95% CI: 22.37, 30.35)], followed by Others [21.2% (95% CI: 16.75, 26.35)], Bumiputera Sabah [19.8% (95% CI: 16.28, 23.87)], Bumiputera

Sarawak [18.2% (95% CI: 14.51, 22.64)], Malays [15.0% (95% CI: 14.16, 15.93)] and Chinese [13.9% (95% CI: 11.91, 16.25)] respectively (**Table 3.12.2**).

Two most common forms of bullying were ‘being made fun of because of how body or face looks’ [15.9% (95% CI: 14.29, 17.76)] and ‘made fun of with sexual jokes, comments or gestures’ [14.1% (95% CI: 12.77, 15.62)]. Bullying in the form of ‘being made fun of because of religion’ was the least common at 4.7% (95% CI: 3.86, 5.75) (**Table 3.12.3**).

Physical abuse at home was reported by 11.8% (95% CI: 10.90, 12.83) of adolescents. This was highest in Selangor [15.4% (95% CI: 12.45, 18.80)] and lowest in Melaka [8.2% (95% CI: 6.20, 10.80)]. Urban localities reported a prevalence of 11.4% (95% CI: 10.13, 12.90) with rural at 12.3% (95% CI: 10.95, 13.86). There was no significant difference between males and females with a prevalence of 12.7% (95% CI: 11.37, 14.07) and 11.0% (95% CI: 9.91, 22.23) respectively. Adolescents in Form 1 reported the highest prevalence at 18.1% (95% CI: 16.26, 20.11). The lowest prevalence of physical abuse at home was reported by Malays [9.9% (95% CI: 9.06, 10.90)] while the highest was among Indians [24.4% (95% CI: 21.28, 27.85)] (**Table 3.12.4**).

It was reported that 43.2% (95% CI: 41.85, 44.60) of adolescents were abused verbally at home. This was highest in Sabah [50.1% (95% CI: 46.66, 53.64%)] and lowest in Kedah [36.9% (95% CI: 32.72, 41.29)]. The prevalence of verbal abuse was significantly higher among females [49.2% (95% CI: 47.29, 51.11)] compared to males [37.2% (95% CI: 35.79, 38.53)]. There was no significant difference found between urban [42.9% (95% CI: 40.73, 45.08)] and rural [43.7% (95% CI: 42.02, 45.30)] localities. Adolescents from Form 4 had the highest prevalence of verbal abuse at home with a prevalence of 45.1% (95% CI: 42.84, 47.29). Among various ethnicities, Bumiputera Sabah were reported as having the highest prevalence of verbal abuse at home [52.3% (95% CI: 48.56, 55.94)], while Chinese [29.6% (95% CI: 27.24, 32.16)] had the lowest (**Table 3.12.4**).

It was found that 29.9% of adolescents (95% CI: 28.76, 31.11) had been seriously injured in the past 12 months. This was highest in both Pahang [34.1% (95% CI: 28.86, 39.67)] and Perlis

[34.1% (95% CI 29.35, 39.27)] and lowest in Penang [25.2% (95% CI: 22.23, 28.37)]. Significantly more males [35.8% (95% CI: 34.32, 37.31)] than females [24.1% (95% CI: 22.72, 25.60)] reported they had been seriously injured (**Table 3.12.5**). There was no significant difference found between urban [29.0% (95% CI: 27.49, 30.63)] and rural [31.1% (95% CI: 29.24, 32.96)] localities. Adolescents in Form 1 had the highest prevalence of serious injury; 35.8% (95% CI: 33.47, 38.12). Among various ethnicities, Indians had a prevalence of serious injury of 35.5% (95% CI: 30.94, 40.43), Malays; 29.9% (95% CI: 28.71, 31.18) and Chinese; 25.9% (95% CI: 23.71, 28.13), with Others showing the highest prevalence at 36.3% (95% CI: 29.82, 43.22) (**Table 3.12.5**).

Among those who had been seriously injured, two most common types of injuries were ‘a cut or stab wound’ [22.3% (95% CI: 21.00, 23.58)] and ‘a broken bone/dislocated joint’ [13.6% (95%CI: 12.58, 14.77)] (**Table 3.12.6**). Two most common causes of serious injury were falls [35.0% (95% CI: 33.47, 36.52)] and motor vehicle accidents [13.6% (95% CI: 12.54, 14.78)] (**Table 3.12.7**).

3.12.5 Discussion

The prevalence of Malaysian school-going adolescents who had been physically attacked (25.3%) was lower than in 2012 (27.8%). It was comparable to prevalence found among school-going adolescents in Brunei (2014) at 27.1%. Adolescents from Indonesia (2015), Philippines (2011) and Thailand (2008) reported higher prevalence of being physically attacked at 32.7%, 33.1% and 33.3% respectively. Adolescents from Vietnam (2013) reported a lower prevalence at 21.0%. The prevalence of adolescents who were involved in physical fights (24.9%) in this study was lower than in 2012 (27.4%). It was lower than Thailand (2008) and Philippines (2011) with reported prevalence of 33.3% and 36.6% respectively. Vietnam (2013) reported a lower prevalence of 16.6%. A cross-national study by Smith-Khuri et al⁴ yielded a much higher prevalence of physical fights – mean of 39.8% from 5 countries (Ireland, Israel, Portugal, Sweden and the United States).

Additionally, the reported prevalence of having been bullied in Malaysia (16.2%) was lower than that found in 2012 (17.9%), this being the lowest among all regional countries with

similar survey methodology; Indonesia, Brunei, Vietnam, Philippines and Thailand. However the prevalence of victimisation from bullying in Malaysia somewhat falls in the middle when compared to rates from across OECD countries such as the Netherlands (9%)⁵, England (10.0%)⁶, USA (9.0%)⁷, Germany (10.0%)⁸, Norway (12.0%)⁹, Canada (18.0%)¹⁰, Japan (14.0%)¹¹, Korea (14.0%)¹², and Australia (25.0% among younger children; 14.0% among older children)¹³. It is worth noting however that these rates are not strictly comparable as the level of prevalence does vary depending on country and age (as well as definition, methodology, and period of time over which the prevalence rate pertains to).

The current findings on physical and verbal abuse at home experienced by the adolescent in the past 30 days (11.8% and 43.2% respectively) are similar to those reported in year 2012, which was 11.1% and 42.7% then. This shows that more innovative methods need to be sought to address these issues.

The prevalence of serious injury among school going adolescents in this study was lower than that found in Malaysia in 2012 (29.9% vs. 34.9%). It was comparable to the prevalence found using similar surveys among adolescents as reported by Indonesia (2015), Brunei (2014) and Vietnam (2013) which was 29.6%, 30.0% and 29.3% respectively, and lower than the Philippines (2011) and Thailand (2008) which was 48.2% and 46.7% respectively. Beyond the ASEAN region, Malaysian prevalence is higher when compared to countries such as the USA (9.2%)¹⁴, Canada (5.4%)¹⁵, and Sweden (2.5% for boys, 2.0% for girls).¹⁶

Overall, younger male adolescents especially those of Indian ethnicity, show a high prevalence of having been physically attacked, involvement in physical fights, having been bullied and having had serious injury. Physical and verbal abuse at home appears to be distributed almost evenly across urban and rural localities and all age groups.

3.12.6 Conclusion

The findings in this study are consistent with internationally reported prevalence on violence and injury among adolescents. In Malaysia, prevalence of adolescents who experienced physical attacks, physical fights, bullying and serious injuries in 2017 shows a reduction compared to the previous survey in 2012. Studies have shown that violence related behaviour is associated with other negative factors such as smoking, drug abuse, truancy and physical and mental health problems.¹⁷ Thus, despite the successes achieved by our current programs, the relatively high prevalence found in this study reminds us that we should continue and improve our efforts in addressing this issue.

3.12.7 Recommendations

1. Multiple factors are associated with the perpetuation and the victimization of bullying, violent behaviour and unintentional injuries among school-going adolescents. Although this study identified the prevalence and types of violent behaviour experienced, further studies may be conducted in these areas to better understand this problem. These should include risk factors such as health and sociocultural factors, help seeking behaviour and short and long term effects of engaging or being exposed to these situations.
2. Written policies and laws by themselves alone are not adequate to tackle the problem of physical attacks, physical fights, bullying, physical and verbal abuse experienced by school-going adolescents. Strategies should be developed with the involvement of parents, family, and the community. Support services for both perpetrator and victim at community and school levels should be developed. Increased efforts need to be directed towards male adolescents in the younger age group and within the Indian community. Helping them with counselling rather than punitive measures, besides early detection of underlying factors would aid better prevention strategies. Innovative measures including use of social media, need to be adapted in line with the problems faced by the current generation such as cyberbullying and online forms of abuse. An integrated, multifactorial and multisectoral approach from the family level to school environment is crucial in addressing this problem.

3. Unintentional injuries should be addressed by stepping up safety awareness programs. This should be targeted towards road and traffic safety, starting from the younger age group. This would help reduce the burden of avoidable and unintentional injuries. Measures to create a safe environment within the school, home and other areas should be implemented by all parties.

3.12.8 References

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Table 3.12.1 : Prevalence of involvement in violence at least once in the past 12 months among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Having Been Physically Attacked At Least Once			Involvement In Physical Fight At Least Once						
	Unweighted Count	Estimated Population	Prevalence (%)	Lower 95% CI	Upper 95% CI	Unweighted Count	Estimated Population	Prevalence (%)	Lower 95% CI	Upper 95% CI
Form										
Form 1	1,805	146,900	32.6	30.44	34.87	1,843	152,782	33.9	31.45	36.54
Form 2	1,490	120,086	28.2	26.20	30.28	1,523	122,154	28.7	26.15	31.33
Form 3	1,333	96,659	22.5	20.43	24.62	1,308	95,337	22.2	19.98	24.49
Form 4	1,195	92,887	22.4	20.33	24.70	1,114	87,936	21.2	18.66	24.08
Form 5	912	85,936	20.3	17.45	23.59	796	74,930	17.7	14.94	20.91
Ethnicity										
Malay	4,403	326,131	24.1	22.76	25.52	4,336	319,819	23.6	22.17	25.18
Chinese	938	87,942	24.6	22.22	27.12	875	78,643	22.0	19.61	24.55
Indian	462	52,505	35.3	29.79	41.15	463	53,789	36.2	30.62	42.08
Bumiputera Sabah	487	39,998	26.8	22.11	32.11	478	41,567	27.8	22.91	33.40
Bumiputera Sarawak	237	24,663	25.5	21.49	29.91	263	28,259	29.3	25.17	33.83
Others	163	11,229	29.6	23.82	36.02	169	11,061	29.1	24.44	34.27

Table 3.12.2: Prevalence of being bullied at least once in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Having Been Bullied At Least Once				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	4,436	346,882	16.2	15.28	17.14
State					
Johor	238	38,243	13.9	11.13	17.20
Kedah	225	20,695	13.4	11.17	15.98
Kelantan	192	15,139	12.5	10.00	15.42
Melaka	293	10,427	15.5	13.19	18.16
N. Sembilan	280	15,178	17.2	14.31	20.48
Pahang	368	22,733	22.0	16.56	28.55
Pulau Pinang	241	15,590	13.8	10.98	17.27
Perak	289	30,102	16.7	13.87	19.86
Perlis	253	4,275	15.8	13.04	19.09
Selangor	318	72,344	18.6	15.70	21.79
Terengganu	241	14,451	14.7	12.21	17.54
Sabah	306	36,423	18.3	15.58	21.43
Sarawak	272	30,670	15.5	13.19	18.13
WP Kuala Lumpur	262	17,953	16.0	12.83	19.72
WP Labuan	315	1,007	18.2	15.16	21.70
WP Putrajaya	343	1,652	19.7	16.02	24.04
Locality of school					
Urban	2,499	185,341	15.3	14.06	16.70
Rural	1,937	161,541	17.3	16.06	18.62
Sex					
Male	2,452	198,657	18.7	17.48	19.99
Female	1,984	148,225	13.7	12.70	14.81
Form					
Form 1	1,257	102,711	22.8	20.66	25.10
Form 2	1,081	80,942	19.0	16.93	21.25
Form 3	906	64,602	15.0	13.30	16.89
Form 4	699	55,444	13.4	11.41	15.70
Form 5	493	43,182	10.2	8.78	11.89
Ethnicity					
Malay	2,915	203,082	15.0	14.16	15.93
Chinese	562	49,960	13.9	11.91	16.25
Indian	341	38,647	26.0	22.37	30.05
Bumiputera Sabah	344	29,526	19.8	16.28	23.87
Bumiputera Sarawak	161	17,647	18.2	14.51	22.64
Others	113	8,019	21.2	16.75	26.35

Table 3.12.3 : Most common ways of being bullied in the past 30 days among students Form 1 to Form 5 in Malaysia, 2017

Socio-demographic Characteristics	Hit, Kicked, Pushed, Shoved Around or Locked Indoor			Made Fun of Race, Nationality or Color		
	Unweighted Count	Estimated Population	Prevalence (%)	Unweighted Count	Estimated Population	Prevalence (%)
MALAYSIA	335	27,247	7.9	454	36,521	10.6
State						
Johor	14	2,398	6.3	18	2,881	7.6
Kedah	21	1,854	9.1	22	2,149	10.5
Kelantan	6	447	3.0	27	2,174	14.6
Melaka	14	465	4.5	34	1,130	11.0
N. Sembilan	16	830	5.6	27	1,537	10.3
Pahang	29	1,832	8.1	40	2,693	11.9
Pulau Pinang	21	1,498	9.7	16	1,062	6.9
Perak	39	4,053	13.7	35	3,794	12.8
Perlis	19	347	8.2	26	462	11.0
Selangor	23	4,834	6.7	39	8,940	12.4
Terengganu	20	1,235	8.6	27	1,705	11.9
Sabah	31	3,870	10.7	26	3,189	8.8
Sarawak	23	2,351	7.7	25	2,720	9.0
WP Kuala Lumpur	15	1,057	5.9	25	1,813	10.1
WP Labuan	24	77	7.8	34	115	11.6
WP Putrajaya	20	99	6.0	33	156	9.5
Locality of school						
Urban	184	14,189	7.7	252	19,295	10.5
Rural	151	13,058	8.2	202	17,225	10.8
Sex						
Male	253	20,950	10.6	287	23,475	11.9
Female	82	6,298	4.3	167	13,045	8.9

Table 3.12.3 : Most common ways of being bullied in the past 30 days among Form 1 to Form 5 students in Malaysia 2017 (cont.)

