

NATIONAL HEALTH AND MORBIDITY SURVEY 2017

ADOLESCENT HEALTH SURVEY 2017

PULAU PINANG



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SURVEY 2017**

(NMRR-16-698-30042)

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PULAU PINANG

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Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

National Health and Morbidity Survey 2017 (NMRR-16-698-30042)

Pulau Pinang Adolescent Health Survey 2017

ISBN: 978-983-2387-65-7

MOH/S/IKU/97.18(RR)

Suggested citation:

Institute for Public Health (IPH) 2017. National Health and Morbidity Survey (NHMS) 2017: Adolescent Health Survey 2017, Pulau Pinang.

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The views expressed in this report are those of the authors alone and do not necessarily represent the opinions of the other investigators participating in the survey, nor the view or policy of the Ministry of Health.

Produced and Distributed by:

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Published by Institute for Public Health, National Institutes of Health, Ministry of Health Malaysia.

Acknowledgement

The authors would like to thank the Director General of Health Malaysia and the National Health and Morbidity Survey (NHMS) Steering Committee Team for supporting this research project via financial grant and technical support. The research team members would like to express their gratitude to the Director General of Education, Ministry of Education Malaysia, as well as the Director of Family Health Development Division and Director of Nutrition Division, Ministry of Health Malaysia. Our appreciation is also extended towards the various State Education Departments, District Education Offices, School Principals and the selected school officers who assisted in this study successfully. And last but not least, all students from 212 schools whom have participated in this study.

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

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Research in Adolescent Health in Malaysian Context.....	1
1.2	Objectives.....	5
1.2.1	General Objectives	5
1.2.2	Specific Objectives.....	5
1.2.3	The NHMS 2017 Organisation Team.....	5
2.0	METHODOLOGY AND SAMPLING DESIGN	8
2.1	Target Population.....	8
2.2	Sampling Frame.....	8
2.3	Sample Size Determination	8
2.4	Sampling Design	10
2.5	Ethical Approval and Consent Forms	10
2.6	Survey Instruments	10
2.7	Data Collection	11
2.8	Data Management.....	11
2.8.1	Data Operation Centre	12
2.8.2	Data Analysis	14
3.0	FINDINGS.....	15
3.1	General Findings.....	15
3.2	Alcohol Consumption	18
3.2.1	Introduction.....	18
3.2.2	Objectives	18
3.2.3	Variable definitions.....	19
3.2.4	Findings.....	19
3.2.5	Discussion/ Conclusion	20
3.2.6	Recommendations.....	20
3.2.7	References	21
3.3.	Dietary Behaviours	25
3.3.1	Introduction.....	25
3.3.2	Objectives	25
3.3.3	Variable Definitions	26
3.3.4	Findings.....	26
3.3.5	Discussion/ Conclusion	28
3.3.6	Recommendations.....	29

3.3.7	References	29
3.4	Drug Use	34
3.4.1	Introduction	34
3.4.2	Objectives	35
3.4.3	Variable Definitions	35
3.4.4	Findings.....	36
3.4.5	Discussion/ Conclusion	36
3.4.6	Recommendations.....	37
3.4.7	References	37
3.5	Hygiene (Including Oral Health	42
3.5.1	Introduction	42
3.5.2	Objectives	42
3.5.3	Variable Definitions	43
3.5.4	Findings.....	43
3.5.5	Discussion/Conclusion	45
3.5.6	Recommendations.....	46
3.5.7	References	46
3.6	Internet Use and Addiction	57
3.6.1	Introduction	57
3.6.2	Objectives	57
3.6.3	Variable Definitions	58
3.6.4	Findings.....	58
3.6.5	Discussion/ Conclusion	59
3.6.6	Recommendations.....	59
3.6.7	References	60
3.7	Mental Health Problems	63
3.7.1	Introduction	63
3.7.2	Objectives	63
3.7.3	Variable definitions.....	63
3.7.4	Findings.....	64
3.7.5	Discussion/ Conclusion	64
3.7.6	Recommendations.....	64
3.7.7	References	64
3.8	Physical Activity.....	69
3.8.1	Introduction	69
3.8.2	Objectives	69

3.8.3	Variable Definitions	69
3.8.4	Findings.....	69
3.8.5	Discussion/ Conclusion	70
3.8.6	Recommendations.....	70
3.8.7	References	71
3.9.	Protective Factors.....	73
3.9.1	Introduction	73
3.9.2	Objectives	73
3.9.3	Variable Definitions	73
3.9.4	Findings.....	74
3.9.5	Discussions/ Conclusion	75
3.9.6	Recommendations.....	75
3.9.7	References	75
3.10	Sexual Behaviours that contribute to HIV Infection, Other STIs and Unintended Pregnancy.....	80
3.10.1	Introduction	80
3.10.2	Objectives.....	80
3.10.3	Variable Definitions.....	80
3.10.4	Findings	81
3.10.5	Discussion/ Conclusion	81
3.10.6	Recommendations	81
3.10.7	References	82
3.11	Tobacco Use	86
3.11.1	Introduction	86
3.11.2	Objectives.....	86
3.11.3	Variable Definitions.....	87
3.11.4	Findings	87
3.11.5	Discussion / Conclusions	89
3.11.6	Recommendations	89
3.11.7	References	89
3.12	Violence and Unintentional Injury	97
3.12.1	Introduction	97
3.12.2	Objectives.....	97
3.12.3	Variable Definitions.....	98
3.12.4	Findings	99
3.12.5	Discussion / Conclusion.....	100

3.12.6	Recommendations	101
3.12.7	References	102
APPENDICES	106

LIST OF TABLES

METHODOLOGY AND SAMPLING DESIGN

Table 2.1 Distribution of secondary schools sampled by state, NHMS 2017

GENERAL FINDINGS

Table 3.1.1 Response rate at student level by state, NHMS 2017

Table 3.1.2 Comparison between NHMS 2017 sample and total enrolment of students in Malaysia 2017

ALCOHOL CONSUMPTION

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

Table 3.2.2 Prevalence of current alcohol drinkers among Form 1 to Form 5 students Pulau Pinang, 2017

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

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

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

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 Pulau Pinang, 2017

DIETARY BEHAVIOURS

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 Pulau Pinang, 2017

- 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 Pulau Pinang, 2017
- 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 Pulau Pinang, 2017
- 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 Pulau Pinang, 2017
- 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 Pulau Pinang, 2017
- 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 Pulau Pinang, 2017
- Table 3.3.7** Prevalence of milk or milk products intake of at least two servings per day in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.3.8** Prevalence of consuming food from fast food restaurants of at least three days in the past seven days among Form 1 to Form 5 students in Pulau Pinang, 2017

DRUG USE

- Table 3.4.1** Prevalence of ever used drugs in a lifetime among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.4.2** Prevalence of current drug use in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.4.3** Prevalence of ever used marijuana in their lifetime among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.4.4** Prevalence of current marijuana use in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.4.5** Prevalence of ever used amphetamines/metaphetamines in their lifetime among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.4.6** Source of getting drugs in the past 30 days among current drug users, Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.4.7** Age of initiation of first use of drugs amongst ever drug users among Form 1 to Form 5 students in Pulau Pinang, 2017

HYGIENE (INCLUDING ORAL HEALTH)

- Table 3.5.1** Prevalence of teeth brushing in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.5.2** Prevalence of use of fluoridated toothpaste among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.5.3** Prevalence of use of dental floss among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.5.4** Timing of last dental visit among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.5.4.1** Prevalence of last dental visit within the last 24 months among Form 1 to Form 5 students in Pulau Pinang, 2017
- 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 Pulau Pinang, 2017
- 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 Pulau Pinang, 2017
- 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 Pulau Pinang, 2017
- Table 3.5.8** Prevalence of handwashing before eating in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.5.9** Prevalence of handwashing after using the toilet in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017

INTERNET USE AND ADDICTION

- Table 3.6.1** Prevalence of internet use in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.6.2** Prevalence of positive Malay Version Internet Addiction Test (MVIAT) among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.6.3** Percentage of reported devices used by internet users among Form 1 to Form 5 students in Pulau Pinang, 2017

Table 3.6.4 Percentage of reported devices used by internet addicts among Form 1 to Form 5 students in Pulau Pinang, 2017

MENTAL HEALTH PROBLEMS

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 in Pulau Pinang, 2017

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

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

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

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

Table 3.7.6 Prevalence of not having any close friend among Form 1 to Form 5 students in Pulau Pinang, 2017

PHYSICAL ACTIVITY

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

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

PROTECTIVE FACTORS

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

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

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

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

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

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 in Pulau Pinang, 2017

SEXUAL BEHAVIOURS

Table 3.10.1 Prevalence of ever had sexual intercourse among Form 1 to Form 5 students in Pulau Pinang, 2017

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

Table 3.10.3 Percentage of first sexual intercourse before the age of 14 years among those who ever had sex among Form 1 to Form 5 students in Pulau Pinang, 2017

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

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

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

TOBACCO USE

Table 3.11.1 Prevalence of current smokers among Form 1 to Form 5 students in Pulau Pinang, 2017

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

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

- Table 3.11.4** Prevalence of current E-cigarettes/ Vape use among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.11.5** Prevalence of current smoke and smokeless tobacco products use by types (except manufactured cigarette and E-cigarette/Vape) among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.11.6** Prevalence of having tried a cigarette before the age of 14 years among ever smokers among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.11.7** Prevalence of having tried E-cigarette/ Vape before the age of 14 years among ever E-cigarette/ Vape users among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.11.8** Prevalence of quit smoking attempts in the past 12 months among those who ever smoked among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.11.9** Prevalence of quit E-cigarette/ Vape attempts in the past 12 months among those who ever used E-Cigarette/ Vape among Form 1 to Form 5 students in Pulau Pinang, 2017
- 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 Pulau Pinang, 2017
- 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 Pulau Pinang, 2017
- 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 Pulau Pinang, 2017

VIOLENCE AND UNINTENTIONAL INJURY

- Table 3.12.1** Prevalence of involvement in violence at least once in the past 12 months among Form 1 to Form 5 students Pulau Pinang, 2017
- Table 3.12.2** Prevalence of being bullied at least once in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.12.3** Most common ways of being bullied in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017

- Table 3.12.4** Prevalence of being abused at least once in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.12.5** Prevalence of having had serious injury at least once in the past 12 months among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.12.6** Types of the most serious injury sustained in the past 12 months among students who were injured among Form 1 to Form 5 students in Pulau Pinang, 2017
- Table 3.12.7** Major cause of the most serious injury sustained in the past 12 months among students who were injured among Form 1 to Form 5 students in Pulau Pinang, 2017

LIST OF APPENDICES

- Appendix 1 Members of Steering Committee NHMS 2015-2018
- Appendix 2 Terms of Reference for NHMS 2017 Steering Committee
- Appendix 3 List of members of Central Coordinating Committee
- Appendix 4 Terms of Reference for NHMS 2017 Central Coordinating Team
- Appendix 5 List of Research Team Members, NHMS 2017
- Appendix 6 List of Liaison Officer and Data Collection Teams
- Appendix 7 Questionnaire & OMR form

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. A total of 14 secondary schools were randomly selected in Pulau Pinang of which 1,749 students completed the survey out of 1,974 eligible respondents with response rate of 88.6%.

Pulau Pinang Key Findings

The study observed that the prevalence of current cigarette smokers in Pulau Pinang school-going adolescents was 8.6%. Amongst those who ever smoked cigarettes, 72.8% had tried cigarettes before the of age 14 years and 64.5% had attempted to quit smoking in the past 12 months. The prevalence of current e-cigarette/vape use in Pulau Pinang school-going adolescents was 5.2%. Among those who ever smoked e-cigarette/vape, 43.7% had first tried e-cigarette/vape before age 14 years and 57.0% had tried to stop using e-cigarette/vape in the past 12 months. Overall, 7.4% of students reported having parents or guardians who used e-cigarette/vape, 32.9% of students reported having parents or guardians who used any form of tobacco products and 35.4% of students reported having been exposed to people who smoked in their presence in the past seven days. Prevalence of current alcohol drinkers among school-going adolescents in Pulau Pinang was 11.5%. Among students who had ever consumed alcohol (24.7%), 27.7% reported ever drunkenness in their lifetime. With regards to drug use, 1.8% of students in Pulau Pinang reported had ever used drugs and the prevalence of current drug users was 1.3%. Prevalence of ever using marijuana in their lifetime was 0.8% and current use of marijuana was 0.8%, while 1.0% 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 in Pulau Pinang was 6.9% and the prevalence of having had sex in the past 30 days was 5.6%. Of those who ever had sex, 22.8% of them had their first sexual experience before age 14 years, and 6.9% had at least two sexual partners. It was found that 7.8% of students reported they, or their partners had used condoms whilst 10.5% used other birth control methods. A total of 25.2% students had been seriously injured in the past 12 months. Among the respondents, 21.6% claimed to have been physically attacked in the past 12 months, while 22.7% of adolescents claimed to have been involved in physical fights. With regards to bullying, 13.8% reported to have ever been bullied in the past 30 days. Physical abuse at home was reported by 9.4% of students while 39.0% of reported verbal abuse at home in the past 30 days.

The overall prevalence of internet use among school-going adolescents in Pulau Pinang was 88.5% and the prevalence of internet addiction was 32.9%. Smartphones were the most prevalent device used. A total of 9.2% school-going adolescents in Pulau Pinang reported feeling lonely and 3.3% reported that they had no close friend. A total of 7.0% 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 9.5%, 7.0% and 6.0% respectively. Prevalence of truancy amongst students in the past 30 days was 24.2% while only 48.1% 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 11.8%, 33.8%, 46.1% and 74.2% respectively.

Overall, 86.7% of students reported having cleaned or brushed their teeth at least twice daily while 0.7% of students reported that they had never cleaned or brushed their teeth in the past 30 days. A total of 46.3% students reported use of fluoridated toothpaste, while only 17.9% used dental floss. In the past 30 days, 9.7% never or rarely used soap when washing their hands, 6.0% never or rarely washed their hands before eating and 3.8% reported that they had never or rarely washed their hands after using the toilet. In relation to dietary behaviours, 4.5% 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 36.2% and consumption of vegetables at least thrice daily was 26.5% in the past 30 days. Only 15.5% of

students 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 22.8% and 8.2% 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 24.4% while 60.7% 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 21.5% whereas 56.8% of students had spent at least three hours in a typical or usual day in sitting activities.

Malaysia 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

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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**.