Socio-demographic Characteristics	Hit, Kicked, Pushed, Shoved Around or Locked Indoors			Made Fun of Race, Nationality or Colors		
	Unweighted Count	Estimated Population	Prevalence (%) Lower Upper	Unweighted Count	Estimated Population	Prevalence (%) Lower Upper
Form						
Form 1	117	10,671	10.6 8.27 13.41	143	12,549	12.4 10.39 14.80
Form 2	102	7,637	9.5 7.37 12.11	128	9,285	11.5 8.91 14.78
Form 3	51	3,949	6.2 4.00 9.36	89	5,918	9.2 7.17 11.78
Form 4	45	3,516	6.4 4.16 9.67	56	4,949	9.0 6.66 11.99
Form 5	20	1,474	3.4 1.87 6.23	38	3,820	8.9 5.33 14.51
Ethnicity						
Malay	179	12,620	6.3 5.05 7.77	283	20,947	10.4 8.96 12.06
Chinese	61	5,243	10.6 7.75 14.31	47	4,031	8.1 6.06 10.86
Indian	43	4,718	12.3 9.12 16.48	60	6,435	16.8 12.66 22.00
Bumiputera Sabah	37	3,232	11.0 5.74 20.17	28	2,194	7.5 4.93 11.23
Bumiputera Sarawak	9	950	5.4 2.85 10.07	15	1,527	8.7 4.45 16.36
Others	6	484	6.0 2.03 16.59	21	1,386	17.3 10.02 28.18

Table 3.12.3 : Most common ways of being bullied in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Made Fun of Because of Religion				Made Fun with Sexual Jokes, Comments or Gestures					
	Unweighted Count	Estimated Population	Prevalence (%)		Unweighted Count	Estimated Population	Prevalence (%)			
			Lower	Upper			Lower	Upper		
MALAYSIA	179	16,210	4.7	3.86	5.75	619	48,598	14.1	12.77	15.62
State										
Johor	5	954	2.5	1.09	5.70	41	6,658	17.6	11.29	26.36
Kedah	8	824	4.0	2.16	7.41	32	2,977	14.6	10.35	20.15
Kelantan	9	755	5.1	2.29	10.83	28	2,100	14.1	9.99	19.55
Melaka	3	100	1.0	0.34	2.79	63	2,285	22.2	17.02	28.47
N. Sembilan	5	334	2.2	1.14	4.34	36	1,865	12.5	8.39	18.14
Pahang	19	1,363	6.0	3.07	11.48	54	3,233	14.3	11.26	17.96
Pulau Pinang	10	702	4.5	1.88	10.51	31	1,949	12.6	7.87	19.55
Perak	17	1,780	6.0	3.76	9.47	32	3,339	11.3	8.00	15.65
Perlis	14	241	5.7	2.86	11.15	35	593	14.1	9.58	20.26
Selangor	13	2,585	3.6	1.79	7.05	49	11,153	15.5	12.41	19.10
Terengganu	18	1,266	8.9	4.99	15.22	37	2,069	14.5	12.19	17.09
Sabah	17	2,055	5.7	3.24	9.83	40	4,676	13.0	9.00	18.31
Sarawak	25	2,930	9.7	6.07	15.00	31	3,456	11.4	8.07	15.82
WP Kuala Lumpur	5	282	1.6	0.62	3.96	32	1,918	10.7	6.87	16.30
WP Labuan	8	25	2.5	0.59	9.86	44	144	14.6	11.88	17.77
WP Putrajaya	3	13	0.8	0.21	2.85	34	181	11.0	6.88	17.06
Locality of school										
Urban	70	6,380	3.5	2.43	4.95	343	26,325	14.3	12.56	16.32
Rural	109	9,830	6.1	4.84	7.75	276	22,273	13.9	11.92	16.17
Sex										
Male	133	12,626	6.4	5.16	7.94	318	26,137	13.3	11.63	15.11
Female	46	3,584	2.4	1.66	3.57	301	22,461	15.3	13.28	17.55

Table 3.12.3 : Most common ways of being bullied in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Made Fun of Religion				Made Fun with Sexual Jokes, Comments or Gestures				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	
Form									
Form 1	63	5,925	5.9	4.30 7.97	136	12,130	12.0	9.97 14.41	
Form 2	37	3,194	4.0	2.63 5.93	140	10,961	13.6	10.89 16.86	
Form 3	34	2,899	4.5	2.85 7.09	138	9,806	15.3	12.36 18.73	
Form 4	31	2,844	5.2	3.09 8.50	104	7,502	13.6	10.47 17.51	
Form 5	14	1,347	3.1	1.61 6.03	101	8,198	19.1	14.01 25.52	
Ethnicity									
Malay	86	6,657	3.3	2.48 4.40	457	32,150	16.0	14.17 17.97	
Chinese	30	2,966	6.0	3.88 9.15	67	7,406	15.0	10.98 20.06	
Indian	17	1,849	4.8	2.19 10.31	22	7,406	15.0	10.98 20.06	
Bumiputera Sabah	21	2,222	7.6	4.49 12.54	46	4,034	13.8	8.61 21.31	
Bumiputera Sarawak	16	2,016	11.5	6.83 18.72	17	1,843	10.5	6.07 17.61	
Others	9	501	6.3	2.65 14.06	10	613	7.7	3.68 15.25	

Table 3.12.3 : Most common ways of being bullied in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Left Out of Activities on Purpose or Completely Ignored			Made Fun of How Body or Face Looks		
	Unweighted Count	Estimated Population	Prevalence (%) 95% CI Lower Upper	Unweighted Count	Estimated Population	Prevalence (%) 95% CI Lower Upper
MALAYSIA	301	20,911	6.1 5.18 7.13	736	54,828	15.9 14.29 17.76
State						
Johor	16	2,352	6.2 3.32 11.35	38	6,149	16.2 12.32 21.12
Kedah	13	1,112	5.4 3.68 7.98	29	2,659	13.0 9.17 18.15
Kelantan	8	623	4.2 2.51 6.89	29	2,228	15.0 9.82 22.15
Melaka	24	923	9.0 6.22 12.79	49	1,835	17.8 13.76 22.83
N. Sembilan	26	1,343	9.0 5.92 13.39	57	2,898	19.4 16.00 23.27
Pahang	31	1,806	8.0 5.17 12.14	60	3,424	15.1 9.65 22.94
Pulau Pinang	18	1,025	6.6 2.99 14.03	35	2,310	14.9 9.49 22.68
Perak	19	1,895	6.4 3.90 10.32	32	3,560	12.0 7.56 18.56
Perlis	13	237	5.6 2.92 10.57	41	655	15.6 10.77 22.00
Selangor	19	4,967	6.9 4.61 10.16	62	14,286	19.8 14.62 26.26
Terengganu	11	712	5.0 2.78 8.75	39	2,204	15.4 10.42 22.21
Sabah	11	1,148	3.2 1.46 6.80	37	4,269	11.8 7.85 17.44
Sarawak	13	1,415	4.7 2.14 9.86	38	4,252	14.0 9.25 20.66
WP Kuala Lumpur	20	1,102	6.2 4.06 9.23	53	3,530	19.7 14.95 25.52
WP Labuan	17	52	5.3 3.25 8.55	56	178	18.0 13.61 23.35
WP Putrajaya	42	198	12.0 9.18 15.44	81	391	23.7 20.08 27.64
Locality of the school						
Urban	193	12,665	6.9 5.47 8.65	425	29,657	16.1 14.11 18.42
Rural	108	8,246	5.1 4.21 6.28	311	25,171	15.7 13.07 18.79
Sex						
Male	121	8,421	4.3 3.38 5.41	340	26,348	13.4 11.47 15.56
Female	180	12,489	8.5 6.97 10.33	396	28,480	19.4 17.00 22.02

Table 3.12.3 : Most common ways of being bullied in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Left Out Of Activities On Purpose or Completely Ignored				Made Fun Of How Body or Face Looks				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	
Form									
Form 1	86	5,441	5.4	3.98 7.26	177	13,779	13.6	11.05 16.73	
Form 2	74	4,875	6.0	4.53 8.04	153	10,749	13.3	10.79 16.38	
Form 3	57	3,452	5.4	3.89 7.39	170	11,950	18.6	15.37 22.36	
Form 4	47	3,674	6.7	4.78 9.22	123	8,704	15.8	12.31 20.04	
Form 5	37	3,469	8.1	5.21 12.34	113	9,646	22.5	17.52 28.37	
Ethnicity									
Malay	222	13,781	6.8	5.80 8.07	554	38,330	19.1	16.97 21.32	
Chinese	42	3,645	7.4	5.07 10.58	53	4,568	9.2	6.78 12.44	
Indian	13	1,570	4.1	1.68 9.68	36	4,067	10.6	6.42 17.10	
Bumiputera Sabah	10	624	2.1	0.66 6.68	49	3,678	12.6	8.03 19.12	
Bumiputera Sarawak	6	571	3.3	1.23 8.31	25	2,779	15.8	10.02 24.16	
Others	8	719	9.0	3.80 19.75	19	1,406	17.5	9.10 31.13	

Table 3.12.4: Prevalence of being abused at least once in the past 30 days among Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Physical Abuse At Home At Least Once				Verbal Abuse At Home At Least Once			
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper
MALAYSIA	3,034	253,449	11.8	10.90 12.83	11,681	924,222	43.2	41.85 44.60
State								
Johor	152	23,731	8.6	5.81 12.57	784	124,016	45.2	39.33 51.14
Kedah	162	14,891	9.6	7.81 11.86	627	56,894	36.9	32.72 41.29
Kelantan	129	10,630	8.8	5.78 13.05	677	50,978	42.1	37.93 46.37
Melaka	151	5,509	8.2	6.20 10.80	748	27,809	41.5	37.67 45.43
N. Sembilan	160	9,119	10.3	7.00 14.94	681	34,097	38.6	35.07 42.22
Pahang	220	14,296	13.8	9.54 19.60	769	45,031	43.5	38.85 48.35
Pulau Pinang	158	10,596	9.4	6.83 12.82	683	43,874	39.0	35.41 42.69
Perak	229	23,532	13.0	10.26 16.32	736	76,644	42.4	38.48 46.45
Perlis	177	3,028	11.2	8.48 14.69	630	10,127	37.6	34.38 41.01
Selangor	261	59,938	15.4	12.45 18.80	763	181,638	46.6	42.30 50.96
Terengganu	172	10,302	10.5	7.83 13.91	641	37,752	38.4	35.76 41.05
Sabah	246	29,926	15.1	11.78 19.04	835	99,551	50.1	46.66 53.64
Sarawak	204	22,540	11.4	9.37 13.83	683	76,556	38.9	35.33 42.57
WP Kuala Lumpur	210	13,885	12.4	10.21 14.91	843	52,753	47.1	41.46 52.77
WP Labuan	233	740	13.4	10.29 17.27	802	2,584	46.9	42.09 51.68
WP Putrajaya	170	786	9.4	6.68 13.05	779	3,916	46.7	39.78 53.85
Locality of school								
Urban	1,718	138,445	11.4	10.13 12.90	6,774	517,577	42.9	40.73 45.08
Rural	1,316	115,004	12.3	10.95 13.86	4,907	406,645	43.7	42.02 45.30
Sex								
Male	1,585	134,484	12.7	11.37 14.07	4,775	394,120	37.2	35.79 38.53
Female	1,449	118,965	11.0	9.91 12.23	6,906	530,102	49.2	47.29 51.11

Table 3.12.4: Prevalence of being abused at least once in the past 30 days among students Form 1 to Form 5 in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Physical Abuse At Home At Least Once				Verbal Abuse At Home At Least Once				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	
Form									
Form 1	958	81,333	18.1	16.26 20.11	2,416	192,123	42.8	40.37 45.33	
Form 2	739	61,033	14.3	12.56 16.29	2,286	178,505	42.0	39.79 44.24	
Form 3	584	44,525	10.3	8.79 12.13	2,509	187,466	43.6	41.53 45.65	
Form 4	453	37,840	9.1	7.60 10.97	2,423	186,111	45.1	42.84 47.29	
Form 5	300	28,717	6.8	5.43 8.46	2,047	180,016	42.7	39.83 45.64	
Ethnicity									
Malay	1,821	134,408	9.9	9.06 10.90	8,297	612,999	45.4	44.10 46.71	
Chinese	430	40,323	11.3	9.50 13.28	1,214	105,675	29.6	27.24 32.16	
Indian	316	36,162	24.4	21.28 27.85	598	67,048	45.3	39.64 51.12	
Bumiputera Sabah	260	22,836	15.3	11.56 19.99	906	77,912	52.3	48.56 55.94	
Bumiputera Sarawak	132	14,760	15.3	12.17 18.96	428	45,186	46.8	41.09 52.63	
Others	75	4,960	13.1	9.26 18.10	238	15,401	40.5	35.02 46.30	

**Table 3.12.5: Prevalence of had serious injury at least once in the past 12 months
Form 1 to Form 5 students in Malaysia, 2017**

Socio-demographic Characteristics	Having Had Serious Injury At Least Once				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	8,083	641,569	29.9	28.76	31.11
State					
Johor	443	72,305	26.2	22.53	30.29
Kedah	433	39,616	25.7	23.59	27.86
Kelantan	488	37,568	30.9	25.12	37.33
Melaka	541	18,974	28.3	24.06	32.86
N. Sembilan	490	26,906	30.4	26.58	34.57
Pahang	582	35,295	34.1	28.86	39.67
Pulau Pinang	433	28,392	25.2	22.23	28.37
Perak	536	55,435	30.6	25.95	35.64
Perlis	541	9,208	34.1	29.35	39.27
Selangor	554	127,980	32.7	29.44	36.14
Terengganu	481	29,732	30.2	27.35	33.19
Sabah	481	64,852	32.6	28.08	37.49
Sarawak	502	55,827	28.3	25.22	31.55
WP Kuala Lumpur	516	35,435	31.6	28.01	35.35
WP Labuan	498	1,604	29.0	26.35	31.81
WP Putrajaya	500	2,441	29.1	25.47	33.10
Locality of school					
Urban	4,554	351,365	29.0	27.49	30.63
Rural	3,529	290,203	31.1	29.24	32.96
Sex					
Male	4,720	380,815	35.8	34.32	37.31
Female	3,363	260,754	24.1	22.72	25.60
Form					
Form 1	2,012	161,035	35.8	33.47	38.12
Form 2	1,700	135,211	31.7	29.50	33.96
Form 3	1,630	118,431	27.5	25.61	29.47
Form 4	1,541	116,748	28.2	26.17	30.34
Form 5	1,200	110,144	26.1	23.69	28.58
Ethnicity					
Malay	5,572	404,923	29.9	28.71	31.18
Chinese	1,027	92,613	25.9	23.71	28.13
Indian	482	53,010	35.5	30.94	40.43
Bumiputera Sabah	528	46,747	31.3	26.75	36.28
Bumiputera Sarawak	289	30,502	31.6	26.04	37.66
Others	185	13,774	36.3	29.82	43.22

Table 3.12.6 : Types of the most serious injury sustained in the past 12 months among students who were injured Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Broken Bone / Dislocated Joint				A Cut or Stab Wound					
	Unweighted Count	Estimated Population	Prevalence (%)		Unweighted Count	Estimated Population	Prevalence (%)			
			Lower	Upper			Lower	Upper		
MALAYSIA	1,102	87,242	13.6	12.58	14.77	1,795	142,395	22.3	21.00	23.58
State										
Johor	90	14,703	20.4	15.85	25.96	85	14,294	19.9	16.21	24.13
Kedah	61	5,651	14.3	10.43	19.31	102	8,996	22.8	19.51	26.41
Kelantan	55	4,031	10.7	7.48	15.17	113	8,565	22.8	18.81	27.35
Melaka	84	2,861	15.1	12.17	18.61	130	4,455	23.5	20.27	27.13
N. Sembilan	77	4,306	16.1	12.99	19.69	106	5,696	21.2	16.83	26.45
Pahang	97	5,683	16.1	13.15	19.63	113	6,680	19.0	14.96	23.74
Pulau Pinang	54	3,825	13.5	9.94	18.14	93	6,100	21.6	17.42	26.39
Perak	73	7,478	13.6	10.14	17.92	111	11,479	20.8	18.30	23.60
Perlis	88	1,591	17.4	12.83	23.07	151	2,549	27.8	23.40	32.73
Selangor	79	17,251	13.5	10.70	16.89	136	31,434	24.6	20.48	29.24
Terengganu	49	3,385	11.4	8.63	14.89	101	6,287	21.1	17.97	24.71
Sabah	50	5,893	9.1	6.76	12.23	110	13,468	20.9	18.03	24.02
Sarawak	49	5,200	9.3	7.51	11.58	138	15,097	27.1	22.19	32.73
WP Kuala Lumpur	70	4,838	13.7	10.31	17.95	93	6,416	18.2	13.59	23.84
WP Labuan	54	174	10.9	7.68	15.36	94	293	18.4	15.08	22.27
WP Putrajaya	72	374	15.3	11.41	20.28	119	585	24.0	19.35	29.33
Locality of school										
Urban	633	49,287	14.1	12.44	15.88	986	77,601	22.2	20.38	24.04
Rural	469	37,956	13.1	11.81	14.55	809	64,795	22.4	20.64	24.26
Sex										
Male	746	60,646	16.0	14.75	17.30	1,090	87,466	23.1	21.33	24.88
Female	356	26,597	10.2	8.71	11.95	705	54,929	21.1	19.45	22.86

Table 3.12.6 : Types of the most serious injury sustained in the past 12 months among students who were injured Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Broken Bone / Dislocated Joint				A Cut or Stab Wound				
	Unweighted Count	Estimated Population	Prevalence (%)		Unweighted Count	Estimated Population	Prevalence (%)		
			Lower	Upper			Lower	Upper	
Form									
Form 1	231	19,279	12.0	10.13	435	35,713	22.3	20.03	24.75
Form 2	221	17,960	13.3	11.21	349	28,063	20.8	18.25	23.52
Form 3	260	18,144	15.3	13.26	360	25,322	21.4	18.87	24.21
Form 4	214	17,359	14.9	12.81	382	28,244	24.3	21.60	27.18
Form 5	176	14,499	13.2	10.81	269	25,053	22.8	19.90	26.04
Ethnicity									
Malay	785	58,632	14.5	13.19	1,254	90,980	22.5	21.06	24.06
Chinese	128	10,641	11.6	9.20	216	20,331	22.1	18.78	25.91
Indian	80	8,373	15.8	11.74	96	9,394	17.7	14.27	21.84
Bumiputera Sabah	60	5,128	11.0	7.95	114	10,553	22.6	18.86	26.90
Bumiputera Sarawak	33	3,191	10.5	7.36	79	8,056	26.5	21.30	32.44
Others	16	1,278	9.3	5.30	36	3,081	22.4	16.11	30.21