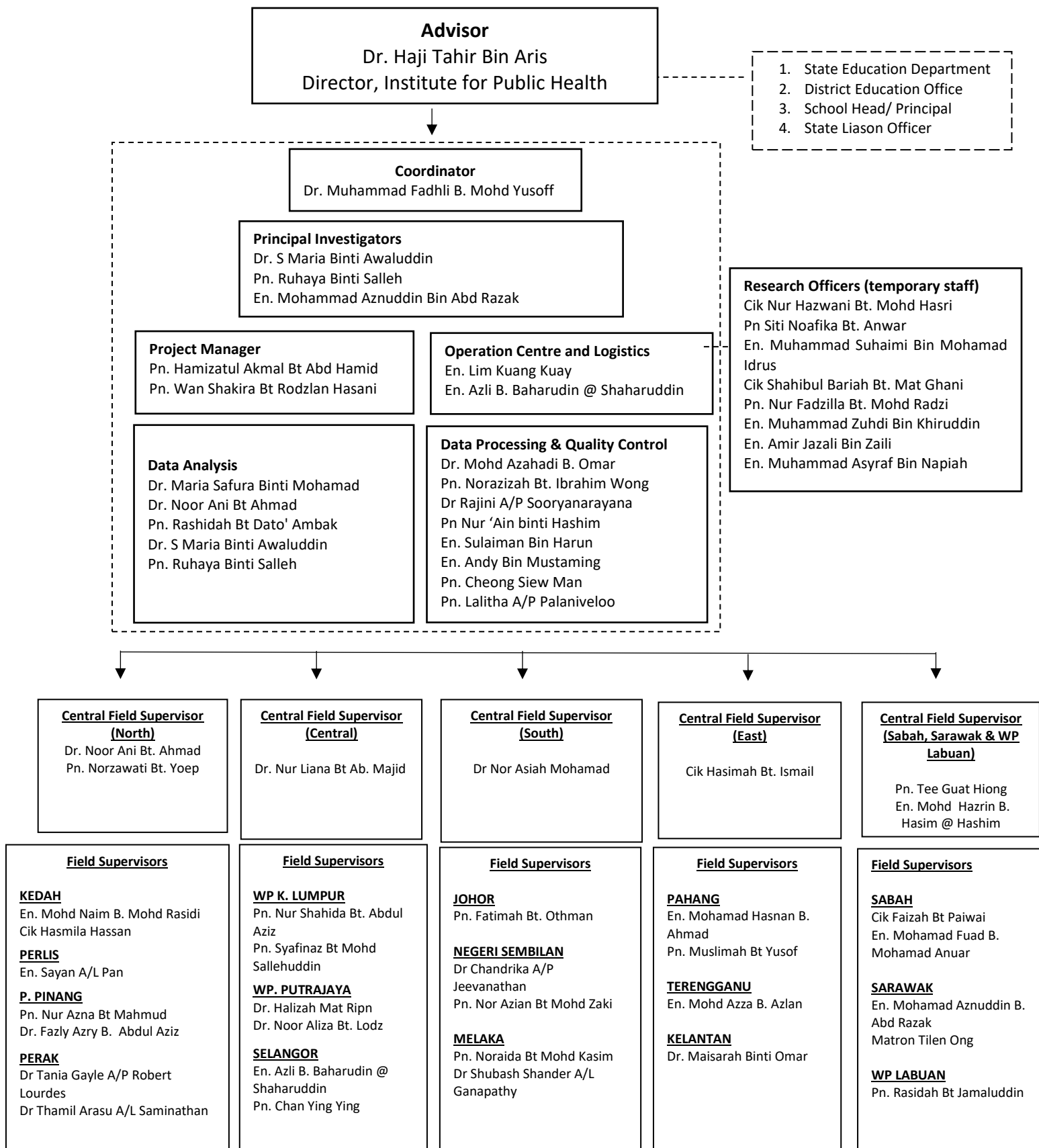


Figure 1: Organisation chart for data collection teams NHMS 2017

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

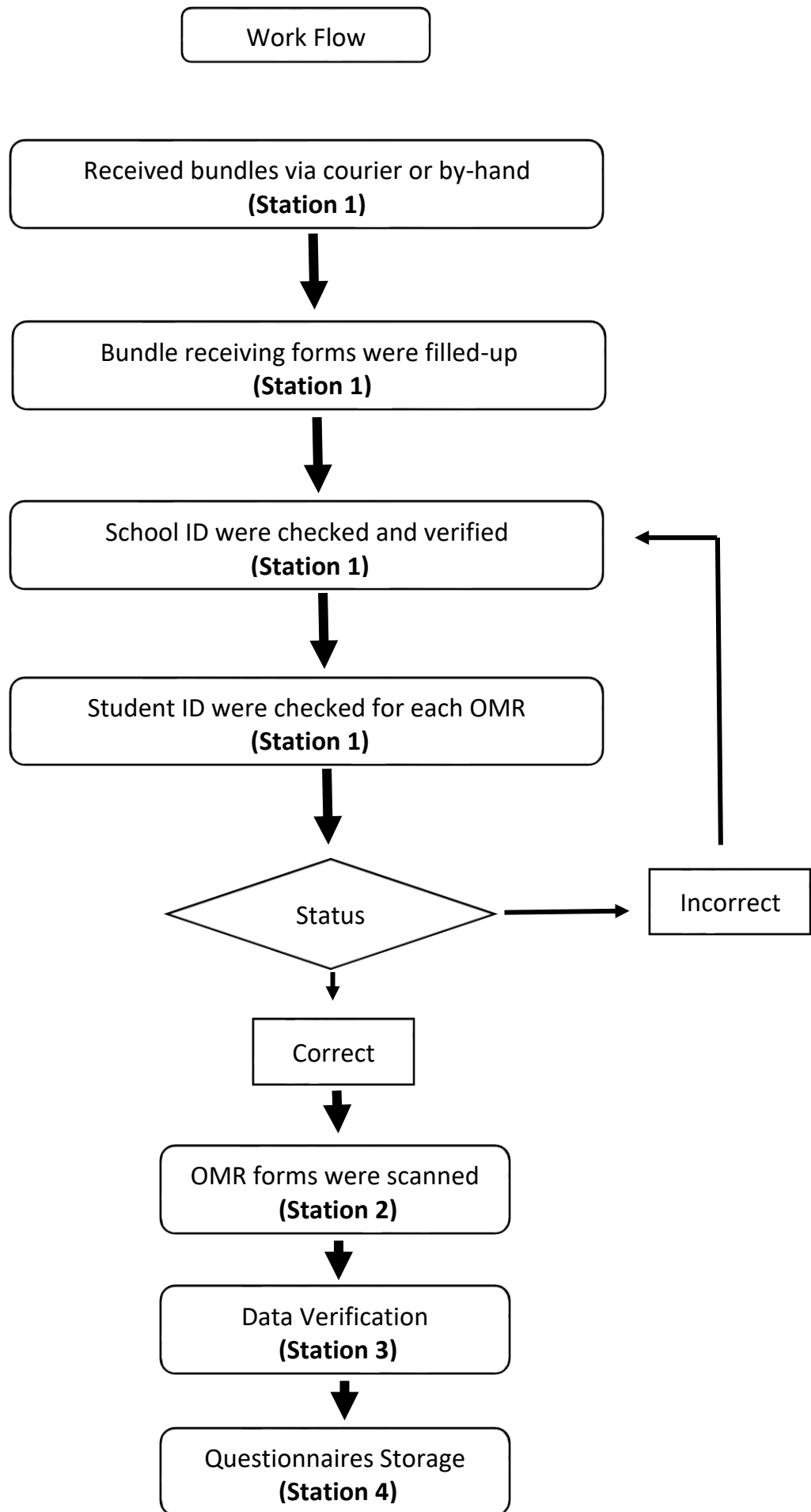


Figure 2 : Work Flow of NHMS 2017

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 45.5% (795) males and 54.5% (954) females in Pulau Pinang. In terms of school locality; 63.8% (1,116) and 36.2% (633) were students studying in school located in urban areas and rural areas respectively.