Table 3.12.6 : Types of the most serious injury sustained in the past 12 months among students who were injured Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Concussion / Head or Neck Injury, Knocked Out or				Bad Burn					
	Unweighted Prevalence (%)		95% CI		Unweighted Prevalence (%)		95% CI			
	Count	Estimated Population	Lower	Upper	Count	Estimated Population	Lower	Upper		
MALAYSIA	548	44,446	6.9	6.17	7.82	198	16,463	2.6	2.05	3.22
State										
Johor	25	3,861	5.4	3.47	8.22	3	511	0.7	0.27	1.85
Kedah	31	2,784	7.0	5.18	9.52	12	1,119	2.8	1.55	5.13
Kelantan	30	2,165	5.8	4.00	8.23	10	843	2.2	1.29	3.87
Melaka	36	1,299	6.9	4.51	10.30	6	200	1.1	0.45	2.43
N. Sembilan	28	1,454	5.4	3.88	7.53	8	427	1.6	0.79	3.17
Pahang	35	2,233	6.3	3.98	9.95	13	935	2.7	1.31	5.32
Pulau Pinang	21	1,389	4.9	3.21	7.46	10	710	2.5	1.30	4.80
Perak	48	5,206	9.4	5.48	15.81	15	1,461	2.6	1.59	4.39
Perlis	40	657	7.2	5.41	9.44	16	294	3.2	1.87	5.48
Selangor	53	11,609	9.1	7.01	11.70	18	3,889	3.0	1.45	6.27
Terengganu	39	2,280	7.7	5.37	10.84	21	1,342	4.5	2.61	7.70
Sabah	34	3,925	6.1	4.26	8.61	16	1,922	3.0	1.58	5.56
Sarawak	34	3,698	6.6	4.68	9.36	19	2,101	3.8	2.36	5.99
WP Kuala Lumpur	28	1,630	4.6	3.12	6.78	9	628	1.8	0.89	3.54
WP Labuan	42	134	8.5	6.64	10.70	12	36	2.2	1.23	4.07
WP Putrajaya	24	120	4.9	3.29	7.27	10	45	1.8	0.71	4.71
Locality of school										
Urban	301	23,424	6.7	5.60	7.97	99	7,860	2.2	1.55	3.25
Rural	247	21,022	7.3	6.17	8.54	99	8,603	3.0	2.27	3.89
Sex										
Male	274	22,360	5.9	4.98	6.96	128	10,953	2.9	2.18	3.81
Female	274	22,087	8.5	7.21	9.96	70	5,510	2.1	1.53	2.93

Table 3.12.6 : Types of the most serious injury sustained in the past 12 months among students who were injured Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Concussion / Head or Neck Injury, Knocked Out or				Bad Burn					
	Unweighted		95% CI		Unweighted		95% CI			
	Count	Estimated Population	Prevalence (%)	Lower	Upper	Count	Estimated Population	Prevalence (%)	Lower	Upper
Form										
Form 1	147	12,228	7.6	6.04	9.60	55	4,949	3.1	2.17	4.38
Form 2	119	10,120	7.5	5.92	9.44	46	3,556	2.6	1.84	3.75
Form 3	98	6,696	5.7	4.39	7.28	47	3,485	2.9	1.79	4.82
Form 4	108	8,864	7.6	5.81	9.94	35	2,996	2.6	1.64	4.02
Form 5	76	6,539	6.0	3.90	9.00	15	1,477	1.3	0.69	2.59
Ethnicity										
Malay	377	28,687	7.1	6.22	8.10	123	9,268	2.3	1.83	2.87
Chinese	61	6,358	6.9	4.36	10.83	26	2,452	2.7	1.61	4.61
Indian	32	3,378	6.4	3.76	10.63	18	2,000	3.8	2.11	6.67
Bumiputera Sabah	43	3,188	6.8	4.62	9.99	14	1,227	2.6	1.22	5.60
Bumiputera Sarawak	20	2,135	7.0	4.99	9.80	10	1,024	3.4	1.91	5.89
Others	15	701	5.1	3.14	8.15	7	492	3.6	1.50	8.27

Table 3.12.6 : Types of the most serious injury sustained in the past 12 months students those who were injured Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	Poisoned				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
MALAYSIA	110	8,966	1.4	1.13	1.73
State					
Johor	3	422	0.6	0.22	1.54
Kedah	5	426	1.1	0.43	2.66
Kelantan	5	395	1.1	0.56	1.97
Melaka	3	79	0.4	0.14	1.23
N. Sembilan	4	174	0.6	0.19	2.22
Pahang	12	869	2.5	1.15	5.21
Pulau Pinang	1	71	0.3	0.04	1.79
Perak	13	1,267	2.3	1.50	3.52
Perlis	12	205	2.2	1.19	4.16
Selangor	10	2,318	1.8	1.12	2.93
Terengganu	6	408	1.4	0.66	2.82
Sabah	5	562	0.9	0.42	1.81
Sarawak	13	1,338	2.4	1.21	4.72
WP Kuala Lumpur	7	392	1.1	0.47	2.53
WP Labuan	8	24	1.5	0.78	2.85
WP Putrajaya	3	14	0.6	0.22	1.56
Locality of school					
Urban	60	4,902	1.4	1.04	1.87
Rural	50	4,064	1.4	1.01	1.94
Sex					
Male	71	5,280	1.4	1.04	1.87
Female	39	3,685	1.4	1.00	1.99
Form					
Form 1	34	2,983	1.9	1.20	2.88
Form 2	32	3,160	2.3	1.57	3.47
Form 3	17	1,320	1.1	0.58	2.13
Form 4	17	964	0.8	0.44	1.56
Form 5	10	539	0.5	0.23	1.02
Ethnicity					
Malay	65	4,526	1.1	0.82	1.53
Chinese	20	1,979	2.2	1.40	3.30
Indian	12	1,632	3.1	1.52	6.13
Bumiputera Sabah	8	553	1.2	0.49	2.86
Bumiputera Sarawak	2	206	0.7	0.16	2.76
Others	3	70	0.5	0.08	2.97

Table 3.12.7 : Major cause of the most serious injury sustained in the past 12 months among students who were injured Form 1 to Form 5 students in Malaysia, 2017

Socio-demographic Characteristics	In A Motor Vehicle Accident or Hit By A Motor Vehicle						Fell					
	Unweighted		Prevalence (%)		95% CI		Unweighted		Prevalence (%)		95% CI	
	Count	Population	Count	Population	Lower	Upper	Count	Population	Count	Population	Lower	Upper
MALAYSIA	1,088	87,027	13.6	12.54	14.78	2,830	223,494	35.0	33.47	36.52		
State												
Johor	64	10,995	15.2	11.39	20.08	169	27,337	37.9	32.35	43.74		
Kedah	63	5,881	14.8	11.71	18.65	154	13,863	35.0	30.49	39.79		
Kelantan	88	6,449	17.2	12.82	22.69	158	12,197	32.5	27.76	37.71		
Melaka	87	2,967	15.6	11.97	20.17	215	7,632	40.2	36.16	44.43		
N. Sembilan	78	4,432	16.6	11.56	23.22	162	8,580	32.1	27.91	36.61		
Pahang	83	5,093	14.5	11.29	18.40	194	11,828	33.6	30.69	36.73		
Pulau Pinang	48	3,540	12.5	8.90	17.26	148	9,360	33.0	26.83	39.89		
Perak	91	9,813	17.8	13.77	22.79	176	18,103	32.9	28.49	37.65		
Perlis	102	1,750	19.0	15.76	22.82	181	3,096	33.7	29.26	38.42		
Selangor	74	15,623	12.3	9.94	15.14	203	46,966	37.0	32.52	41.70		
Terengganu	65	4,187	14.2	10.97	18.20	141	8,884	30.1	26.12	34.48		
Sabah	46	5,435	8.4	5.85	11.91	181	21,712	33.5	29.74	37.54		
Sarawak	66	6,838	12.3	8.93	16.74	174	19,235	34.6	28.75	41.02		
WP Kuala Lumpur	47	3,652	10.3	6.92	15.08	193	13,166	37.2	31.87	42.77		
WP Labuan	37	119	7.4	5.24	10.47	190	616	38.5	33.44	43.84		
WP Putrajaya	49	253	10.4	7.98	13.38	191	919	37.7	33.10	42.46		
Locality of school												
Urban	560	45,705	13.1	11.46	14.86	1,639	126,854	36.3	34.38	38.20		
Rural	528	41,322	14.3	12.92	15.79	1,191	96,640	33.4	31.13	35.81		
Sex												
Male	770	62,410	16.5	15.07	17.93	1,610	130,029	34.3	32.39	36.22		
Female	318	24,617	9.5	8.14	11.02	1,220	93,464	36.0	33.65	38.43		

Table 3.12.7 : Major cause of the most serious injury sustained in the past 12 months among students who were injured, Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	In A Motor Vehicle Accident or Hit By A Motor Vehicle						Fell									
	Unweighted Count		Estimated Population		Prevalence (%)		95% CI		Unweighted Count		Estimated Population		Prevalence (%)		95% CI	
	Count	Population	Count	Population	Lower	Upper	Lower	Upper	Count	Population	Count	Population	Lower	Upper	Count	Population
Form																
Form 1	193	16,215	10.1	8.57	11.97	773	61,134	38.2	35.45	41.12						
Form 2	182	14,932	11.1	9.28	13.20	619	47,137	35.0	31.46	38.72						
Form 3	238	17,805	15.1	12.96	17.44	564	40,836	34.6	31.78	37.42						
Form 4	241	18,193	15.6	13.27	18.33	510	40,304	34.6	31.36	38.06						
Form 5	234	19,882	18.1	15.11	21.56	364	34,083	31.0	28.05	34.20						
Ethnicity																
Malay	859	64,761	16.1	14.66	17.55	1,938	141,543	35.1	33.45	36.74						
Chinese	78	7,733	8.4	6.30	11.14	382	32,863	35.7	31.31	40.40						
Indian	53	5,712	10.9	7.73	15.05	158	17,322	32.9	26.38	40.24						
Bumiputera Sabah	52	4,407	9.4	6.72	13.07	172	15,096	32.3	27.65	37.31						
Bumiputera Sarawak	29	2,982	9.8	6.67	14.20	111	11,253	37.0	29.83	44.83						
Others	17	1,432	10.5	6.42	16.59	69	5,417	39.6	28.97	51.21						

Table 3.12.7 : Major cause of the most serious injury sustained in the past 12 months among students who were injured Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Something Fell or Hit Him/Her			Attacked or Abused or Fighting With Someone				
	Unweighted Count	Estimated Population	Prevalence (%)	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower	95% CI Upper
MALAYSIA	511	41,667	6.5	297	24,703	3.9	3.27	4.57
State								
Johor	28	4,243	5.9	9	1,641	2.3	1.12	4.56
Kedah	31	2,782	7.0	16	1,452	3.7	1.96	6.74
Kelantan	19	1,470	3.9	14	1,184	3.2	1.74	5.67
Melaka	28	912	4.8	10	349	1.8	0.94	3.58
N. Sembilan	30	1,589	5.9	19	1,229	4.6	3.37	6.25
Pahang	39	2,422	6.9	25	1,721	4.9	2.79	8.44
Pulau Pinang	30	1,842	6.5	15	996	3.5	1.62	7.47
Perak	33	3,368	6.1	18	1,755	3.2	2.00	5.04
Perlis	34	566	6.2	18	312	3.4	2.01	5.65
Selangor	42	9,259	7.3	30	6,185	4.9	2.95	7.94
Terengganu	38	2,258	7.7	31	1,968	6.7	4.95	8.94
Sabah	34	4,202	6.5	22	2,566	4.0	2.77	5.64
Sarawak	44	4,792	8.6	17	1,786	3.2	1.91	5.37
WP Kuala Lumpur	25	1,736	4.9	17	1,415	4.0	2.32	6.79
WP Labuan	30	98	6.1	18	59	3.7	2.86	4.72
WP Putrajaya	26	128	5.2	18	86	3.5	2.17	5.67
Locality of school								
Urban	274	20,869	6.0	163	12,941	3.7	2.91	4.70
Rural	237	20,798	7.2	134	11,762	4.1	3.20	5.16
Sex								
Male	294	24,497	6.5	223	19,453	5.1	4.33	6.07
Female	217	17,170	6.6	74	5,251	2.0	1.48	2.76

Table 3.12.7 : Major cause of the most serious injury sustained in the past 12 months among students who were injured Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	Something Fell or Hit Him/Her				Attacked or Abused or Fighting With Someone						
	Unweighted		Prevalence (%)		95% CI		Prevalence (%)		95% CI		
	Count	Estimated Population	Count	Estimated Population	Lower	Upper	Count	Estimated Population	Lower	Upper	
Form											
Form 1	142	12,396	7.75	12,396	6.44	9.32	85	7,047	4.4	3.10	6.23
Form 2	114	9,735	7.23	9,735	5.71	9.11	75	6,054	4.5	3.37	5.97
Form 3	89	6,136	5.19	6,136	4.03	6.66	67	4,995	4.2	2.93	6.06
Form 4	109	8,549	7.35	8,549	5.84	9.21	43	3,749	3.2	2.24	4.60
Form 5	57	4,851	4.42	4,851	3.14	6.18	27	2,858	2.6	1.55	4.34
Ethnicity											
Malay	327	21,936	5.4	21,936	4.74	6.23	196	15,432	3.8	3.17	4.61
Chinese	65	6,629	7.2	6,629	5.58	9.27	33	2,976	3.2	2.06	5.04
Indian	45	6,320	12.0	6,320	8.36	16.97	30	3,250	6.2	3.64	10.30
Bumiputera Sabah	31	2,947	6.3	2,947	4.41	8.93	24	2,098	4.5	2.94	6.80
Bumiputera Sarawak	32	3,322	10.9	3,322	7.25	16.14	7	521	1.7	0.62	4.66
Others	11	515	3.8	515	1.87	7.42	7	426	3.1	1.51	6.30

Table 3.12.7 : Major cause of the most serious injury sustained in the past 12 months among students who were injured Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	In A Fire or Too Near A Flame or Something Hot				Inhaled or Swallowed Something Bad						
	Unweighted Count	Estimated Population	Prevalence (%)		Unweighted Count	Estimated Population	Prevalence (%)				
			Lower	Upper			Lower	Upper			
MALAYSIA	127	10,928	1.7	1.33	2.20	2.20	93	7,339	1.1	0.91	1.45
State											
Johor	4	701	1.0	0.35	2.68	2.68	6	1,044	1.4	0.74	2.80
Kedah	7	630	1.6	0.75	3.33	3.33	7	603	1.5	0.67	3.40
Kelantan	6	550	1.5	0.62	3.45	3.45	6	492	1.3	0.51	3.32
Melaka	6	244	1.3	0.59	2.78	2.78	4	114	0.6	0.24	1.53
N. Sembilan	6	304	1.1	0.44	2.90	2.90	8	440	1.6	0.78	3.46
Pahang	14	935	2.7	1.40	5.01	5.01	6	374	1.1	0.51	2.22
Pulau Pinang	4	254	0.9	0.37	2.16	2.16	4	240	0.8	0.35	2.02
Perak	8	780	1.4	0.83	2.41	2.41	6	615	1.1	0.53	2.34
Perlis	6	114	1.2	0.59	2.60	2.60	4	63	0.7	0.28	1.65
Selangor	14	3,481	2.7	1.47	5.04	5.04	6	1,282	1.0	0.46	2.19
Terengganu	11	678	2.3	1.08	4.83	4.83	5	291	1.0	0.39	2.48
Sabah	9	1,042	1.6	0.83	3.11	3.11	5	701	1.1	0.50	2.33
Sarawak	7	711	1.3	0.58	2.81	2.81	7	786	1.4	0.86	2.32
WP Kuala Lumpur	7	433	1.2	0.56	2.63	2.63	4	237	0.7	0.22	1.99
WP Labuan	9	29	1.8	0.72	4.53	4.53	7	20	1.2	0.40	3.74
WP Putrajaya	9	41	1.7	0.94	3.03	3.03	8	37	1.5	0.90	2.58
Locality of school											
Urban	67	6,125	1.8	1.21	2.53	2.53	58	4,527	1.3	0.96	1.74
Rural	60	4,802	1.7	1.21	2.28	2.28	35	2,812	1.0	0.68	1.39
Sex											
Male	77	6,101	1.6	1.15	2.25	2.25	55	3,712	1.0	0.71	1.35
Female	50	4,826	1.9	1.32	2.61	2.61	38	3,627	1.4	0.97	2.01

Table 3.12.7 : Major cause of the most serious injury sustained in the past 12 months among students who were injured Form 1 to Form 5 students in Malaysia, 2017 (cont.)

Socio-demographic Characteristics	In A Fire or Too Near A Flame or Something Hot				Inhaled or Swallowed Something Bad				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	
Form									
Form 1	43	4,101	2.6	1.78 3.68	24	1,839	1.15	0.63 2.08	
Form 2	34	2,317	1.7	1.14 2.59	13	1,205	0.89	0.47 1.69	
Form 3	23	1,786	1.5	0.92 2.48	20	1,400	1.18	0.66 2.10	
Form 4	18	1,344	1.2	0.56 2.39	27	2,218	1.91	1.19 3.04	
Form 5	9	1,379	1.3	0.53 2.97	9	677	0.62	0.25 1.51	
Ethnicity									
Malay	78	5,855	1.5	1.04 2.02	56	3,655	0.9	0.65 1.27	
Chinese	18	2,638	2.9	1.71 4.78	16	1,332	1.4	0.78 2.69	
Indian	13	1,038	2.0	1.08 3.57	10	1,100	2.1	1.08 4.03	
Bumiputera Sabah	10	810	1.7	0.79 3.78	4	389	0.8	0.26 2.66	
Bumiputera Sarawak	6	545	1.8	0.76 4.16	4	603	2.0	0.78 4.96	
Others	2	42	0.3	0.05 1.91	3	260	1.9	0.53 6.53	

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 Programme 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 Yoep, Central Field Supervisor of Perak & Kedah
- 14.Pn. Norazizah binti Ibrahim Wong, Data Processing & Quality
- 15.En. Mohd Hazrin bin Hasim @ Hashim, Central Field Supervisor of WP Labuan & Sabah
- 16.Pn. Lalitha a/p Palanivello, Person in charge for 24Hour Diet Recall
- 17.Pn. Siti Nor'Ain binti Hashim, Head of ICT Support
- 18.En. Lim Kuang Kuay, Logistic Support
- 19.Pn. Hamizatul Akmal binti Abd. Hamid, Project Manager
- 20.Pn. Wan Shakira binti Rodzlan Hasani, Project Manager
- 21.Pn. Cheong Siew Man, Person in-charge for Food Frequency Questionnaire
- 22.Pn. Nazirah Bt Alias, Data Processing & Quality
- 23.Dr. Fazila Haryati Ahmad, Data Processing &Quality

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

No	Team	Duties	Officers
1	Project Management and Finance	Work closely with recruitment group for employment of RA Prepare Questionnaires manual, Data collection manual Meeting with Liason Officers Planning for data collection training Prepare security cards/name tags for research team Arrangement for advanced payment for team managers, nurses and drivers Process claims of MOH staff Prepare tickets for travelling Monitor the expenditure/budget	Dr. Muhammad Fadhli bin Mohd Yusoff Dr. S. Maria Binti Awaluddin Pn. Hamizatul Akmal binti Abd Hamid Pn. Wan Shakira binti Rodzlan Hasani Cik Nur Hazwani Binti Mohd Hasri
2	Survey Research Centre	Calculate the sample size Determine the sample distribution by state	Dr. Muhammad Fadhli bin Mohd Yusoff Pn. Norazizah binti Ibrahim Wong Pn. Wan Shakira binti Rodzlan Hasani
3	ICT Unit	Maintenance of the scanning machine Daily back up for databases	Pn. Siti Nor'ain Binti Hashim En. Sulaiman Bin Harun En. Yusmirol Bin Yusop En. Andy Bin Mustaming

4	Central Field Supervisors	<p><u>Before Data Collection</u></p> <p>Central Field Supervisors are expected to prepare for the initiation of data collection. The preparation tasks include: Conduct meeting with State Education Office, School Principals, Teacher in-charged for the selected schools.</p> <p>To ensure adequate logistic support for the data collection and liaise with the District Education Office, District Health Office and other relevant departments to ensure that:</p> <ul style="list-style-type: none"> • Human resources are available: Field Supervisors, Team leaders, Research Assistants and drivers. • Manage transport: Vehicles • Manage survey instruments and relevant form • Manage lodging for data collectors <p><u>During Data Collection</u></p> <p>Gather feedback from the field on the data collection status and problems related to logistics.</p> <p>Visit the field to help data collectors solve the problem if necessary.</p> <p>To ensure all data collection monitoring forms have been received on time.</p> <p>To ensure bundle from field received by the Operation Centre by hand and by post (Sabah, Sarawak, WP Labuan)</p> <p>Updating the monitoring board for state achievement and attending CCT meeting.</p>	<p>Dr Nor Asiah Binti Muhamad</p> <p>Dr Nur Liana Binti Ab Majid</p> <p>Pn. Norzawati Binti Yeop</p> <p>Dr. Noor Ani Binti Ahmad</p> <p>Pn. Hasimah Binti Ismail</p> <p>Pn. Tee Guat Hiong</p> <p>En. Mohd Hazrin Bin Hashim @ Hashim</p>
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5	Data Processing and management	<p>Setting up data processing facility Development of directory of variables database</p> <p>Development of quality control (QC) manual for data processing</p> <p>Specify data structure for data processing and data output requirement</p> <p>Responsible for data entry and data cleaning</p> <p>Monitoring and evaluation of QC performance for data processing</p>	<p>Dr. Mohd Azahadi bin Omar</p> <p>Dr. Rajini a/p sooryanarayana</p> <p>Dr. Fazila Haryati Binti Ahmad</p> <p>Pn. Nazirah Binti Alias</p>
6	Operation Centre	<p>Arrange date and place of meeting</p> <p>Prepare and circulate briefing materials</p> <p>Prepare and circulate minutes of CCT meeting</p> <p>Prepare letters of appointment to state liaison officers, nurses, scouts and data collectors</p> <p>Prepare advertisement material for recruitment of data collectors, team leaders, and interviewers,</p> <p>Prepare letters of notifications for data collections</p> <p>Prepare manuals for field Supervisors and data collectors</p> <p>Develop a system/format and monitor the distribution of materials/equipment for field work</p> <p>Arrange transport/drivers for distribution and collection of materials</p>	<p>Pn. Hamizatul Akmal binti Abd Hamid</p> <p>En. Azli bin Baharudin</p> <p>Cik Nur Hazwani Binti Mohd Hasri</p> <p>Pn. Siti Noafika Binti Anwar</p> <p>En. Muhammad Suhaimi Bin Mohamad Idrus</p> <p>Cik Shahibul Bariah binti Mat Ghani</p> <p>Pn. Nur Fadzilla binti Mohd Radzi</p> <p>En. Muhammad Zuhdi Bin Khiruddin</p> <p>Cik Nurbaiti Binti Asmawi</p>

Appendix 5: List of Research Team Members, NHMS 2017

Alcohol Use

1. Dr. Muhammad Fadhli Mohd Yusoff
2. Dr. Tania Gayle Robert
3. Dr. Halizah Mat Rifin
4. Dr. Norli Abdul Jabbar
5. Dr. Rozanim Kamaruddin
6. Dr. Jane Ling Miaw Yn
7. Ms. Hasimah Ismail
8. Ms. Hamizatul Akmal Binti Abd Hamid
9. Mr. Mohd Hatta Mutalip
10. Ms. Wan Shakira Rodzlan Hasani

Dietary Behaviours

1. Ms. Rashidah Ambak
2. Ms. Ruhaya Salleh
3. Ms. Norlida Zulkafly
4. Dr. S. Maria Awaluddin
5. Ms. Rusidah Selamat
6. Ms. Syafinaz Mohd Sallehuddin
7. Mr. Mohd Hasnan Ahmad
8. Ms. Cheong Siew Man

Drug Use

1. Dr. Muhammad Fadhli Mohd Yusof
2. Dr. Rushidi Ramly
3. Dr. Norli Abdul Jabbar

4. Dr. Jane Ling Miaw Yn
5. Dr. Halizah Mat Rifin
6. Dr. Tania Gayle Robert
7. Dr. Thamil Arasu Saminathan
8. Dr. Nur Liana Ab. Majid
9. Ms. Hasimah Ismail
10. Ms. Hamizatul Akmal Abd Hamid
11. Ms. Wan Shakira Rodzlan Hasani

Hygiene (Including Oral Health)

1. Dr. Yaw Siew Lian
2. Dr. Nurrul Ashikin Abdullah
3. Dr. Natifah Che Salleh
4. Ms. Norazizah Ibrahim Wong
5. Mr. Mohamad Fuad Mohamad Anuar
6. Mr. Sayan a/l Pan

Internet Use and Addiction

1. Dr S. Maria Awaluddin
2. Prof Madya Dr. Normala Ibrahim
3. Ms. Chan Ying Ying
4. Dr. Rimah Melati Abd. Ghani
5. Dr. Amal Shamsuddin
6. Prof Madya Dr. Wan Salwina Wan Ismail
7. Dr. Norharlina Bahar
8. Dr. Saidatul Norbaya Binti Buang
9. Dr. Nik Rubiah Nik Abd. Rashid

Mental Health Problems

1. Dr. Noor Ani Ahmad
2. Prof Dr. Sherina Mohd Sidik
3. Dr. Fazly Azry Abdul Aziz
4. Ms. Noraida Mohamad Kasim
5. Mr. Mohammad Aznuddin Abd Razak
6. Ms. Muslimah Yusof

Physical Activity

1. Mr. Lim Kuang Kuay
2. Dr. Hj. Mohd Azahadi Omar
3. Ms. Chan Ying Ying
4. Dr. Chandrika A/p Jeevananthan
5. Mr. Azli Baharudin @Shaharuddin
6. Ms. Nazirah Alias

Protective Factors

1. Pn Norzawati binti Yoep
2. Ms. Faizah Paiwai
3. Dr. Noor Aliza Lodz
4. Dr. S. Maria Awaluddin
5. Ms. Azna Ahmad
6. Dr. Nik Rubiah Nik Abd Rashid

Sexual Behaviour that contribute to HIV infection, other STI and unintended pregnancy

1. Dr. Maisarah Omar
2. Dr. Noor Aliza Lodz
3. Dr. S.Maria Awaluddin
4. Dr. Noor Ani Ahmad
5. Dr. Nik Rubiah Nik Abdul Rashid
6. Ms. Noraida Mohamad Kasim

Tobacco Use

1. Dr. Noraryana Hassan
2. Dr. Nizam Baharom
3. Dr. Muhammad Fadhli Mohd Yusoff,
4. Dr. Abdul Aiman Abd Ghani
5. Dr. Nur Liana Ab. Majid
6. Dr. Thamil Arasu Saminathan
7. Dr. Jane Ling Miaw Yn
8. Dr. Tania Gayle Robert
9. Dr. Halizah Mat Rifin
10. Ms. Tee Guat Hiong
11. Ms. Hasimah Ismail
12. Ms. Hamizatul Akmal Abd Hamid
13. Ms. Wan Shakira Rodzlan Hasani

Violence and Unintentional Injury

1. Dr. Rajini Sooryanarayana
2. Dr. Shubash Shander Ganapathy
3. Dr. Muhammad Fadhli Mohd Yusoff
4. Dr. S Maria Awaluddin
5. Dr. Thamil Arasu a/l Saminathan

6. Dr. Azriman Rosman
7. Dr. Fazila Haryati Ahmad
8. Mr. Mohamad Fuad Mohamad Anuar
9. Mr. Mohd Hazrin Bin Hasim@Hashim

Appendix 6: List of Liaison Officer and Data Collection Teams

JOHOR

Liaison Officer

Mr. Yahya Bin Ahmad

Field Supervisor

Ms. Fatimah Binti Othman

Nutritionist

1. Ms. Nik Normasitah Binti Nik Ismail
2. Mr. Mohd Razif Bin Mohd Jamain
3. Ms. Siti Dinie Syazwani Binti Azlam
4. Ms. Lee Pei Shan
5. Mr. Mohd Zaid Bin Ramlan

Drivers

1. Mr. Osman Bin Mohd
2. Mr. Mohd Safar Bin Sarbani

Research Assistants

- | | |
|---|---------------------------------------|
| 1. Mr. Mohd Nazrulshah Bin Salim | 4. Ms. Nur Hamizah Binti Md Sha'eb |
| 2. Ms. Sharifah Solihah Binti Syed Hashim | 5. Ms. Siti Aisyah Binti Ibrahim |
| 3. Mr. Khairulhanafi Bin Muhammad Khair | 6. Ms. Nor Hamizah Binti Atan |
| | 7. Ms. Siti Nur Nadiah Binti Khozaini |
| | 8. Ms. Nurul Siddiqah Binti Whakiddin |

KELANTAN

Liaison Officer

Ms. Puspawati Binti Mohamed

Field Supervisor

Dr. Maisarah Binti Omar

Nutritionist

- | | |
|---|--|
| 1. Mr. Norhasliza Binti Ariffin | 7. Ms. Lina Husniyah Binti Mohamad |
| 2. Ms. Junaidah Binti Mustapha | 8. Mr. Wan Fauzi Bin Wan Yusoff |
| 3. Ms. Norul Syurafak Binti Sa'ari | 9. Ms. Nor Suhaida Binti Che Ali |
| 4. Ms. Wan Roswani Binti Wan Ibrahim | 10. Ms. Suzy Edawaty Binti Ahmad
Nordin |
| 5. Ms. Noriza Binti Hussain | 11. Mr. Mohammad Affendy Bin Mhd
Akhir |
| 6. Ms. Nor Maihiza Akmal Binti Mohd
Salleh | |

Drivers

1. Mr. Nik Zabri Bin Nik Harun
2. Mr. Mohd Azaman bin Hassan

Research Assistants

- | | |
|-------------------------------------|--|
| 1. Mr. Mohd Shazwanuddin Bin Johari | 7. Ms. Siti Nur Asyikin Binti Che Khir
Johari |
| 2. Ms. Nur Izzati Binti Abd Rasid | 8. Ms. Norhidayah Binti Muhamad |
| 3. Mr. Ahmad Syahmi Bin Rusli | |
| 4. Ms. Nor Atiqah Binti Rahimi | |
| 5. Mr. Saiful Amin Bin Ab Rani | |
| 6. Mr. Mohamad Fakhri Bin Ludin | |

KEDAH

Liaison Officer

Ms. Rohida Binti Sallehuddin

Field Supervisor

Ms. Hasmila Binti Mat Hassan

Nutritionist

1. Ms. Noor Hasnani Binti Ismail
2. Ms. Sharifah Binti Salbiah
3. Mr. Ho Boon Keat
4. Ms. Zalikha Amirah Binti Zainol

Drivers

1. Mr. Muhammad Ezuan Bin Razali @ Ghazali
2. Mr. Mohd Nizam Bin Yaakob

Research Assistants

1. Ms. Siti Syakiroh Binti Zaimi Azlan
2. Ms. Nurul Hani' Binti Mohamad Shofi
3. Ms. Roslinda Binti Md Zadin
4. Ms. Nurul Hazliza Binti Mat Yusoff
5. Mr. Azman Bin Senin
6. Ms. Siti Rakiah Binti Abdul Rahaman
7. Mr. Wan Muhd Hafiz Bin Wan Abdul Kadir
8. Mr. Muhamad Sulhi Bin Isa

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. Ms. Nabila Huda Binti Mohd Nor
2. Mr. Thaneswaran a/l Subramaniam
3. Mr. Muhamad Hazwan Bin Hasman
4. Ms. Nur Nazihah Binti Mohamed
5. Mr. Mohamad Asyfik Bin Whakiddin
6. Ms. Nursyafawani Binti Yusoff
7. Ms. Nur Afifah Binti Shaari
8. Ms. Nabilah Binti Mohd Nawi
9. Mr. Muhammad Noriduan Bin Nor'amilin

NEGERI SEMBILAN

Liaison Officer

Ms. Norliza Binti Zainal Abidin

Field Supervisor

Dr. Chandrika A/p Jeevananthan

Ms. Nor Azian Binti Mohd Zaki

Nutritionist

1. Mr. Suhaidi Bin Sudin
2. Mr. Mohamad Ihsan Bin Tahir
3. Ms. Suriyani Binti Mohd Yusop
4. Ms. Siti Nor Aisah Binti Muhamad Fandi
5. Ms. Farah Wahida Binti Za'abar

Drivers

1. Mr. Mohd Baharuddin Bin Abu Bakar
2. Mr. Hashim Bin Mat Zin

Research Assistants

- | | |
|---|--|
| 1. Ms. Suhainiza Binti Samsudin | Hassanudin |
| 2. Ms. Nur Anas Iylia Binti Ishak | 7. Mr. Mohamad Aimi Iqwan Bin Mohd |
| 3. Ms. Sharmilla d/o Bala Subramaniam | Roslan |
| 4. Mr. Sa'dun Bin Mohd Yusoff | 8. Kalaiwani a/p Gunasekaran |
| 5. Ms. Syarifah Nurul Azirah Binti Sy
Hassan | 9. Mr. Muhammad Syahir Bin Samad |
| 6. Ms. Nor Aliza Binti Hassan @ | 10. Mr. Muhamad Mustaqim Bin Md
Lazim |

PAHANG

Liaison Officer

Ms. Suriati Binti Zakaria

Field Supervisor

1. Ms. Muslimah Binti Yusof
2. Mr. Mohamad Hasnan Bin Ahmad

Nutritionist

1. Ms. Nur Shazwani Binti Ahmad Nazri
2. Ms. Shalina Binti Ramli
3. Mr. Lai Wai Kent
4. Ms. Tiew Kee Fong
5. Ms. Fazrina Binti Jamharee
6. Mr. Mohd Faez Bin Bachok
7. Ms. Nurul Hidayah Binti Whakiddin
8. Ms. Norafifah Binti Ahmad Shabri
9. Ms. Nur Nadia Binti Zambri