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

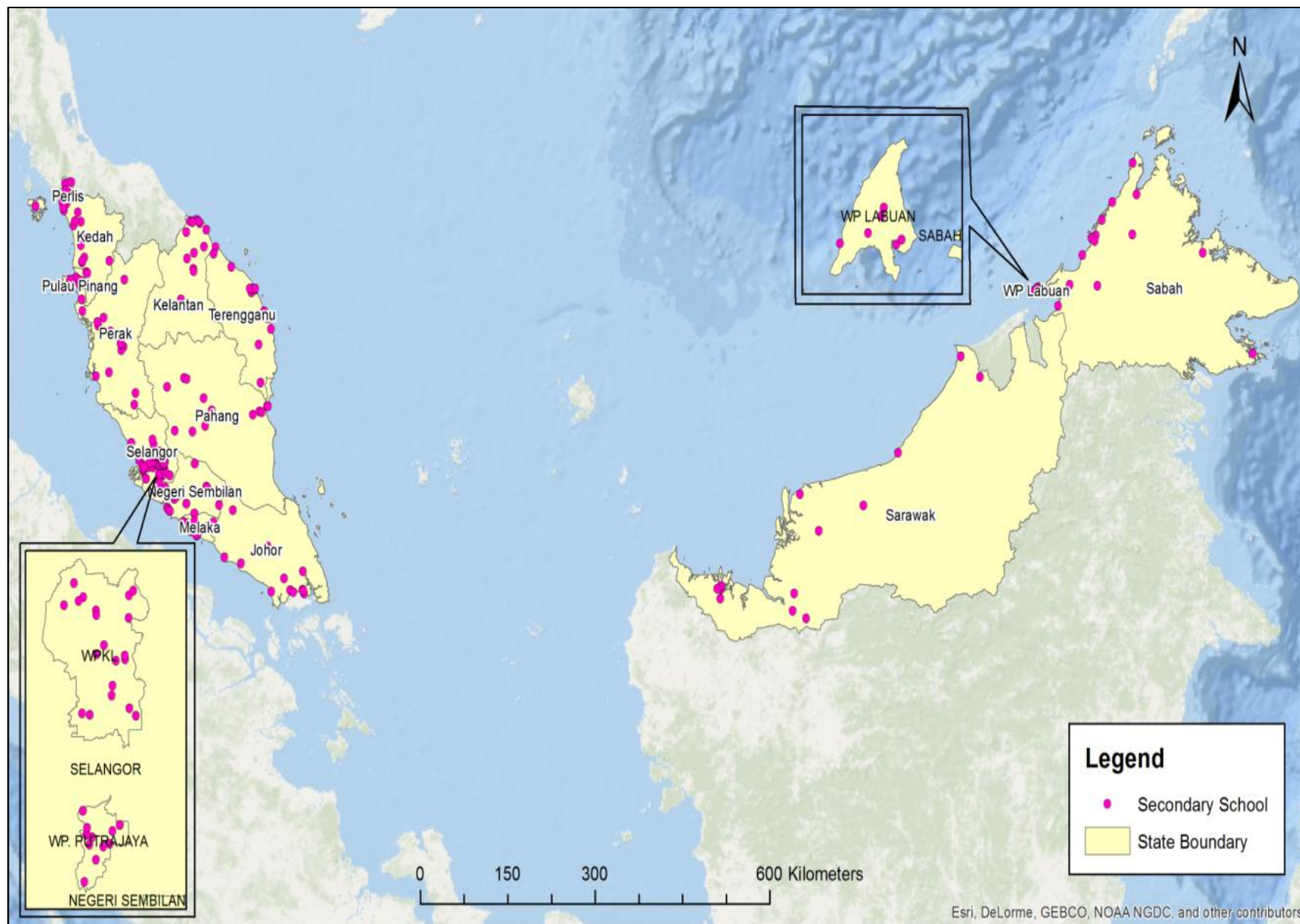


Figure 3: GIS mapping of the selected secondary schools

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.
- **Drunkeness:** 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

The prevalence of ever alcohol drinkers among students from Form 1 to Form 5 in Pulau Pinang was 24.7% (95% CI: 14.06, 39.65). The prevalence of ever alcohol drinkers was significantly higher among students who attended urban schools (35.8%, 95% CI: 23.90, 49.79) compared to students who attended rural schools (3.9%, 95% CI: 1.80, 8.40) (**Table 3.2.1**). The prevalence of current alcohol drinkers among students from Form 1 to Form 5 was 11.5% (95% CI: 6.75, 19.05). The prevalence of current alcohol drinkers was significantly higher among students who attended urban schools (16.8%, 95% CI: 11.59, 23.77) compared to students who attended rural schools (1.7%, 95% CI: 0.51, 5.67) as observed among ever drinkers (**Table 3.2.2**). Among ever alcohol drinkers, 27.7% (95% CI: 19.90, 37.04) reported drunkenness (**Table 3.2.3**). Among students who ever consumed alcohol, most of the students had their first alcoholic beverage at the age of 12 or 13 years old (38.0%, 95% CI: 31.74, 44.76) (**Table 3.2.4**).

Among current alcohol drinkers, most of the students obtained their alcoholic beverages from their family (45.5%, 95% CI: 35.15, 56.29); by purchasing it from the stores (23.5% CI: 13.44, 37.93); or getting it from their friends (14.4% CI: 7.03, 27.30) (**Table 3.2.5**). Overall, 3.2% (95%

CI: 2.15, 4.78) 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 (**Table 3.2.6**).

3.2.5 Discussion/ Conclusion

The prevalence of current alcohol drinkers among students from Form 1 to Form 5 in Pulau Pinang was 11.5% (95% CI: 6.75, 19.05), whereas the national prevalence was 10.2% (95% CI: 9.00, 11.60). Among current alcohol drinkers, most of the students obtained their alcoholic beverages from their families, by purchasing them from stores and some obtained the beverages from their friends. This coincides with the national data where the students also reported the same sources as the main source of obtaining their alcoholic beverages. Most the students in Penang who were ever alcohol drinkers had their first alcoholic drink at the age of 12 or 13 years as observed in the national prevalence.

3.2.6 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 use among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	403	27,831	24.7	14.06	39.65
Locality of school					
Urban	379	26,281	35.8	23.90	49.79
Rural	24	1,550	3.9	1.80	8.40
Sex					
Male	236	16,876	30.4	16.51	49.07
Female	167	10,955	19.2	10.40	32.60
Form					
Form 1	59	4,222	17.8	8.32	34.01
Form 2	64	3,735	16.7	8.23	31.03
Form 3	51	2,815	12.6	6.47	23.24
Form 4	120	6,911	32.0	18.81	48.97
Form 5	109	10,148	44.5	25.73	64.99

Table 3.2.2: Prevalence of current drinker in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	182	13,017	11.5	6.75	19.05
Locality of school					
Urban	171	12,339	16.8	11.59	23.77
Rural	11	677	1.7	0.51	5.67
Sex					
Male	116	8,586	15.5	9.26	24.68
Female	66	4,430	7.7	3.82	15.06
Form					
Form 1	26	1,887	7.9	3.93	15.40
Form 2	28	1,595	7.1	2.79	17.11
Form 3	21	1,209	5.4	2.16	13.01
Form 4	56	3,334	15.5	9.32	24.54
Form 5	51	4,992	21.9	11.82	36.95

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

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	106	7,697	27.7	19.90	37.04
Locality of school					
Urban	104	7,562	28.8	20.42	38.88
Rural	2	135	8.7	2.09	29.90
Sex					
Male	64	4,930	29.2	19.33	41.55
Female	42	2,767	25.3	18.23	33.88
Form					
Form 1	14	1,078	25.5	14.93	40.13
Form 2	15	866	23.2	10.92	42.64
Form 3	13	725	25.8	13.66	43.19
Form 4	33	1,975	28.6	16.14	45.40
Form 5	31	3,054	30.1	16.94	47.60

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

	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
7 years old or younger	26	1,642	5.9	3.37	10.17
8 or 9 years old	42	3,054	11.0	7.76	15.38
10 or 11 years old	53	3,474	12.5	7.79	19.51
12 or 13 years old	143	10,558	38.0	31.74	44.76
14 or 15 years old	99	6,490	23.4	18.06	29.70
16 years old or older	-	-	-	-	-
Unknown	39	2,538	9.1	4.73	16.96

Table 3.2.5: Source of getting alcohol among current drinker among Form 1 to Form 5 students in Pulau Pinang, 2017

	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
I bought in a store	37	2,532	23.5	13.44	37.93
I gave someone money to buy	5	398	3.7	1.09	11.77
I got it from my friends	22	1,550	14.4	7.03	27.30
I got it from my family	66	4,894	45.5	35.15	56.29
I stole it	-	-	-	-	-
I got it some other way	18	1,378	12.8	7.65	20.68

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 Pulau Pinang, 2017

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	52	3,623	3.2	2.15	4.78
Locality of school					
Urban	40	2,816	3.8	2.61	5.60
Rural	12	807	2.1	0.78	5.32
Sex					
Male	27	1,950	3.5	2.11	5.79
Female	25	1,673	2.9	1.78	4.78