Drivers

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2. Ms. Mah Su Feng
3. Ms. Juliani Faridza Binti Alias
4. Ms. Foo Ming Ming
5. Ms. Siti Norazlin Binti Mohd Ngadikin
6. Ms. Marshita Binti Mohamed
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8. Ms. Gan Xiang Ling
9. Ms. Nurliyana Binti Saidin
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| 3. Mr. Muhammad Hafizuddin Bin Ismail | 8. Mr. Muhammad Luqman Bin Bahari |
| 4. Mr. Ahmad Hariz Bin Abd Halim | 9. Mr. Muhamad Arif Bin Misra |
| 5. Mr. Muhamad Shukur Bin Abdul Razak | 10. Mr. Ahmad Hasif Bin Abd Halim |

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3. Ms. Zamzurina Binti Muhamad Kamaruzaman
4. Ms. Wan Ema Marliza Binti Wan Ismail
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6. Ms. Amirah Binti Mohamed Jalal
7. Ms. Argeela a/p Subramaniam
8. Ms. Nor Hasyimah Binti Khalid
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2. Ms. Illya Natasha Binti Zulkefli
3. Ms. Shazana Binti Che Hassandi
4. Mr. Nurlis Bin Yunarlis
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6. Ms. Fatin Norhasny Binti Leman
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3. Ms. Nur Hazwani Binti Mat Sulong
4. Mr. Muhamad Zawahir Bin Ismail
5. Mr. Ahmad Taufik Bin Yusof
6. Mr. Safrial Bin Ridwan
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8. Ms. Nur Hashima Binti Mat Sulong
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3. Ms. Chin Kim Ling
4. Ms. Maslia Naim
5. Ms. Noranisah Binti Amat
6. Ms. Nur Aisyah Binti Amu @ Abu
7. Ms. Mac Donna Matheus
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4. Mr. Awangku Mohd Shahfarol Bin Pg' Kamal
5. Mr. Zainal Abidin Bin Diding
6. Ms. Joan Sonny Limbowoi Binti Saimin
7. Ms. Nurul Afifah Binti Jamlin
8. Mr. Mohd Afrizan Sahran
9. Mr. Ianddrian Charles Taimin
10. Mr. Mazlan Bin Hj Abdul Halim Chin
11. Ms. Rasyidah Fathin Rahban
12. Ms. Faradillah Binti Dahalan
13. Ms. Diana Guriana
14. Mr. Steve Glantdenventur E Benjamin
15. Mr. Maxwell Guriana
16. Ms. Norsazweena Binti Jerain
17. Ms. Siti Ayuni Binti Saplie
18. Ms. Frial Misuellyn Benjamin
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9. Ms. Oui Pek Geik
10. Ms. Ellen Lee Lk Lin
11. Ms. Ariannie Charles
12. Ms. Nurul Shaidatul Nadia Binti Mohd Saifullah
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3. Ms. Remayah Ak Sadang
4. Mr. Donny Anak Nirau
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6. Ms. Wenna Anak Anthony
7. Ms. Joan Tjirna Anak Ben
8. Mr. Nicholas Mikai Anak Dunning
9. Mr. Dominick Riyu Ak Ambau
10. Mr. Winston Bunyau Anak Jayan
11. Ms. Noor Rafidah Binti Abdul Karim
12. Mr. Joshua Anak Gassai
13. Ms. Daphne Anak Dingon
14. Mr. Muhammad Nazirul Bin Rosmadi
15. Mr. Clinttino Anak Philip Langut
16. Mr. Terry Neilson Anak Jelanie
17. Ms. Norliza Binti Hamdan
18. Ms. Doris Anak Sabat
19. Mr. Firtzgerald Jemutt Anak Joshua
20. Mr. Yohannes Bin Dominic

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Ms. Nur Shahida Bt. Abdul Aziz

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1. Ms. Wan Siti Zulaicha Binti Shahrudin
2. Ms. Noorzatul Shuhada Binti Md Zaini
3. Ms. Norhasniza Binti Yaacob
4. Ms. Sharidatulakmar Binti Ismail
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Driver

1. Mr. Pragas a/l Arulanantham
2. Mr. Wan Abdul Rashid Bin Wan Zakaria

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| 2. Mr. Sadeswaran a/l Paramesvaran | 9. Ms. Nurain Nadia Binti Azmi |
| 3. Ms. Thachayani a/p Ramayah | 10. Mr. Lukmanulhakim Bin Azid |
| 4. Ms. Nurul 'Awatif Hanani Binti
Hazarudin | |
| 5. Mr. Muhammad Hasif Bin Abdul
Ghalib | |
| 6. Mr. Wan Suhaili Wan Ab Rahman | |
| 7. Mr. Muhammad Rashidi Bin Rosli | |

Appendix 7: Questionnaire & OMR



TINJAUAN KESIHATAN REMAJA | NHMS 2017
ADOLESCENT HEALTH SURVEY

PENGENALAN

Kementerian Kesihatan Malaysia dengan kerjasama Kementerian Pendidikan Malaysia sedang menjalankan tinjauan yang berkaitan kesihatan remaja. Tinjauan ini adalah berkenaan dengan kesihatan anda dan tindakan yang anda ambil yang memberi kesan kepada kesihatan anda.

Terima kasih kerana bersetuju untuk menyertai tinjauan ini. Tiada jawapan yang **BETUL** atau **SALAH**. Markah peperiksaan anda tidak akan terjejas sekiranya anda menjawab atau tidak menjawab soalan dalam tinjauan ini. Setiap jawapan yang anda berikan boleh membantu memantapkan program kesihatan untuk remaja. Oleh itu, sila jawab dengan ikhlas dan tepat.

Segala maklumat individu yang diberikan adalah RAHSIA kerana TIADA MAKLUMAT PENGENALAN DIRI DIAMBIL dan TIDAK AKAN DIDEHAHKAN. Tiada siapa akan tahu jawapan anda. Sila jawab berdasarkan apa yang anda tahu.

INTRODUCTION

The Ministry of Health Malaysia, with the cooperation of the Ministry of Education Malaysia is conducting a survey on adolescent health. This survey is about your health and the things that you do that may affect your health.

*Thank you for agreeing to participate in this survey. There are no **CORRECT** or **WRONG** answers. None of your grades or marks will be affected whether or not you answer the questions. Each answer that you provide will help in the improvisation of health programs for adolescents. Therefore, please answer as honestly and accurately as possible.*

*All individual information given will be kept **SECRET** because **NO IDENTIFIERS ARE TAKEN** nor **WILL BE EXPOSED**. No one will know your answer. Answer the questions based on the best of your knowledge.*

TINJAUAN KESIHATAN REMAJA | NHMS 2017
 ADOLESCENT HEALTH SURVEY

PANDUAN MENGISI BORANG (SILA BACA DENGAN TELITI)

GUIDE ON FILLING THE QUESTIONNAIRE (PLEASE READ CAREFULLY)

a. **JANGAN** tulis **NAMA ANDA** pada kertas soalan mahupun kertas jawapan.

***DO NOT** write **YOUR NAME** on the questionnaire or the answer sheet.*




b. Sila **BACA PERNYATAAN** untuk soalan yang memberikan pernyataan atau definisi sebelum menjawab soalan.

*Please **READ STATEMENT** for questions with a preceding statement or definition before answering.*

c. Sila **HITAMKAN** jawapan yang bersamaan jawapan anda pada kertas jawapan yang disediakan. Hanya hitamkan **SATU JAWAPAN** bagi setiap soalan. Sila gunakan pensel 2B yang disediakan. Sekiranya telah selesai, ikut arahan pegawai yang melakukan survei di sekolah/kelas anda.

*Please **FILL IN THE CIRCLES** on your answer sheet that matches your answer. There can be **ONLY ONE ANSWER** for each question. Use only the provided 2B pencil. When you are done, follow the instructions of the person conducting the survey in your school/class*

BERIKUT ADALAH CONTOH BAGAIMANA MENGISI JAWAPAN
HERE IS AN EXAMPLE OF HOW TO FILL IN THE CIRCLE:









ISIKAN BULATAN SEPERTI INI  BUKAN SEPERTI INI  ATAU 
 FILL IN THE CIRCLES LIKE THIS NOT LIKE THIS OR

TINJAUAN/SURVEY

1. Adakah ikan tinggal dalam air?
 Do fish live in the water?

A. Ya
 Yes

B. Tidak
 No

Borang jawapan 1.        
 Answer sheet

TINJAUAN KESIHATAN REMAJA | NHMS 2017
 ADOLESCENT HEALTH SURVEY

BAHAGIAN 1

PART 1

1. Berapakah umur anda?
 How old are you?
 - a. 11 tahun atau ke bawah
11 years old or younger
 - b. 12 tahun
12 years old
 - c. 13 tahun
13 years old
 - d. 14 tahun
14 years old
 - e. 15 tahun
15 years old
 - f. 16 tahun
16 years old
 - g. 17 tahun
17 years old
 - h. 18 tahun atau ke atas
18 years old or older

2. Apakah jantina anda?
 What is your sex?
 - a. Lelaki
Male
 - b. Perempuan
Female

3. Anda belajar di tingkatan/kelas apa?
 In what form/class are you?
 - a. Kelas peralihan
Remove class
 - b. Tingkatan 1
Form 1
 - c. Tingkatan 2
Form 2
 - d. Tingkatan 3
Form 3
 - e. Tingkatan 4
Form 4
 - f. Tingkatan 5
Form 5

4. Apakah etnik anda?
 What is your ethnicity?
 - a. Melayu
Malay
 - b. Cina
Chinese
 - c. India
Indian
 - d. Bumiputera Sabah
Bumiputera Sabah
 - e. Bumiputera Sarawak
Bumiputera Sarawak
 - f. Lain-lain etnik
Some other ethnic

5. Apakah status perkahwinan ibu bapa anda?
 What is the marital status of your parents?
 - a. Berkahwin dan tinggal bersama
Married and living together
 - b. Berkahwin tetapi tidak tinggal bersama atas dasar bekerja di tempat lain
Married but living apart due to working in other place
 - c. Bercerai
Divorced
 - d. Balu (ayah atau ibu telah meninggal)
Widower (my mother or father has died)
 - e. Berpisah (ibu bapa tidak tinggal serumah)
Separated (my parent do not live together)
 - f. Tidak tahu
I do not know

TINJAUAN KESIHATAN REMAJA NHMS 2017 ADOLESCENT HEALTH SURVEY
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BAHAGIAN 2
PART 2

6. Dalam tempoh 30 hari yang lepas, berapa kerap anda kelaparan kerana tidak cukup makanan di rumah?

During the past 30 days, how often did you go hungry because there was not enough food in your home?

- a. Tidak pernah
Never
- b. Jarang-jarang
Rarely
- c. Kadang-kadang
Sometimes
- d. Kebanyakan masa
Most of the time
- e. Sentiasa
Always

Enam soalan yang berikutnya adalah berkenaan apa yang anda mungkin makan atau minum.

The next six questions ask about what you might eat and drink.

7. Dalam tempoh 30 hari yang lepas, berapa kali dalam sehari anda **biasanya** makan buah?

*During the past 30 days, how many times per day did you **usually** eat fruits?*

- a. Saya tidak makan buah dalam 30 hari yang lepas
I did not eat fruits during the past 30 days
- b. Kurang dari 1 kali sehari
Less than 1 time per day
- c. 1 kali sehari
1 time per day
- d. 2 kali sehari
2 times per day
- e. 3 kali sehari
3 times per day
- f. 4 kali sehari
4 times per day
- g. 5 kali atau lebih sehari
5 or more times per day

8. Dalam tempoh 30 hari yang lepas, berapa kali dalam sehari anda **biasanya** makan sayur?

*During the past 30 days, how many times per day did you **usually** eat vegetables?*

- a. Saya tidak makan sayur dalam 30 hari yang lepas
I did not eat vegetables during the past 30 days
- b. Kurang dari 1 kali sehari
Less than 1 time per day
- c. 1 kali sehari
1 time per day
- d. 2 kali sehari
2 times per day
- e. 3 kali sehari
3 times per day
- f. 4 kali sehari
4 times per day
- g. 5 kali atau lebih sehari
5 or more times per day

9. Dalam tempoh 30 hari yang lepas, berapa kali dalam sehari anda **biasanya** minum air berkarbonat seperti Coca Cola, Sprite, Pepsi dan lain-lain? (Air berkarbonat diet tidak termasuk dalam kumpulan ini)

*During the past 30 days, how many times per day did you **usually** drink carbonated soft drinks such as Coca Cola, Sprite, and Pepsi? (Do not include diet soft drinks)*

- a. Saya tidak minum air berkarbonat dalam 30 hari yang lepas
I did not drink carbonated soft drink during the past 30 days
- b. Kurang dari 1 kali sehari
Less than 1 time per day
- c. 1 kali sehari
1 time per day
- d. 2 kali sehari
2 times per day
- e. 3 kali sehari
3 times per day
- f. 4 kali sehari
4 times per day
- g. 5 kali atau lebih sehari
5 or more times per day

TINJAUAN KESIHATAN REMAJA | NHMS 2017
 ADOLESCENT HEALTH SURVEY

10. Dalam tempoh 30 hari yang lepas, berapa kali dalam sehari anda **biasanya** minum air kosong seperti air mineral, air masak atau air paip?

*During the past 30 days, how many times per day did you **usually** drink plain water such as mineral water, boiled water, or tap water?*

- a. Saya tidak minum air kosong dalam 30 hari yang lepas
I did not drink plain water during the past 30 days
- b. Kurang dari 1 kali sehari
Less than 1 time per day
- c. 1 kali sehari
1 time per day
- d. 2 kali sehari
2 times per day
- e. 3 kali sehari
3 times per day
- f. 4 kali sehari
4 times per day
- g. 5 kali atau lebih sehari
5 or more times per day

11. Dalam tempoh 30 hari yang lepas, berapa kali dalam sehari anda **biasanya** minum susu atau makan produk tenusu seperti susu, keju, yogurt dan lain-lain? (Ini tidak termasuk susu pekat manis)

*During the past 30 days, how many times per day did you **usually** drink milk or eat milk products, such as milk, cheese, and yogurt? (This does not include sweetened condensed milk)*

- a. Saya tidak minum susu atau makan produk tenusu dalam 30 hari yang lepas

I did not drink milk or eat milks products during the past 30 days

- b. Kurang dari 1 kali sehari
Less than 1 time per day
 - c. 1 kali sehari
1 time per day
 - d. 2 kali sehari
2 times per day
 - e. 3 kali sehari
3 times per day
 - f. 4 kali sehari
4 times per day
 - g. 5 kali atau lebih sehari
5 or more times per day
12. Dalam tempoh 7 hari yang lepas, berapa hari anda makan makanan segera dari restoran **makanan segera** seperti McDonald, KFC, dan Pizza Hut?
- During the past 7 days, how many days did you eat food from a **fast food** restaurant, such as McDonalds, KFC and Pizza Hut?*
- a. 0 hari
0 day
 - b. 1 hari
1 day
 - c. 2 hari
2 days
 - d. 3 hari
3 days
 - e. 4 hari
4 days
 - f. 5 hari
5 days
 - g. 6 hari
6 days
 - h. 7 hari
7 days

TINJAUAN KESIHATAN REMAJA NHMS 2017 ADOLESCENT HEALTH SURVEY
--

BAHAGIAN 3
PART 3

6 soalan seterusnya adalah berkenaan amalan pembersihan gigi, lawatan pergigian anda dan juga bagaimana gigi anda memberi kesan kepada aktiviti-aktiviti anda.

The 6 next question are about the cleaning of your teeth, your dental visits and also how your teeth affect your activities.