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

The overall prevalence of students who reported being hungry most of the time or always was 4.5% (95% CI: 3.26, 6.18) with an estimated projection to 5,078 school-going adolescents. In terms of school locality, urban school-going adolescents reported a higher prevalence of being hungry [5.2% (95% CI: 3.72, 7.34)] as compared students from the rural areas 3.1% (95% CI: 1.81, 5.33). There were 4.9% (95% CI: 3.00, 7.78) of male students and 4.1% (95% CI: 2.63, 6.46) of female students who reported being hungry. Form 5 students reported the highest prevalence of being hungry [6.4% (95% CI: 3.30,12.08)] as compared to other forms. **(Table 3.3.1).**

Fruits intake

The overall prevalence of consuming fruits at least twice daily in the past 30 days was 36.2% (95%CI: 30.64, 42.21) with an estimated projection to 40,930 school-going adolescents. Urban school-going adolescents significantly reported lower prevalence of fruits intake (30.6%; 95%

CI: 27.02, 34.38) as compared to the students in the rural areas (46.7%; 95% CI: 39.56, 54.02). There were 34.5% (95% CI: 29.12, 40.30) of male students and 37.9% (95% CI: 31.23, 45.10) of female students who reported consuming fruits at least twice daily. There was a decreasing trend of consuming fruits at least twice daily in the upper forms. **(Table 3.3.2).**

Vegetables intake

The overall prevalence of consuming vegetables at least three times daily in the past 30 days was 26.5% (95%CI: 22.80, 30.66), with an estimated projection to 29,989 school-going adolescents. Rural school-going adolescents showed a significant lower frequency of vegetables intake at 20.1% (95% CI: 15.09, 26.18) compared to students in the urban areas 30.0% (95% CI: 27.40, 32.80). There were 28.5% (95% CI: 23.39, 34.29) of male students and 24.6% (95% CI: 20.82, 28.83) of female students who reported consuming vegetables at least twice daily. Form 3 students showed the lowest frequency of consuming vegetables at least three times daily at 20.5% (95% CI: 16.45, 25.21). **(Table 3.3.3).**

Fruits and vegetables intake

The overall prevalence of consuming fruits and vegetables at least five times daily in the past 30 days was 15.5% (95% CI: 13.25, 18.08) with an estimated projection to 17,526 school-going adolescents. There was no difference in fruits and vegetables intake at least five times daily by school locality, sex, school levels and forms. There was a decreasing trend in consuming fruits and vegetables in the upper forms **(Table 3.3.4)**

Carbonated soft drinks intake

The overall prevalence of consuming carbonated drinks at least once daily in the past 30 days was 22.8% (95%CI: 15.92, 31.57) with an estimated projection to 25,689 school-going adolescents. Urban school-going adolescents consumed more frequent carbonated drinks (26.1%; 95% CI: 17.12, 37.61) than rural school-going adolescents (16.7%; 95% CI: 9.47, 27.81). Male students reported higher frequency of carbonated drinks consumption (28.3%; 95% CI: 19.52, 39.10) than female students (17.5%; 95% CI: 11.76, 25.20). Form 1 students (29.5% ; 95% CI: 18.21, 43.90) reported the highest frequency of carbonated drinks consumption as compared to other forms. **(Table 3.3.5).**

Plain water intake

The overall prevalence of drinking plain water five times or more daily in the past 30 days was 60.7% (95%CI: 53.58, 67.35) with an estimated projection to 68,419 school-going adolescents. The prevalence among urban school-going adolescents was 65.0 % (95% CI: 56.12, 72.94) while rural school-going adolescents was 52.6% (95% CI: 47.34, 57.87). There was no significant difference in drinking plain water by sex. Form 4 students reported the lowest prevalence of drinking plain water five times or more daily (51.7%; 95% CI: 42.67, 60.55) as compared to other students. **(Table 3.3.6).**

Milk and milk products intake

The overall prevalence of milk or milk products intake at least two times daily in the past 30 days was 24.4% (95%CI: 21.86, 27.04) with an estimated projection to 27,491 school-going adolescents. There was no significant difference in taking milk or milk products by sex and school location. Form 5 students (17.4%; 95% CI: 12.46, 23.65) significantly had the lowest prevalence of milk or milk products intake compared to Form 1 students, 30.1% (95% CI: 24.23, 36.74) **(Table 3.3.7).**

Fast food intake

The overall prevalence of consuming food from fast food restaurants of at least three days in the past seven days was 8.2% (95% CI: 6.04, 11.16) with an estimated projection to 9,312 school-going adolescents. There was no significant difference in consuming fast food by school locality and sex. By forms, Form 4 students (10.5%; 95% CI: 6.96, 15.59) showed the highest prevalence of consuming food from fast food restaurants. **(Table 3.3.8).**

3.3.5 Discussion/ Conclusion

The prevalence of being hungry most of the time or always during the past 30 days in Pulau Pinang was 4.5% (95% CI: 3.26, 6.18) which was comparable with the national prevalence of 3.9% (95% CI: 3.53, 4.24) and the previous Pulau Pinang GSHS 2012 [5.5% (95% CI: 3.24, 9.26)]¹. Students in Pulau Pinang reported comparable prevalence of consuming fruits at least twice daily in 2017 [36.2% (95% CI: 30.64, 42.21)] and 2012 [38.4% (95% CI: 31.68, 45.55)]¹,

however significantly lower than the national prevalence [46.8% (95% CI: 45.09, 48.53)] in 2017. For vegetables intake at least three times per day, the prevalence was similar [26.5% (95% CI: 22.8, 30.66)] with Pulau Pinang GSHS 2012 [25.1% (95% CI: 22.83, 27.59)]¹, however it was significantly lower in comparison with the national prevalence [36.0% (95% CI: 34.45, 37.52)]. For carbonated drink consumption once daily [22.8% (95% CI: 15.92, 31.57)], it was comparable with the prevalence of Pulau Pinang GSHS 2012 [20.4% (95% CI: 15.20, 26.92)]¹ but lower when compared to the national prevalence [36.9% (95% CI: 35.04, 38.79)]. For plain water intake 60.7% (95% CI: 53.58, 67.35), it was comparable with the prevalence of Pulau Pinang GSHS 2012 [61.4% (95% CI: 53.90, 68.40)], and national prevalence [60.4% (95% CI: 59.07, 61.78)].

3.3.6 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.

3.3.7 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 in his/her home, in the past 30 days, among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-demographic characteristics	*Most of the time or always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
Pulau Pinang	75	5,078	4.5	3.26	6.18
Locality of school					
Urban	54	3,845	5.2	3.72	7.34
Rural	21	1,233	3.1	1.81	5.33
Sex					
Male	37	2,713	4.9	3.00	7.78
Female	38	2,365	4.1	2.63	6.46
School level					
Lower secondary	44	2,794	4.1	2.88	5.76
Upper secondary	31	2,284	5.1	2.91	8.87
Form					
Form 1	17	1,224	5.2	2.96	8.83
Form 2	14	828	3.7	1.48	8.96
Form 3	13	742	3.3	1.77	6.21
Form 4	14	822	3.8	2.07	6.78
Form 5	17	1,462	6.4	3.30	12.08

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

Socio-demographic characteristics	Yes (at least twice daily)				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	642	40,930	36.2	30.64	42.21
Locality of school					
Urban	342	22,451	30.6	27.02	34.38
Rural	300	18,479	46.7	39.56	54.02
Sex					
Male	272	19,245	34.5	29.12	40.30
Female	370	21,685	37.9	31.23	45.10
School level					
Lower secondary	464	28,479	41.6	35.19	48.37
Upper secondary	178	12,452	27.9	22.83	33.68
Form					
Form 1	153	11,120	46.8	35.31	58.67
Form 2	160	9,181	41.0	33.07	49.48
Form 3	151	8,178	36.7	28.83	45.39
Form 4	105	6,336	29.1	23.06	35.98
Form 5	73	6,116	26.8	19.04	36.36