- | | |
|--|--|
| <p>13. Dalam tempoh 30 hari yang lepas, berapa kali dalam sehari anda membersihkan atau memberus gigi anda?
<i>During the past 30 days, how many times per day did you usually clean or brush your teeth?</i></p> <p>a. Saya tidak membersihkan atau memberus gigi dalam 30 hari yang lepas
<i>I did not clean or brush my teeth during the past 30 days</i></p> <p>b. Kurang dari 1 kali sehari
<i>Less than 1 time per day</i></p> <p>c. 1 kali sehari
<i>1 time per day</i></p> <p>d. 2 kali sehari
<i>2 times per day</i></p> <p>e. 3 kali sehari
<i>3 times per day</i></p> <p>f. 4 kali atau lebih dalam sehari
<i>4 or more times per day</i></p> <p>14. Adakah anda menggunakan ubat gigi berflourida?
<i>Do you use toothpaste that contain fluoride?</i></p> <p>a. Ya
<i>Yes</i></p> <p>b. Tidak
<i>No</i></p> <p>c. Tidak tahu
<i>I do not know</i></p> <p>15. Adakah anda menggunakan flos/benang gigi untuk membersihkan gigi anda?
<i>Do you use dental floss to clean your teeth?</i></p> <p>a. Ya
<i>Yes</i></p> <p>b. Tidak
<i>No</i></p> | <p>16. Bilakah kali terakhir anda berjumpa doktor gigi atau jururawat pergigian untuk pemeriksaan, pembersihan gigi atau rawatan pergigian yang lain?
<i>When was the last time you saw a dentist or dental nurse for a check-up, teeth cleaning, or other dental treatment?</i></p> <p>a. Dalam tempoh 12 bulan yang lepas
<i>During the past 12 months</i></p> <p>b. Di antara 12 hingga 24 bulan yang lepas
<i>Between 12 and 24 months ago</i></p> <p>c. Lebih daripada 24 bulan yang lepas
<i>More than 24 months ago</i></p> <p>d. Tidak pernah
<i>Never</i></p> <p>e. Tidak tahu
<i>I do not know</i></p> <p>17. Dalam tempoh 12 bulan yang lepas, adakah sakit gigi menyebabkan anda tidak hadir ke kelas atau sekolah?
<i>During the past 12 months, did a toothache cause you to miss classes or school?</i></p> <p>a. Ya
<i>Yes</i></p> <p>b. Tidak
<i>No</i></p> <p>18. Adakah anda mengelak untuk senyum atau ketawa kerana risau dengan rupa gigi anda?
<i>Do you avoid smiling or laughing because how your teeth look?</i></p> <p>a. Ya
<i>Yes</i></p> <p>b. Tidak
<i>No</i></p> |
|--|--|

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**3 soalan seterusnya adalah berkenaan amalan membasuh tangan.
The next 3 questions are about your hand washing practices.**

19. Dalam tempoh 30 hari yang lepas, berapa kerap anda menggunakan sabun semasa membasuh tangan anda?

During the past 30 days, how often did you use soap when washing your hands?

- a. Tidak pernah
Never
- b. Jarang-jarang
Rarely
- c. Kadang-kadang
Sometimes
- d. Kebanyakan masa
Most of the time
- e. Setiap kali
Always

20. Dalam tempoh 30 hari yang lepas, berapa kerap anda membasuh tangan sebelum makan?

During the past 30 days, how often did you wash your hands before eating?

- a. Tidak pernah
Never
- b. Jarang-jarang
Rarely
- c. Kadang-kadang
Sometimes
- d. Kebanyakan masa
Most of the time
- e. Setiap kali
Always

21. Dalam tempoh 30 hari yang lepas, berapa kerap anda membasuh tangan selepas menggunakan tandas?

During the past 30 days, how often did you wash your hands after using the toilet?

- a. Tidak pernah
Never
- b. Jarang-jarang
Rarely
- c. Kadang-kadang
Sometimes
- d. Kebanyakan masa
Most of the time
- e. Setiap kali
Always

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BAHAGIAN 4
PART 4
SILA BACA PERNYATAAN DI BAWAH:

Soalan berikutnya adalah berkenaan serangan fizikal. Serangan fizikal berlaku apabila seseorang atau lebih ramai orang menyerang individu lain dengan anggota badan atau senjata seperti kayu dan pisau. Serangan fizikal tidak diambil kira jika dua individu atau pelajar yang sama saiz atau kekuatan bersetuju untuk bergaduh secara fizikal.

PLEASE READ THE STATEMENT BELOW:
The next question asks about physical attacks. A physical attack occurs when one or more people hurt another person with/without a weapon such as sticks and knife. It is not a physical attack when two individuals or students of about the same strength or power choose to fight each other.

22. Dalam tempoh 12 bulan yang lepas, berapa kali anda telah diserang secara fizikal?
During the past 12 months, how many times were you physically attacked?
- a. 0 kali
0 times
 - b. 1 kali
1 time
 - c. 2 atau 3 kali
2 or 3 times
 - d. 4 atau 5 kali
4 or 5 times
 - e. 6 atau 7 kali
6 or 7 times
 - f. 8 atau 9 kali
8 or 9 times
 - g. 10 atau 11 kali
10 or 11 times
 - h. 12 kali atau lebih
12 or more times

SILA BACA PERNYATAAN DI BAWAH:

Soalan seterusnya adalah berkaitan pergaduhan fizikal. Pergaduhan fizikal berlaku apabila dua individu atau pelajar yang sama saiz atau kekuatan bersetuju untuk bergaduh secara fizikal.

PLEASE READ THE STATEMENT BELOW:
The next question asks about physical fights. A physical fight occurs when two individuals or students of about the same strength or power choose to fight each other.

23. Dalam tempoh 12 bulan yang lepas, berapa kali anda terlibat dalam pergaduhan secara fizikal?
During the past 12 months, how many times were you in physical fight?
- a. 0 kali
0 times
 - b. 1 kali
1 time
 - c. 2 atau 3 kali
2 or 3 times
 - d. 4 atau 5 kali
4 or 5 times
 - e. 6 atau 7 kali
6 or 7 times
 - f. 8 atau 9 kali
8 or 9 times
 - g. 10 atau 11 kali
10 or 11 times
 - h. 12 kali atau lebih
12 or more times

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SILA BACA PERNYATAAN DI BAWAH:

3 soalan seterusnya adalah berkenaan kecederaan serius yang pernah anda alami. Kecederaan serius berlaku apabila anda tidak hadir sekurang-kurangnya satu hari aktiviti yang biasa dilakukan (termasuk sekolah, sukan atau kerja) atau kecederaan yang memerlukan rawatan daripada doktor atau anggota kesihatan.

PLEASE READ THE STATEMENT BELOW:

The next 3 questions ask you about serious injuries that happened to you. An injury is serious when it makes you miss at least one full day of usual activities (such as school, sports or a job) or requires treatment by a doctor or medical personnel.

24. Dalam tempoh 12 bulan yang lepas, berapa kali anda mengalami kecederaan serius?

During the past 12 months, how many times were you seriously injured?

- a. 0 kali
0 times
- b. 1 kali
1 time
- c. 2 atau 3 kali
2 or 3 times
- d. 4 atau 5 kali
4 or 5 times
- e. 6 atau 7 kali
6 or 7 times
- f. 8 atau 9 kali
8 or 9 times
- g. 10 atau 11 kali
10 or 11 times
- h. 12 kali atau lebih
12 or more times

25. Dalam tempoh 12 bulan yang lepas, apakah kecederaan yang **paling serius** yang anda pernah alami?

*During the past 12 months, what was the **most serious** injury that happened to you?*

- a. Saya tidak mengalami kecederaan dalam tempoh 12 bulan yang lepas
I was not seriously injured during the past 12 months
- b. Patah tulang atau sendi terkehel/terkeluar
I had a broken bone or a dislocated joint
- c. Luka atau tikaman
I had a cut or stab wound
- d. Gegaran (konkusi) kepala atau kecederaan leher, pengsan atau tidak boleh bernafas
I had a concussion or other head or neck injury, was knocked out or could not breathe
- e. Kebakaran kulit yang serius
I had a bad burn
- f. Diracun atau mengambil ubat berlebihan
I was poisoned or took too much of a drug
- g. Sesuatu yang lain berlaku kepada saya
Something else happened to me

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26. Dalam tempoh 12 bulan yang lepas, apakah penyebab utama terhadap kecederaan serius yang anda alami?

During the past 12 months, what was the major cause of the most serious injury that happened to you?

- a. Saya tidak mengalami kecederaan dalam 12 bulan yang lepas
I was not seriously injured during the past 12 months
- b. Saya terlibat dalam kemalangan melibatkan kenderaan
I was in a motor vehicle accident or hit by a motor vehicle
- c. Saya terjatuh
I fell
- d. Sesuatu telah jatuh atau terkena saya
Something fell on me or hit me
- e. Saya telah diserang atau didera atau bergaduh dengan orang lain
I was attacked or abused or was fighting with someone
- f. Saya terlibat dalam kebakaran atau berada terlalu dekat dengan api atau sesuatu yang panas
I was in the fire or too near a flame or something hot
- g. Saya sedut atau telan sesuatu yang membahayakan saya
I inhaled or swallowed something bad for me
- h. Sesuatu yang lain menyebabkan kecederaan saya
Something else caused my injury

SILA BACA PERNYATAAN BI BAWAH:

2 soalan seterusnya adalah berkenaan buli. Buli berlaku apabila seseorang atau sekumpulan pelajar mengata atau melakukan sesuatu yang tidak menyenangkan pelajar lain. Seseorang juga boleh dikatakan dibuli apabila dia diejek secara berterusan atau dipulaukan dengan sengaja. Buli tidak diambil kira apabila dua pelajar yang sama saiz atau kekuatan bergaduh atau ejekan dilakukan secara bergurau atau berseronok bagi kedua-dua pihak.

PLEASE READ THE STATEMENT BELOW:

The next 2 questions ask about bullying. Bullying occurs when a student or group of students say or do bad and unpleasant things to another student. It is also bullying when a student is teased a lot in an unpleasant way or when a student is left out of things on purpose. It is not bullying when two students of about the same strength or power argue or fight or when teasing is done in a friendly and fun way.

27. Dalam tempoh 30 hari yang lepas, berapa hari anda telah dibuli?

During the past 30 days, on how many days were you bullied?

- a. 0 hari
0 days
- b. 1 atau 2 hari
1 or 2 days
- c. 3 hingga 5 hari
3 to 5 days
- d. 6 hingga 9 hari
6 to 9 days
- e. 10 hingga 19 hari
10 to 19 days
- f. 20 hingga 29 hari
20 to 29 days
- g. Kesemua 30 hari
All 30 days

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28. Dalam 30 hari yang lepas, apakah perlakuan buli **paling kerap** anda alami?
*During the past 30 days, how were you bullied **most often**?*
- a. Saya tidak dibuli dalam 30 hari yang lepas
I was not bullied during the past 30 days
 - b. Saya telah dipukul, ditendang, ditolak atau dikunci dalam suatu tempat
I was hit, kicked, punched, shoved around, or locked indoors
 - c. Saya telah diejek kerana bangsa, kerakyatan atau warna kulit saya
I was made fun of because of my race, nationality or colour
 - d. Saya telah diejek kerana agama saya
I was made fun of because of my religion
 - e. Saya telah diejek dengan ejekan seksual seperti secara komen, perilaku atau gurauan
I was made fun of with sexual jokes, comments or gestures
 - f. Saya telah dipulau dari apa-apa aktiviti secara sengaja atau langsung tidak dipedulikan
I was left out of activities on purpose or completely ignored
 - g. Saya diejek kerana bentuk badan atau paras rupa saya
I was made fun of because of how my body or face looks
 - h. Saya telah dibuli dengan cara lain
I was bullied in some other way

SILA BACA PERNYATAAN BI BAWAH:
2 soalan berikutnya adalah berkenaan deraan fizikal dan lisan di rumah. Apabila seseorang memukul atau mengatakan ayat yang menyakitkan hati ia diambil kira sebagai deraan fizikal atau lisan.

PLEASE READ THE STATEMENT BELOW:
The next 2 questions ask about physical and verbal abuse at home. When someone hits you or says hurtful or insulting things to you it is called physical abuse or verbal abuse.

29. Dalam tempoh 30 hari yang lepas, adakah anda telah dipukul di rumah sehingga meninggalkan kesan atau mengalami kecederaan?
During the past 30 days, how many times did someone at home hit you so hard that they left a mark or caused an injury?
- a. 0 kali
0 times
 - b. 1 kali
1 time
 - c. 2 atau 3 kali
2 or 3 times
 - d. 4 atau 5 kali
4 or 5 times
 - e. 6 atau 7 kali
6 or 7 times
 - f. 8 atau 9 kali
8 or 9 times
 - g. 10 atau 11 kali
10 or 11 times
 - h. 12 kali atau lebih
12 or more times

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30. Dalam tempoh 30 hari yang lepas, berapa kali seseorang di rumah menyatakan sesuatu yang menyakitkan hati atau menghina anda?

During the past 30 days, how many times has someone at home said hurtful or insulting things to you?

- a. 0 kali
0 times
- b. 1 kali
1 time
- c. 2 atau 3 kali
2 or 3 times
- d. 4 atau 5 kali
4 or 5 times
- e. 6 atau 7 kali
6 or 7 times
- f. 8 atau 9 kali
8 or 9 times
- g. 10 atau 11 kali
10 or 11 times
- h. 12 kali atau lebih
12 or more times

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BAHAGIAN 5
PART 5

6 soalan seterusnya adalah berkenaan perasaan dan persahabatan anda.
The next 6 questions ask about your feelings and friendships.

31. Dalam tempoh 12 bulan yang lepas, berapa kerap anda merasa kesunyian?
During the past 12 months, how often have you felt lonely?
- Tidak pernah
Never
 - Jarang-jarang
Rarely
 - Kadang-kadang
Sometimes
 - Kebanyakan masa
Most of the time
 - Setiap masa
Always
32. Dalam tempoh 12 bulan yang lepas, berapa kerap anda merasa terlalu risau tentang sesuatu perkara sehingga anda tidak dapat tidur di waktu malam?
During the past 12 months, how often have you been so worried about something that you could not sleep at night?
- Tidak pernah
Never
 - Jarang-jarang
Rarely
 - Kadang-kadang
Sometimes
 - Kebanyakan masa
Most of the time
 - Setiap masa
Always
33. Dalam tempoh 12 bulan yang lepas, pernahkah anda terfikir secara serius untuk membunuh diri?
During the past 12 months, did you ever seriously consider attempting suicide?
- Ya
Yes
 - Tidak
No
34. Dalam tempoh 12 bulan yang lepas, adakah anda membuat perancangan untuk membunuh diri?
During the past 12 months, did you make a plan about how you would attempt suicide?
- Ya
Yes
 - Tidak
No
35. Dalam tempoh 12 bulan yang lepas, berapa kali anda telah cuba untuk membunuh diri?
During the past 12 months, how many times did you actually attempt suicide?
- 0 kali
0 times
 - 1 kali
1 time
 - 2 atau 3 kali
2 or 3 times
 - 4 hingga 5 kali
4 to 5 times
 - 6 kali atau lebih
6 or more times
36. Berapa ramai kawan rapat yang anda ada?
How many close friends do you have?
- 0 kawan
0 friends
 - 1 kawan
1 friend
 - 2 kawan
2 friends
 - 3 atau lebih
3 or more

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BAHAGIAN 6
PART 6

Rokok dan produk tembakau yang lain.
Cigarettes and other cigarette products.

37. Berapakah umur anda ketika kali pertama menghisap rokok?
How old were you when you first tried a cigarette?
- a. Saya tidak pernah merokok
I have never smoked cigarettes
 - b. tahun/ *years old*
38. Dalam tempoh 30 hari yang lepas, berapa hari anda merokok?
During the past 30 days, on how many days did you smoke cigarettes?
- a. 0 hari
0 days
 - b. 1 atau 2 hari
1 or 2 days
 - c. 3 hingga 5 hari
3 to 5 days
 - d. 6 hingga 9 hari
6 to 9 days
 - e. 10 hingga 19 hari
10 to 19 days
 - f. 20 hingga 29 hari
20 to 29 days
 - g. Kesemua 30 hari
All 30 days
39. Dalam tempoh 30 hari yang lepas, adakah anda menggunakan mana-mana produk seperti di bawah?
During the past 30 days, did you use any of the products listed below?
- 39.1 Shisha/Shisha
- a. Ya/Yes
 - b. Tidak/No
- 39.2 Rokok Daun/*Traditional hand-rolled cigarette*
- a. Ya/Yes
 - b. Tidak/No
- 39.3 Rokok gulung sendiri dengan kertas rokok/"Roll-your-own" with cigarette paper
- a. Ya/Yes
 - b. Tidak/No
- 39.4 Cerut/ Cigar
- a. Ya/Yes
 - b. Tidak/No
- 39.5 Hisap paip/*Pipe smoking*
- a. Ya/Yes
 - b. Tidak/No
- 39.6 Rokok elektronik atau vape/*E-cigarettes or vape*
- a. Ya/Yes
 - b. Tidak/No
- 39.7 Mengunyah tembakau (Sentil atau songel)/*Chewing tobacco*
- a. Ya/Yes
 - b. Tidak/No
- 39.8 Menghidu tembakau/*Snuff*
- a. Ya/Yes
 - b. Tidak/No

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40. Dalam tempoh 12 bulan yang lepas, adakah anda cuba untuk berhenti merokok?

During the past 12 months, have you ever tried to stop smoking cigarettes?