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

Socio-demographic characteristics	Yes (at least three times daily)				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	454	29,989	26.5	22.80	30.66
Locality of school					
Urban	323	22,053	30.0	27.40	32.80
Rural	131	7,936	20.1	15.09	26.18
Sex					
Male	219	15,919	28.5	23.39	34.29
Female	235	14,070	24.6	20.82	28.83
School level					
Lower secondary	300	18,560	27.1	22.57	32.23
Upper secondary	154	11,430	25.6	20.74	31.25
Form					
Form 1	108	7,723	32.5	25.36	40.59
Form 2	108	6,274	28.0	20.77	36.67
Form 3	84	4,563	20.5	16.45	25.21
Form 4	87	5,199	23.9	18.45	30.30
Form 5	67	6,231	27.3	21.28	34.34

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 Pulau Pinang, 2017

Socio-demographic characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	268	17,526	15.5	13.25	18.08
Locality of school					
Urban	169	11,575	15.8	13.71	18.06
Rural	99	5,951	15.0	10.30	21.45
Sex					
Male	196	12,227	17.9	14.65	21.63
Female	72	5,299	11.9	9.02	15.51
School level					
Lower secondary	196	12,227	17.9	14.65	21.63
Upper secondary	72	5,299	11.9	9.02	15.51
Form					
Form 1	68	5,019	21.1	15.40	28.29
Form 2	73	4,240	18.9	14.06	25.03
Form 3	55	2,968	13.3	8.71	19.85
Form 4	42	2,558	11.8	8.34	16.30
Form 5	30	2,741	12.0	7.89	17.89

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

Socio-demographic characteristics	Yes (at least once a day)				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	384	25,689	22.8	15.92	31.57
Locality of school					
Urban	281	19,112	26.1	17.12	37.61
Rural	103	6,577	16.7	9.47	27.81
Sex					
Male	220	15,713	28.3	19.52	39.10
Female	164	9,976	17.5	11.76	25.20
School level					
Lower secondary	271	17,415	25.6	18.63	33.98
Upper secondary	113	8,274	18.6	10.51	30.81
Form					
Form 1	93	6,933	29.5	18.21	43.90
Form 2	87	5,313	23.7	15.08	35.31
Form 3	91	5,169	23.3	14.89	34.46
Form 4	81	4,948	22.9	13.60	35.79
Form 5	32	3,326	14.6	7.22	27.26

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 Pulau Pinang, 2017

Socio-demographic characteristics	Yes (at least 5 times daily)				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	1,057	68,419	60.7	53.58	67.35
Locality of school					
Urban	720	47,680	65.0	56.12	72.94
Rural	337	20,739	52.6	47.34	57.87
Sex					
Male	479	33,917	60.9	48.68	71.84
Female	578	34,502	60.5	55.88	64.91
School level					
Lower secondary	691	41,816	61.3	54.83	67.44
Upper secondary	366	26,603	59.7	50.11	68.57
Form					
Form 1	214	15,111	64.0	53.37	73.42
Form 2	241	13,857	62.1	53.69	69.89
Form 3	236	12,847	57.7	51.43	63.70
Form 4	192	11,249	51.7	42.67	60.55
Form 5	174	15,355	67.3	55.53	77.29

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 Pulau Pinang, 2017

Socio-demographic characteristics	Unweighted Count	Estimated Population	Prevalence %	95% CI	
				Lower	Upper
PULAU PINANG	441	27,492	24.4	21.86	27.04
Locality of school					
Urban	267	16,981	23.1	19.89	26.75
Rural	174	10,511	26.6	24.29	29.06
Sex					
Male	185	12,544	22.5	19.58	25.78
Female	256	14,948	26.1	22.89	29.68
School level					
Lower secondary	311	18,540	27.1	24.20	30.26
Upper secondary	130	8,952	20.1	16.63	24.09
Form					
Form 1	106	7,154	30.1	24.23	36.74
Form 2	96	5,543	24.8	19.49	30.92
Form 3	109	5,844	26.3	20.51	33.05
Form 4	83	4,994	23.0	18.57	28.10
Form 5	47	3,958	17.4	12.46	23.65

Table 3.7.8: Prevalence of consuming food from a fast food restaurant of at least three days in the past 7 days, among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-demographic characteristics	Yes (at least three days)				
	Unweighted Count	Estimated Population	Prevalence (%)	Lower	Upper
PULAU PINANG	148	9,315	8.2	6.04	11.16
Locality of school					
Urban	97	6,078	8.3	5.60	12.06
Rural	51	3,237	8.2	4.85	13.49
Sex					
Male	70	4,636	8.3	6.00	11.39
Female	78	4,679	8.2	5.60	11.80
School level					
Lower secondary	94	5,676	8.3	5.83	11.68
Upper secondary	54	3,639	8.2	5.59	11.77
Form					
Form 1	24	1,713	7.2	3.82	13.19
Form 2	30	1,780	8.0	5.58	11.21
Form 3	40	2,184	9.8	6.65	14.23
Form 4	38	2,289	10.5	6.96	15.59
Form 5	16	1,350	5.9	3.68	9.38

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, the prevalence of ever drug use among students from Form 1 to Form 5 in Pulau Pinang was 1.8% (95% CI: 0.71, 4.53) with an estimated population of 2,033 students. The prevalence of ever drug use was higher among those who were studying in urban areas [2.0% (95% CI: 0.58, 6.56)], male students [2.6% (95% CI: 0.91, 7.09)] and among Form 4 students [3.5% (95% CI: 1.35, 8.80)] (**Table 3.4.1**). The prevalence of current drug use in the past 30 days among Form 1 to Form 5 students in Pulau Pinang was 1.3% (95% CI: 0.40, 4.03). The prevalence of current drug use was also higher among those who were from urban schools [1.5% (95% CI: 0.37, 5.78)], males [2.0% (95% CI: 0.62, 6.06)] and Form 4 students [2.9% (95% CI: 0.92, 8.70)] (**Table 3.4.2**). The prevalence of ever used marijuana in lifetime was 0.8% (95% CI: 0.32, 2.13) among Form 1 to Form 5 students in Pulau Pinang (**Table 3.4.3**) and 0.8% (95% CI: 0.22, 2.66) were current marijuana users in the past 30 days (**Table 3.4.4**). About 1.0% (95% CI: 0.46, 2.17) of students reported that they had ever used amphetamines or methamphetamines during lifetime (**Table 3.4.5**).

Among current drug users, most of the students obtained their drugs by buying from someone [35.8% (95% CI: 21.97, 52.44)]. Other than that, they also obtained them by stealing or getting it without permission [14.9% (95%CI: 6.53, 30.64)] or getting it in some other ways [13.2% (95% CI: 5.69, 27.76)] (**Table 3.4.6**). Among ever drug users, about 16.0% (95% CI: 5.96, 36.59) had initiated drug use at the age of seven years or younger with percentage of rural areas was 0.2% (95% CI: 0.03, 1.36) and urban areas was 0.3% (95% CI: 0.04, 2.78) (**Table 3.4.7**).

3.4.5 Discussion/ Conclusion

The prevalence of ever drug use and current drug use in Pulau Pinang did not significantly differ with the national prevalence. However, the prevalence of ever marijuana use was observed as significantly lower than the national prevalence. Among those who were ever used drugs, majority of students admitted that they had been using drugs at the age of seven years old or younger. Most of those who were current drug users had obtained their drugs by buying from someone.

3.4.6 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.

3.4.7 References

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2. United Nations Office on Drugs and Crime, *World Drug Report 2017: Global Overview*. (ISBN: 978-92-1-148291-1, eISBN: 978-92-1-060623-3, United Nations publication, Sales No. E.17.XI.6).

Table 3.4.1 : Prevalence of ever used drugs in a life time among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	30	2,033	1.8	0.71	4.53
Locality of school					
Urban	22	1,460	2.0	0.58	6.56
Rural	8	573	1.5	0.47	4.43
Sex					
Male	21	1,436	2.6	0.91	7.09
Female	9	597	1.0	0.40	2.66
Form					
Form 1	7	525	2.2	0.83	5.77
Form 2	5	339	1.5	0.55	4.11
Form 3	5	328	1.5	0.27	7.62
Form 4	12	755	3.5	1.35	8.80
Form 5	1	86	0.4	0.04	3.24

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

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	21	1,444	1.3	0.40	4.03
Locality of school					
Urban	16	1,086	1.5	0.37	5.78
Rural	5	359	0.9	0.12	6.36
Sex					
Male	16	1,095	2.0	0.62	6.06
Female	5	350	0.6	0.17	2.24
Form					
Form 1	5	390	1.6	0.44	5.87
Form 2	2	149	0.7	0.08	5.13
Form 3	3	198	0.9	0.11	6.94
Form 4	10	622	2.9	0.92	8.70
Form 5	1	86	0.4	0.04	3.24

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

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	15	930	0.8	0.32	2.13
Locality of school					
Urban	12	733	1.0	0.32	3.09
Rural	3	197	0.5	0.13	1.88
Sex					
Male	12	742	1.3	0.52	3.39
Female	3	188	0.3	0.07	1.63
Form					
Form 1	1	59	0.2	0.03	2.09
Form 2	1	57	0.3	0.03	2.33
Form 3	2	130	0.6	0.15	2.31
Form 4	11	684	3.2	1.13	8.54
Form 5	-	-	-	-	-

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

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	13	868	0.8	0.22	2.66
Locality of school					
Urban	11	725	1.0	0.24	4.02
Rural	2	142	0.4	0.05	2.58
Sex					
Male	11	737	1.3	0.38	4.47
Female	2	131	0.2	0.05	1.11
Form					
Form 1	2	165	0.7	0.15	3.23
Form 2	1	75	0.3	0.04	2.61
Form 3	3	198	0.9	0.11	6.94
Form 4	7	430	2.0	0.73	5.35
Form 5	-	-	-	-	-

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

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	17	1,127	1.0	0.46	2.17
Locality of school					
Urban	12	775	1.1	0.38	2.91
Rural	5	352	0.9	0.31	2.58
Sex					
Male	12	819	1.5	0.61	3.54
Female	5	308	0.5	0.17	1.67
Form					
Form 1	5	359	1.5	0.55	4.09
Form 2	2	139	0.6	0.16	2.42
Form 3	2	132	0.6	0.07	4.70
Form 4	8	498	2.3	1.15	4.58
Form 5	-	-	-	-	-

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

	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
I bought them from someone	7	496	35.8	21.97	52.44
I gave someone else money to buy it for me	3	207	14.9	6.53	30.64
I stole it or got it without permission	-	-	-	-	-
I got it from my friend	2	119	8.6	2.63	24.52
I got it from my family	1	68	4.9	0.59	30.66
I got it some other ways	3	183	13.2	5.69	27.76

Table 3.4.7 : Age of initiation of first used drugs among ever drug user among students Form 1 to Form 5, Pulau Pinang 2017

	Total					Urban				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
7 years old or younger	5	326	16.0	5.96	36.59	4	252	0.3	0.04	2.78
8 or 9 years old	3	203	10.0	1.80	40.12	1	60	0.1	0.01	0.68
10 or 11 years old	2	120	5.9	2.42	13.61	2	120	0.2	0.04	0.68
12 or 13 years old	2	135	6.6	1.49	24.95	2	135	0.2	0.02	1.50
14 or 15 years old	4	261	12.8	4.08	33.77	2	119	0.2	0.04	0.63
16 years old or older	3	229	11.3	5.71	21.03	3	229	0.3	0.10	0.96

Table 3.4.7 : Age of initiation of first used drugs among ever drug user among Form 1 to Form 5 students in Pulau Pinang, 2017

	Rural				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
7 years old or younger	1	74	0.2	0.03	1.36
8 or 9 years old	2	142	0.4	0.05	2.58
10 or 11 years old	-	-	-	-	-
12 or 13 years old	-	-	-	-	-
14 or 15 years old	2	142	0.4	0.05	2.58
16 years old or older	-	-	-	-	-

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, only 0.7% (95%CI: 0.24, 2.27) of students reported they had never cleaned or brushed their teeth during the past 30 days. About 2.3% (95%CI: 1.48, 3.65) reported they had cleaned or brushed their teeth less than once daily, 10.3% (95%CI: 8.17, 12.84) once daily and 86.7% (95%CI: 82.69, 89.82) at least twice daily (**Table 3.5.1**).

Use of fluoridated toothpaste

Overall, only 46.3% (95%CI: 40.93, 51.84) of students reported use of fluoridated toothpaste while 12.9% (95%CI: 8.59, 18.92) claimed that they were not using fluoridated toothpaste. About 40.8% (95%CI: 36.63, 45.02) of students reported not knowing whether their toothpaste contained fluoride (**Table 3.5.2**).

Use of dental floss for cleaning teeth

Overall, only 17.9% (95%CI: 14.69, 21.59) of students reported that they use dental floss for cleaning their teeth while 82.1% (95%CI: 78.41, 85.31) claimed that they did not use dental floss to clean their teeth (**Table 3.5.3**). Significantly more children in rural [89.6% (95%CI: 87.27, 91.57)] than in urban [78.1% (95%CI: 75.57, 80.42)] schools reported they did not use dental floss. A significantly higher proportion of students who did not use dental floss was observed in Form 3 [87.8% (95%CI: 82.22, 91.84)] compared to Form 1 students [75.0% (95%CI: 67.19, 81.52)].

Last dental visit

Overall, only 44.1% (95%CI: 36.94, 51.51) 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 10.3% (95%CI: 7.74, 13.56) while those with last dental visit more than 24 months was 6.5% (95%CI: 5.17, 8.17). About 10.4% (95%CI: 7.16, 14.95) of students had never ever had a dental visit while 28.7% (95%CI: 23.07, 35.01) did not know when was their last dental visit (**Table 3.5.4**).

Missing class or school due to toothache

Overall, 6.3% (95%CI: 4.05, 9.65) of students had missed class or school due to toothache in the past 12 months (**Table 3.5.5**).

Avoid smiling or laughing due to the appearance of their teeth

Overall, 16.2% (95%CI: 13.58, 19.27) of students reported that they had avoided smiling or laughing due to the appearance of their teeth (**Table 3.5.6**).

Use of soap when washing hands during the past 30 days

Overall in the past 30 days, about 9.7% (95%CI: 7.77, 12.05) of students reported they had never or rarely used soap when washing their hands, 25.2% (95%CI: 21.30, 29.58) reported they had only used soap sometimes when washing their hands while a fairly high proportion of 65.1% (95%CI: 59.90, 69.93) reported they had always used soap when washing their hands (**Table 3.5.7**). There were significantly more male [13.56% (95%CI: 11.25, 16.25)] than female students [5.95% (95%CI: 4.65, 7.59)] who never or rarely used soap when washing their hands in the past 30 days.

Washing hand before eating during the past 30 days

Overall in the past 30 days, about 6.0% (95%CI: 4.04, 8.82) of students never or rarely washed their hands before eating, 11.8% (95%CI: 7.53, 18.01) reported they had sometimes washed their hands before eating while a fairly high proportion of 82.2% (95%CI: 73.96, 88.26) reported they had always washed their hands before eating (**Table 3.5.8**). Significantly more males [8.6% (95%CI: 6.14, 11.95)] than females [3.5% (95%CI: 2.27, 5.22)] reported never or rarely washed their hands before eating in the past 30 days.