- a. Saya tidak pernah merokok
I have never smoked cigarettes
- b. Saya tidak pernah merokok dalam tempoh 12 bulan yang lepas
I did not smoke cigarettes during the past 12 months
- c. Ya
Yes
- d. Tidak
No

41. Dalam tempoh 7 hari yang lepas, berapa hari anda bersama dengan perokok yang sedang merokok?

During the past 7 days, on how many days have people smoked in your presence?

- a. 0 hari
0 days
- b. 1 atau 2 hari
1 or 2 days
- c. 3 atau 4 hari
3 or 4 days
- d. 5 atau 6 hari
5 or 6 days
- e. Kesemua 7 hari
All 7 days

42. Siapa antara bapa, ibu atau penjaga yang menggunakan produk tembakau termasuk rokok?

Which of your parents or guardians use any form of tobacco including cigarettes?

- a. Kedua-duanya tidak merokok
Neither
- b. Ayah atau penjaga lelaki
My father or male guardian
- c. Ibu atau penjaga perempuan
My mother or female guardian
- d. Kedua-duanya
Both
- e. Tidak tahu
I do not know

43. Berapakah umur anda ketika mula-mula menggunakan rokok elektronik/vape?

How old were you when you first tried using e-cigarettes/vape?

- a. Saya tidak pernah gunakan rokok elektronik/vape
I have never tried using e-cigarettes/vape
- b. tahun/ years old

44. Dalam tempoh 30 hari yang lepas, berapa hari anda telah menggunakan rokok elektronik/vape?

During the past 30 days, on how many days did you use e-cigarettes/vape?

- a. 0 hari
0 days
- b. 1 atau 2 hari
1 or 2 days
- c. 3 hingga 5 hari
3 to 5 days
- d. 6 hingga 9 hari
6 to 9 days
- e. 10 hingga 19 hari
10 to 19 days
- f. 20 hingga 29 hari
20 to 29 days
- g. Kesemua 30 hari
All 30 days

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45. Dalam tempoh 12 bulan yang lepas, adakah anda cuba untuk berhenti menggunakan rokok elektronik/vape?
During the past 12 months, did you ever try to stop using e-cigarettes/vape?
- a. Saya tidak pernah menggunakan rokok elektronik/ vape
I have never used e-cigarettes/vape
 - b. Saya tidak pernah menggunakan rokok elektronik/ vape dalam tempoh 12 bulan yang lepas
I don't use e-cigarettes/vape in the past 12 months
 - c. Ya
Yes
 - d. Tidak
No
46. Siakah antara bapa, ibu atau penjaga anda menggunakan rokok elektronik/vape?
Which of your parents or guardians use e-cigarettes/vape?
- a. Kedua-duanya tidak merokok
Neither
 - b. Ayah atau penjaga lelaki
My father or male guardian
 - c. Ibu atau penjaga perempuan
My mother or female guardian
 - d. Kedua-duanya
Both
 - e. Tidak tahu
I do not know

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**BAHAGIAN 7
 PART 7**

SILA BACA PERNYATAAN DI BAWAH:

6 soalan berikutnya adalah berkenaan meminum minuman beralkohol. Satu “minuman merujuk kepada satu gelas wain, tuak, lihing, bahar, ijuk atau todi; sebotol bir, segelas kecil arak, langkau, montoku; atau minuman campuran. Minuman beralkohol tidak termasuk beberapa hirup wain untuk tujuan keagamaan.

PLEASE READ THE STATEMENT BELOW:

The next 6 questions ask about drinking alcohol. A “drink’ is a glass of wine, tuak, lihing, bahar, ijuk or toddy; a bottle of beer, a small glass of liquor’ or mixed drink. Drinking alcohol does not include drinking a few sip of wine for religious purposes.

47. Berapakah umur anda ketika kali pertama anda minum minuman beralkohol?

How old were you when you had your first drink of alcohol?

- a. Saya tidak pernah minum minuman beralkohol
I have never had a drink of alcohol
- b. 7 tahun atau ke bawah
7 years old or younger
- c. 8 atau 9 tahun
8 or 9 years old
- d. 10 atau 11 tahun
10 or 11 years old
- e. 12 atau 13 tahun
12 or 13 years old
- f. 14 atau 15 tahun
14 or 15 years old
- g. 16 tahun atau ke atas
16 years old or older

48. Dalam tempoh 30 hari yang lepas, berapa hari anda mengambil sekurang-kurangnya satu minuman mengandungi alkohol?

During the past 30 days, on how many days did you have at least one drink containing alcohol?

- a. 0 hari
0 days
- b. 1 atau 2 hari
1 or 2 days
- c. 3 hingga 5 hari
3 to 5 days
- d. 6 hingga 9 hari
6 to 9 days
- e. 10 hingga 19 hari
10 to 19 days
- f. 20 hingga 29 hari
20 to 29 days
- g. Kesemua 30 hari
All 30 days

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49. Dalam tempoh 30 hari yang lepas, pada hari anda minum minuman alkohol; berapa banyak minuman yang anda **biasa** ambil dalam sehari?

During the past 30 days, on the day you drank alcohol, how many drinks did you usually drink per day?

- a. Saya tidak minum minuman beralkohol dalam 30 hari yang lepas
I did not drink alcohol during the past 30 days
- b. Kurang dari 1 minuman
Less than one drink
- c. 1 minuman
1 drink
- d. 2 minuman
2 drinks
- e. 3 minuman
3 drinks
- f. 4 minuman
4 drinks
- g. 5 minuman atau lebih
5 or more drinks

50. Dalam tempoh 30 hari yang lepas, biasanya bagaimana anda mendapatkan minuman beralkohol? **SILA PILIH SATU JAWAPAN SAHAJA**

During the past 30 days, how did you usually get the alcohol you drank? SELECT ONLY ONE RESPONSE

- a. Saya tidak minum minuman beralkohol dalam 30 hari yang lepas
I did not drink alcohol during the past 30 days
- b. Saya beli dari kedai atau gerai
I brought it in a store, shop or from a street vendor
- c. Saya beri duit kepada orang lain untuk membeli
I gave someone else money to buy it for me
- d. Saya dapat daripada kawan
I got it from my friend
- e. Saya dapat daripada keluarga saya
I got it from my family
- f. Saya curi atau ambil tanpa kebenaran
I stole it or got it without permission
- g. Saya perolehi dari cara lain
I got it some other way

SILA BACA PERNYATAAN DI BAWAH:

Terhuyung-hayang semasa berjalan, tidak mampu bercakap dengan betul, dan muntah adalah tanda seseorang itu terlalu mabuk.

PLEASE READ THE STATEMENT BELOW? Staggering when walking, not being able to speak right, and throwing up are some signs of being really drunk.

51. Sepanjang hidup anda berapa kali anda minum minuman beralkohol berlebihan sehingga betul-betul mabuk?

During your life, how many times did you drink so much alcohol that you were really drunk?

- a. 0 kali
0 times
- b. 1 atau 2 kali
1 or 2 times
- c. 3 hingga 9 kali
3 or 9 times
- d. 10 kali atau lebih
10 or more times

52. Sepanjang hidup anda, berapa kali anda mendapat masalah dengan ahli keluarga atau kawan, tidak ke sekolah, atau bertumbuk, akibat daripada minum minuman beralkohol?

During your life, how many times have you got into trouble with your family or friends, missed school, or got into fights, as a result of drinking alcohol?

- a. 0 kali
0 times
- b. 1 atau 2 kali
1 or 2 times
- c. 3 hingga 9 kali
3 or 9 times
- d. 10 kali atau lebih
10 or more times

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BAHAGIAN 8
PART 8

SILA BACA PERNYATAAN DI BAWAH:

4 soalan berikutnya adalah berkenaan penggunaan dadah termasuk heroin, morfin, gam, amfitamin, ecstasy, syabu, ice dan ganja. Ini tidak termasuk ubat-ubatan preskripsi.

PLEASE READ THE STATEMENT BELOW:

The next 4 questions ask about drug use. This include heroin, morphine, glue, amphetamine, ecstasy, methamphetamine, ice and marijuana . This does not include prescribed medicine.

53. Berapakah umur anda ketika **pertama kali** anda menggunakan dadah?
*How old were you when you **first** used drugs?*

- a. Saya tidak pernah menggunakan dadah
I have never used drugs
- b. 7 tahun atau ke bawah
7 years old or younger
- c. 8 atau 9 tahun
8 or 9 years old
- d. 10 atau 11 tahun
10 or 11 years old
- e. 12 atau 13 tahun
12 or 13 years old
- f. 14 atau 15 tahun
14 or 15 years old
- g. 16 tahun atau ke atas
16 years old or older

54. Sepanjang hidup anda, berapa kali anda telah menggunakan dadah?
During your life, how many times have you used drugs?

- a. 0 kali
0 times
- b. 1 atau 2 kali
1 or 2 times
- c. 3 hingga 9 kali
3 or 9 times
- d. 10 hingga 19 kali
10 to 19 times
- e. 20 kali atau lebih
20 or more times

55. Dalam tempoh 30 hari yang lepas, berapa kali anda menggunakan dadah?
During the past 30 days, how many times have you used drugs?

- a. 0 kali
0 times
- b. 1 atau 2 kali
1 or 2 times
- c. 3 hingga 9 kali
3 or 9 times
- d. 10 hingga 19 kali
10 to 19 times
- e. 20 kali atau lebih
20 or more times

56. Dalam tempoh 30 hari yang lepas, bagaimana biasanya anda mendapatkan dadah yang anda gunakan? **SILA PILIH SATU JAWAPAN SAHAJA**

*During the past 30 days, how did you usually get the drugs used? **SELECT ONLY ONE RESPONSE***

- a. Saya tidak menggunakan dadah dalam 30 hari yang lepas
I did not use drugs during the past 30 days
- b. Saya beli dari orang lain
I bought them from someone
- c. Saya beri duit kepada orang lain untuk membeli
I gave someone else money to buy it for me
- d. Saya mencuri atau mengambil tanpa kebenaran
I stole it or got it without permission
- e. Saya mendapatkannya daripada kawan saya
I got it from my friend
- f. Saya mendapatkannya daripada keluarga saya
I got it from my family
- g. Saya memperolehi dari cara lain
I got it some other ways

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57. Sepanjang hidup anda, berapa kali anda telah menggunakan ganja?

During your life, how many times have you used marijuana?

- a. 0 kali
0 times
- b. 1 atau 2 kali
1 or 2 times
- c. 3 hingga 9 kali
3 or 9 times
- d. 10 hingga 19 kali
10 to 19 times
- e. 20 kali atau lebih
20 or more times

58. Dalam tempoh 30 hari yang lepas, berapa kali anda menggunakan ganja?

During the past 30 days, how many times have you used marijuana?

- a. 0 kali
0 times
- b. 1 atau 2 kali
1 or 2 times
- c. 3 hingga 9 kali
3 or 9 times
- d. 10 hingga 19 kali
10 to 19 times
- e. 20 kali atau lebih
20 or more times

59. Sepanjang hidup anda, berapa kali anda telah menggunakan amfetamin atau metamfetamin (meth, syabu, ice, chase the dragon)?

During your life, how many times have you used amphetamines or metamphetamines (meth, syabu, ice, chase the dragon)?

- a. 0 kali
0 times
- b. 1 atau 2 kali
1 or 2 times
- c. 3 hingga 9 kali
3 or 9 times
- d. 10 hingga 19 kali
10 to 19 times
- e. 20 kali atau lebih
20 or more times

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BAHAGIAN 9
PART 9

SILA BACA PERNYATAAN DI BAWAH:

5 soalan berikutnya adalah berkenaan hubungan seksual. Hubungan seksual adalah perlakuan seks yang melibatkan memasukkan zakar ke dalam faraj atau dubur.

PLEASE READ THE STATEMENT BELOW:

The next 5 questions ask about sexual intercourse. Sexual intercourse is defined as sexual acts of penetration of penis into vagina or anus.

60. Pernahkah anda melakukan hubungan seksual/persetubuhan dalam 30 hari yang lepas ?

Have you ever had sexual intercourse in the past 30 days?

- a. Ya
Yes
- b. No
Tidak

61. Berapa umur anda ketika kali pertama melakukan hubungan seksual/persetubuhan?

How old were you when you had sexual intercourse for the first time?

- a. Saya tidak pernah melakukan hubungan seksual/persetubuhan
I have never had sexual intercourse
- b. 11 tahun atau ke bawah
11 years old or younger
- c. 12 tahun
12 years old
- d. 13 tahun
13 years old
- e. 14 tahun
14 years old
- f. 15 tahun
15 years old
- g. 16 tahun atau ke atas
16 years old or older

62. Sepanjang hidup anda, berapa ramai orang yang telah anda lakukan hubungan seksual/persetubuhan?

During your life, with how many people have you had sexual intercourse?

- a. Saya tidak pernah melakukan hubungan seksual/persetubuhan
I have never had sexual intercourse
- b. 1 orang
1 person
- c. 2 orang
2 people
- d. 3 orang
3 people
- e. 4 orang
4 people
- f. 5 orang
5 people
- g. 6 orang atau lebih
6 or more people

63. Kali terakhir anda melakukan hubungan seksual/persetubuhan; adakah anda atau pasangan anda menggunakan kondom?

The last time you had sexual intercourse; did you or your partner use a condom?

- a. Saya tidak pernah melakukan hubungan seksual/persetubuhan
I have never had sexual intercourse
- b. Ya
Yes
- c. Tidak
No

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64. Kali terakhir anda melakukan hubungan seksual/persetubuhan, adakah anda atau pasangan anda menggunakan kaedah pencegahan kehamilan lain seperti teknik pancutan luar, masa selamat, pil pencegah kehamilan, ataupun kaedah lain?

The last time you had sexual intercourse, did you or your partner use any other method of birth control, such as withdrawal, safe time, birth control pills, or any other method to prevent pregnancy?

- a. Saya tidak pernah melakukan hubungan seksual/persetubuhan
I have never had sexual intercourse
- b. Ya
Yes
- c. Tidak
No
- d. Tidak tahu
I do not know

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BAHAGIAN 10
PART 10

SILA BACA PERNYATAAN DI BAWAH:

3 soalan seterusnya adalah berkenaan aktiviti fizikal. Aktiviti fizikal adalah apa-apa aktiviti yang meningkatkan kadar denyutan jantung dan menyebabkan kita bernafas dengan kuat. Aktiviti fizikal boleh dilakukan dalam sukan, bermain dengan kawan, atau berjalan ke sekolah. Contoh aktiviti fizikal termasuklah berlari, berjalan pantas, berbasikal, menari, dan bola sepak.

PLEASE READ THE STATEMENT BELOW:

The next 3 questions ask about physical activity. Physical activity is any activity that increases your heart rate and makes you breathe hard. Physical activity can be done in sports, playing with friends, or walking to school. Some examples of physical activity are running, fast walking, biking, dancing, and football.

65. Dalam tempoh 7 hari yang lepas, berapa hari anda melakukan aktiviti fizikal untuk sekurang-kurangnya 60 minit setiap hari? **JUMLAHKAN MASA ANDA MELAKUKAN APA-APA AKTIVITI FIZIKAL SETIAP HARI**

*During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day? **ADD UP ALL THE TIME YOU SPENT IN ANY KIND OF PHYSICAL ACTIVITY EACH DAY***

- a. 0 hari
0 days
- b. 1 hari
1 day
- c. 2 hari
2 days
- d. 3 hari
3 days
- e. 4 hari
4 days
- f. 5 hari
5 days
- g. 6 hari
6 days
- h. 7 hari
7 days

66. Dalam tempoh 7 hari yang lepas, berapa hari anda berjalan kaki atau berbasikal ke sekolah atau balik ke rumah?

During the past 7 days, on how many days did you walk or ride a bicycle to or from school?

- a. 0 hari
0 days
- b. 1 hari
1 day
- c. 2 hari
2 days
- d. 3 hari
3 days
- e. 4 hari
4 days
- f. 5 hari
5 days
- g. 6 hari
6 days
- h. 7 hari
7 days

TINJAUAN KESIHATAN REMAJA | **NHMS 2017**
ADOLESCENT HEALTH SURVEY**SILA BACA PERNYATAAN DIBAWAH:**

Soalan berikutnya adalah berkenaan masa yang anda habiskan dengan duduk semasa tidak di sekolah atau semasa membuat kerja rumah.

PLEASE READ THE STATEMENT BELOW:

The next question asks about the time you spend mostly sitting when you are not in school or doing homework.

67. Biasanya berapa masa yang anda habiskan untuk duduk sama ada untuk menonton televisyen, bermain permainan komputer, berbual dengan kawan atau apa-apa aktiviti yang memerlukan anda duduk?

How much time do you spend during a typical or usual day sitting and watching television, playing computer games, talking with friends, or doing other sitting activities?

- a. Kurang dari 1 jam sehari
Less than 1 hour per day
- b. 1 hingga 2 jam sehari
1 to 2 hours per day
- c. 3 hingga 4 jam sehari
3 to 4 hours per day
- d. 5 hingga 6 jam sehari
5 to 6 hours per day
- e. 7 hingga 8 jam sehari
7 to 8 hours per day
- f. Lebih dari 8 jam sehari
More than 8 hours per day

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BAHAGIAN 11
PART 11

6 soalan seterusnya adalah berkenaan pengalaman anda di sekolah dan di rumah.
The next 6 questions ask about your experiences at school and at home.

68. Dalam tempoh 30 hari yang lepas, berapa hari anda tidak hadir ke kelas atau sekolah tanpa kebenaran?

During the past 30 days, on how many days did you miss classes or school without permission?

- a. 0 hari
0 days
- b. 1 atau 2 hari
1 or 2 days
- c. 3 hingga 5 hari
3 to 5 days
- d. 6 hingga 9 hari
6 to 9 days
- e. 10 hari atau lebih
10 or more days

69. Dalam tempoh 30 hari yang lepas, berapa kerap rakan sekolah anda bersikap baik hati dan suka membantu?

During the past 30 days, how often were most of the students in your school kind and helpful?

- a. Tidak pernah
Never
- b. Jarang-jarang
Rarely
- c. Kadang-kadang
Sometimes
- d. Kebanyakan masa
Most of the time
- e. Sentiasa
Always

70. Dalam tempoh 30 hari yang lepas, berapa kerap ibu bapa atau penjaga anda menyemak kerja sekolah anda?

During the past 30 days, how often did your parents or guardians check to see if your homework was done?

- a. Tidak pernah
Never
- b. Jarang-jarang
Rarely
- c. Kadang-kadang
Sometimes
- d. Kebanyakan masa
Most of the time
- e. Sentiasa
Always

71. Dalam tempoh 30 hari yang lepas, berapa kerap ibu bapa atau penjaga anda cuba memahami masalah dan kebimbangan anda?

During the past 30 days, how often did your parents or guardians try to understand your problems and worries?

- a. Tidak pernah
Never
- b. Jarang-jarang
Rarely
- c. Kadang-kadang
Sometimes
- d. Kebanyakan masa
Most of the time
- e. Sentiasa
Always

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72. Dalam tempoh 30 hari yang lepas, berapa kerap ibu bapa atau penjaga anda benar-benar tahu apa yang anda lakukan pada masa lapang?

During the past 30 days how often did your parents or guardians really know what you were doing with your free time?

- a. Tidak pernah
Never
- b. Jarang-jarang
Rarely
- c. Kadang-kadang
Sometimes
- d. Kebanyakan masa
Most of the time
- e. Sentiasa
Always

73. Dalam tempoh 30 hari yang lepas, berapa kerap ibu bapa atau penjaga anda memeriksa barangan anda tanpa kebenaran?

During the past 30 days, how often did your parents or guardians go through your things without your approval?

- a. Tidak pernah
Never
- b. Jarang-jarang
Rarely
- c. Kadang-kadang
Sometimes
- d. Kebanyakan masa
Most of the time
- e. Sentiasa
Always

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BAHAGIAN 12
PART 12

Penggunaan internet di kalangan remaja.
The use of internet among adolescents.

74. Adakah anda melayari internet dalam 30 hari yang lepas?
Did you surf the internet in the past 30 days?

- a. Ya
Yes
- b. Tidak (Terus ke BAHAGIAN 13, soalan No. 78)
No (Go to PART 13, question No. 78)

75. Apakah alat yang anda gunakan bagi melayari internet?
Which devices that you use for surfing internet?

- 75.1 Telefon pintar/ *smartphone*
 - a. Ya/Yes
 - b. Tidak/No
- 75.2 Komputer, Komputer Riba/ *Computer, Laptop, Notebook*
 - a. Ya/Yes
 - b. Tidak/No
- 75.3 Papan Elektronik Mudah Alih/ *Tablet, Ipad*
 - a. Ya/Yes
 - b. Tidak/No

76. Pernahkah anda belajar menggunakan internet dengan bijak dari.....?
Have you ever learned how to use the internet wisely from.....?

76.1 Ibubapa/penjaga/ *parents/guardian*
 a. Ya/Yes
 b. Tidak/No

76.2 Guru/ *teacher*
 a. Ya/Yes
 b. Tidak/No

76.3 Kawan/ *friend*
 a. Ya/Yes
 b. Tidak/No

76.4 Lain-lain sumber (cth: melalui pembelajaran sendiri, kempen/iklan)
Other sources (eg: through self-learning, campaign/advertisement)

- a. Ya/Yes
- b. Tidak/No

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77. Ujian saringan penggunaan internet.
Internet usage screening test.

Arahan: Sila nilaikan setiap soalan dengan menggunakan pilihan "a" sehingga "e" daripada skala dibawah untuk menilai ketepatan fakta tersebut bagi diri anda dalam tempoh 30 HARI YANG LALU . Sila bulatkan jawapan anda untuk semua soalan.		Tidak pernah	Kadang-kadang	Agak Kerap	Sederhana Kerap	Sangat Kerap
77.1	Berapa kerapkah anda mendapati yang anda melayari internet lebih lama dari masa yang dirancang? <i>How often do you find that you stay on-line longer than you intended?</i>	a	b	c	d	e
77.2	Berapa kerapkah anda mengabaikan tugas pelajaran/ kerja rumah anda untuk menghabiskan lebih banyak masa melayari internet? <i>How often do you neglect household chores to spend more time on-line?</i>	a	b	c	d	e
77.3	Berapa kerapkah anda memilih keseronokan internet berbanding hubungan rapat yang terjalin dengan kawan/pasangan anda? <i>How often do you prefer the excitement of the Internet to intimacy with your partner?</i>	a	b	c	d	e
77.4	Berapa kerapkah anda memulakan hubungan baru dengan pengguna internet yang lain? <i>How often do you form new relationships with fellow on-line users?</i>	a	b	c	d	e
77.5	Berapa kerapkah orang-orang didalam hidup anda mengadu kepada anda mengenai jumlah masa yang anda gunakan untuk melayari internet? <i>How often do others in your life complain to you about the amount of time you spend on-line?</i>	a	b	c	d	e
77.6	Berapa kerapkah pelajaran kamu terjejas (cth. ponteng kelas, menangguhkan kerja, tidak menyiapkan tugas tepat pada masa, dll) disebabkan oleh masa yang anda habiskan untuk melayari internet? <i>How often do your grades or school work suffers because of the amount of time you spend on-line?</i>	a	b	c	d	e
77.7	Berapa kerapkah anda memeriksa email anda sebelum anda melakukan perkara lain? <i>How often do you check your email before something else that you need to do?</i>	a	b	c	d	e
77.8	Berapa kerapkah pencapaian akademik atau produktiviti anda terjejas disebabkan oleh penggunaan internet? <i>How often does your job performance or productivity suffer because of the Internet?</i>	a	b	c	d	e
77.9	Berapa kerapkah anda cuba mempertahankan diri atau berahsia apabila seseorang bertanyakan mengenai aktiviti anda (apa yang anda lakukan) di internet?	a	b	c	d	e

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	<i>How often do you become defensive or secretive when anyone asks you what you do on-line?</i>					
77.10	Berapa kerapkah anda cuba melupakan pemikiran yang terganggu mengenai kehidupan anda dengan pemikiran yang boleh menenangkan di internet? <i>How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?</i>	a	b	c	d	e
77.11	Berapa kerapkah anda mendapati diri anda tertunggu-tunggu atau mengharapkan untuk segera menggunakan internet lagi apabila anda tidak menggunakannya? <i>How often do you find yourself anticipating when you will go on-line again?</i>	a	b	c	d	e
77.12	Berapa kerapkah anda merasa bimbang apabila memikirkan kehidupan tanpa internet akan menjadi bosan, kosong dan tidak menyenangkan? <i>How often do you fear that life without the Internet would be boring, empty, and joyless?</i>	a	b	c	d	e
77.13	Berapa kerapkah anda marah, menjerit atau menunjukkan reaksi tidak gembira kepada seseorang yang mengganggu anda ketika anda melayari internet? <i>How often do you snap, yell, or act annoyed if someone bothers you while you are on-line?</i>	a	b	c	d	e
77.14	Berapa kerapkah anda kurang tidur disebabkan melayari internet hingga lewat malam? <i>How often do you lose sleep due to late-night log-ins?</i>	a	b	c	d	e
77.15	Berapa kerapkah anda asyik terfikir tentang internet atau berkhayal melayarinya walaupun anda tidak menggunakan internet pada masa itu? <i>How often do you feel preoccupied with the Internet when off-line, or fantasize about being on-line?</i>	a	b	c	d	e
77.16	Berapa kerapkah anda berkata kepada diri sendiri "sekejap lagi/ beberapa minit lagi" apabila anda melayari internet? <i>How often do you find yourself saying "just a few more minutes" when on-line?</i>	a	b	c	d	e
77.17	Berapa kerapkah anda cuba untuk mengurangkan masa anda melayari internet tetapi tidak berjaya? <i>How often do you try to cut down the amount of time you spend on-line and fail?</i>	a	b	c	d	e
77.18	Berapa kerapkah anda cuba menyorokkan daripada orang lain mengenai jumlah masa yang anda gunakan untuk melayari internet? <i>How often do you try to hide how long you've been on-line?</i>	a	b	c	d	e
77.19	Berapa kerapkah anda memilih untuk menghabiskan lebih banyak masa melayari internet berbanding keluar bersosial dengan rakan-rakan anda?	a	b	c	d	e

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	<i>How often do you choose to spend more time on-line over going out with others?</i>					
77.20	<p>Berapa kerapkah anda merasa sedih, berperasaan tidak menentu dan gementar apabila tidak melayari internet, di mana semua perasaan ini akan hilang sebaik saja anda menggunakan internet semula?</p> <p><i>How often do you feel depressed, moody or nervous when you are off-line, which goes away once you are back on-line?</i></p>	a	b	c	d	e

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BAHAGIAN 13
PART 13

78. Saringan Minda Sihat
Healthy Mind Screening

Sila baca setiap kenyataan di bawah dan **HITAMKAN** jawapan anda pada KERTAS JAWAPAN berdasarkan jawapan **a, b, c,** atau **d** bagi menggambarkan keadaan anda sepanjang minggu yang lalu. Tiada jawapan betul atau salah. Jangan mengambil masa yang terlalu lama untuk menjawab mana-mana kenyataan.

*Please read each statement and **SHADE** numbers **a, b, c,** or **d** which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.*

Skala pemarkahan adalah seperti berikut:
The rating scale is as follow:

- a. **Tidak langsung** menggambarkan keadaan saya
Did not apply to me at all
- b. **Sedikit atau jarang-jarang** menggambarkan keadaan saya
*Applied to me to some **degree** or **some of the time***
- c. **Banyak atau kerap kali** menggambarkan keadaan saya
*Applied to me to a **considerable degree** or a **good part of time***
- d. **Sangat banyak atau sangat kerap** menggambarkan keadaan saya
*Applied to me **very much,** or **most of the time***

78.1	Saya dapati diri saya sukar ditenteramkan <i>I found it hard to wind down</i>	a	b	c	d
78.2	Saya sedar mulut saya terasa kering <i>I was aware of dryness of my mouth</i>	a	b	c	d
78.3	Saya tidak dapat mengalami perasaan positif sama sekali <i>I couldn't seem to experience any positive feeling at all</i>	a	b	c	d
78.4	Saya mengalami kesukaran bernafas (contohnya pernafasan yang laju, tercungap-cungap walaupun tidak melakukan senaman fizikal) <i>I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)</i>	a	b	c	d
78.5	Saya sukar untuk mendapatkan semangat bagi melakukan sesuatu perkara <i>I found it difficult to work up the initiative to do things</i>	a	b	c	d

TINJAUAN KESIHATAN REMAJA | NHMS 2017
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78.6	Saya cenderung untuk bertindak keterlaluan dalam sesuatu keadaan <i>I tended to over-react to situations</i>	a	b	c	d
78.7	Saya rasa mengeletar (contohnya pada tangan) <i>I experience trembling (e.g. in the hands)</i>	a	b	c	d
78.8	Saya rasa saya menggunakan banyak tenaga dalam keadaan cemas <i>I felt that I was using a lot of nervous energy</i>	a	b	c	d
78.9	Saya bimbang keadaan di mana saya mungkin menjadi panik dan melakukan perkara yang membodohkan diri sendiri <i>I was worried about situation in which I might panic and make a fool of myself</i>	a	b	c	d
78.10	Saya rasa saya tidak mempunyai apa-apa untuk diharapkan <i>I felt that I had nothing to look forward to</i>	a	b	c	d
78.11	Saya mendapati diri saya semakin gelisah <i>I found myself getting agitated</i>	a	b	c	d
78.12	Saya rasa sukar untuk relaks <i>I found it difficult to relax</i>	a	b	c	d
78.13	Saya rasa sedih dan murung <i>I felt down-hearted and blue</i>	a	b	c	d
78.14	Saya tidakdapat menahan sabar dengan perkara yang menghalang saya meneruskan apa yang saya lakukan <i>I was intolerant of anything that kept me from getting on with what I was doing</i>	a	b	c	d
78.15	Saya rasa hampir-hampir menjadi panik/cemas <i>I felt I was close to panic</i>	a	b	c	d
78.16	Saya tidak bersemangat dengan apa jua yang saya lakukan <i>I was unable to become enthusiastic about anything</i>	a	b	c	d
78.17	Saya tidak begitu berharga sebagai seorang individu <i>I felt I wasn't worth much as a person</i>	a	b	c	d

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78.18	Saya rasa yang saya mudah tersentuh <i>I felt that I was rather touchy</i>	a	b	c	d
78.19	Saya sedar tindakbalas jantung saya walaupun tidak melakukan aktiviti fizikal (contohnya kadar denyutan jantung bertambah, atau denyutan jantung berkurangan) <i>I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)</i>	a	b	c	d
78.20	Saya berasa takut tanpa sebab yang munasabah <i>I felt scared without any good reason</i>	a	b	c	d
78.21	Saya rasa hidup ini tidak bermakna <i>I felt that life was meaningless</i>	a	b	c	d



TINJAUAN KEBANGSAAN KESIHATAN DAN MORBIDITI 2017
KERTAS JAWAPAN TINJAUAN KESIHATAN REMAJA

ID PELAJAR

NEGERI		STRATA	KATEGORI SEKOLAH	KOD SEKOLAH	KELAS	PELAJAR	
0	0	1	1	0	0	0	0
1	1	2	2	1	1	1	1
2				2	2	2	2
3				3	3	3	3
4				4	4	4	4
5				5	5	5	5
6				6	6	6	6
7				7	7	7	7
8				8	8	8	8
9				9	9	9	9

1	A B C D E F G H
2	A B
3	A B C D E F
4	A B C D E F
5	A B C D E F
6	A B C D E
7	A B C D E F G
8	A B C D E F G
9	A B C D E F G
10	A B C D E F G
11	A B C D E F G
12	A B C D E F G H
13	A B C D E F
14	A B C
15	A B
16	A B C D E
17	A B
18	A B
19	A B C D E
20	A B C D E
21	A B C D E
22	A B C D E F G H
23	A B C D E F G H
24	A B C D E F G H
25	A B C D E F G
26	A B C D E F G H
27	A B C D E F G
28	A B C D E F G H
29	A B C D E F G H
30	A B C D E F G H
31	A B C D E
32	A B C D E
33	A B
34	A B
35	A B C D E
36	A B C D
37	A B
38	A B C D E F G
39.1	A B
39.2	A B
39.3	A B
39.4	A B
39.5	A B
39.6	A B
39.7	A B
39.8	A B
40	A B C D
41	A B C D E
42	A B C D E
43	A B
44	A B C D E F G
45	A B C D
46	A B C D E
47	A B C D E F G
48	A B C D E F G
49	A B C D E F G
50	A B C D E F G
51	A B C D
52	A B C D
53	A B C D E F G
54	A B C D E
55	A B C D E
56	A B C D E F G
57	A B C D E
58	A B C D E
59	A B C D E
60	A B
61	A B C D E F G
62	A B C D E F G
63	A B C
64	A B C D
65	A B C D E F G H
66	A B C D E F G H
67	A B C D E F
68	A B C D E
69	A B C D E
70	A B C D E
71	A B C D E
72	A B C D E
73	A B C D E
74	A B
75.1	A B
75.2	A B
75.3	A B
76.1	A B
76.2	A B
76.3	A B
76.4	A B
77.1	A B C D E
77.2	A B C D E
77.3	A B C D E
77.4	A B C D E
77.5	A B C D E
77.6	A B C D E
77.7	A B C D E
77.8	A B C D E
77.9	A B C D E
77.10	A B C D E
77.11	A B C D E
77.12	A B C D E
77.13	A B C D E
77.14	A B C D E
77.15	A B C D E
77.16	A B C D E
77.17	A B C D E
77.18	A B C D E
77.19	A B C D E
77.20	A B C D E





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