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

Overall in the last 30 days, about 3.8% (95%CI: 2.59, 5.66) of students reported they had never or rarely washed their hands after using the toilet, 5.9% (95%CI: 4.30, 8.03) had only washed their hands sometimes after using the toilet while 90.3% (95%CI: 87.03, 92.76) of students claimed that they had always or most of the times washed their hands after using the toilet (**Table 3.5.9**). Among students who had only sometimes wash hands after using the toilet in the past 30 days, the prevalence in rural [9.3% (95%CI: 7.18, 11.85)] schools are significantly higher than in the urban [4.1% (95%CI: 2.92, 5.68)] schools.

3.5.5 Discussion/Conclusion

The above findings related to the hand hygiene and oral hygiene practices in the age group of 13-17 years in Pulau Pinang. Overall, the prevalence of students who had cleaned or brushed their teeth less than once per day during the past 30 days (2.3%) was similar to the national prevalence (2.4%). This survey found that the prevalence of students who used fluoridated toothpaste (46.3%) was significantly lower than the national prevalence (58.3%) and Pulau Pinang GSHS in 2012 (58.1%).⁴ The prevalence of students who did not know whether their toothpaste was fluoridated (40.8%) was significantly higher than the national prevalence (31.8%) and Pulau Pinang GSHS in 2012 (29.9%).⁴ The survey findings showed that the prevalence of students who use dental floss (17.9%) was lower than the national prevalence (19.3%). The use of dental floss was not studied in the first Malaysian GSHS in 2012.

Our findings on the proportion of students who never or rarely use soap when washing their hands during the past 30 days (9.7%) was significantly lower than the national prevalence (11.6%) and Pulau Pinang GSHS in 2012 (11.6%)⁴. This study also found that the prevalence of students who never or rarely washed their hands before eating (6.0%) was similar to the national prevalence (6.1%) while higher than the findings in Pulau Pinang GSHS in 2012 (4.7%)⁴. The prevalence of students who had never or rarely washed their hands after going to the toilet (3.8%) was lower compared to the national prevalence (4.8%) but higher than the findings in Pulau Pinang GSHS 2012 (3.1%).⁴

Overall, the findings in relation to hand hygiene and oral hygiene practises of students in the age group of 13-17 years showed that there is still room for further improvement. In terms of

oral hygiene, about 2 in 100 students had cleaned/brushed their teeth less than one time per day during the past 30 days, similar to proportion at national level. Other areas of concern were the low proportion of students (about 1 in 2 students) reported using fluoridated toothpaste and the low proportion (about 2 in 10) of students who reported use of dental floss to clean their teeth. In terms of hand hygiene, about 1 in 10 students reported that they had never or rarely used soap when washing their hands, and 6 in 100 students reported they had never or rarely washed their hands before eating. In addition, the proportion of students who never or rarely washed their hands after going to the toilet was about 4 in 100.

3.5.6 Recommendations

Taking cognizance of these findings, there is a need to 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.

3.5.7 References

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Table 3.5.1: Prevalence of brushing teeth in the past 30 days, students Form 1-5 in Pulau Pinang, 2017 (cont.)

Socio-demographic characteristics	Did not brush or clean					Less than 1 day				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	11	843	0.7	0.24	2.27	36	2,631	2.3	1.48	3.65
Locality of school										
Urban	9	701	1.0	0.27	3.36	25	1,909	2.6	1.46	4.59
Rural	2	142	0.4	0.06	2.16	11	723	1.8	1.07	3.11
Sex										
Male	8	674	1.2	0.30	4.75	29	2,216	4.0	2.60	6.03
Female	3	169	0.3	0.08	1.13	7	415	0.7	0.41	1.28
Form										
Form 1	1	57	0.2	0.03	1.74	7	536	2.3	1.12	4.51
Form 2	3	186	0.8	0.21	3.21	11	686	3.1	1.86	5.02
Form 3	3	198	0.9	0.13	5.84	3	193	0.9	0.21	3.54
Form 4	2	121	0.6	0.17	1.86	11	693	3.2	1.42	7.04
Form 5	2	281	1.2	0.17	8.51	4	523	2.3	0.70	7.26

Table 3.5.1: Prevalence of brushing teeth in the past 30 days, students Form 1-5 in Pulau Pinang, 2017

Socio-demographic characteristics	Once per day					2 times or more per day (at least twice daily)				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	174	11,594	10.3	8.17	12.84	1,527	97,843	86.7	82.69	89.82
Locality of school										
Urban	130	8,890	12.1	9.57	15.21	952	61,927	84.3	79.23	88.37
Rural	44	2,704	6.8	5.94	7.88	575	35,916	91.0	88.19	93.14
Sex										
Male	112	7,883	14.1	11.25	17.63	645	44,954	80.7	74.65	85.53
Female	62	3,711	6.5	4.92	8.51	882	52,889	92.5	90.33	94.20
Form										
Form 1	24	1,735	7.3	4.35	12.01	303	21,424	90.2	84.50	93.95
Form 2	46	2,783	12.4	9.37	16.32	322	18,724	83.7	77.92	88.15
Form 3	37	2,125	9.5	6.73	13.36	365	19,757	88.7	83.21	92.56
Form 4	42	2,334	10.8	7.37	15.44	310	18,556	85.5	80.88	89.14
Form 5	25	2,617	11.5	6.57	19.30	227	19,382	85.0	71.78	92.66

Table 3.5.2: Prevalence of use of fluoridated toothpaste among Form 1 to Form 5 students in Pulau Pinang, 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
PULAU PINANG	801	52,326	46.3	40.93	51.84	204	14,562	12.9	8.59	18.92
Locality of school										
Urban	498	32,581	44.4	38.05	50.88	150	11,014	15.0	9.11	23.70
Rural	303	19,745	50.0	40.90	59.11	54	3,548	9.0	5.77	13.72
Sex										
Male	375	26,724	48.0	43.26	52.69	119	9,302	16.7	10.66	25.19
Female	426	25,601	44.8	37.23	52.56	85	5,259	9.2	5.64	14.65
Form										
Form 1	164	11,638	49.0	38.88	59.20	47	3,754	15.8	9.38	25.39
Form 2	128	7,601	34.0	25.07	44.16	51	3,207	14.3	8.63	22.86
Form 3	188	10,289	46.2	35.78	56.95	38	2,161	9.7	6.25	14.75
Form 4	171	9,921	45.7	38.76	52.82	44	2,732	12.6	7.01	21.57
Form 5	150	12,876	56.5	40.04	71.58	24	2,708	11.9	5.40	24.15

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

Socio-demographic characteristics	Don't Know				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	743	46,025	40.8	36.63	45.02
Locality of school					
Urban	468	29,833	40.6	35.67	45.79
Rural	275	16,192	41.0	33.83	48.59
Sex					
Male	300	19,701	35.4	29.96	41.15
Female	443	26,324	46.0	40.93	51.22
Form					
Form 1	124	8,360	35.2	24.76	47.27
Form 2	203	11,571	51.7	42.06	61.22
Form 3	182	9,824	44.1	34.35	54.34
Form 4	150	9,052	41.7	34.15	49.67
Form 5	84	7,219	31.7	20.99	44.68

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

Socio-demographic characteristics	Yes					No				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	309	20,112	17.9	14.69	21.59	1,432	92,354	82.1	78.41	85.31
Locality of school										
Urban	246	16,032	21.9	19.58	24.43	866	57,147	78.1	75.57	80.42
Rural	63	4,079	10.4	8.43	12.73	566	35,208	89.6	87.27	91.57
Sex										
Male	146	10,179	18.4	14.64	22.85	642	45,175	81.6	77.15	85.36
Female	163	9,933	17.4	14.24	21.07	790	47,180	82.6	78.93	85.76
Form										
Form 1	84	5,929	25.0	18.48	32.81	251	17,823	75.0	67.19	81.52
Form 2	59	3,498	15.8	10.91	22.23	320	18,693	84.2	77.77	89.09
Form 3	49	2,704	12.2	8.16	17.78	358	19,504	87.8	82.22	91.84
Form 4	76	4,472	20.8	14.94	28.18	286	17,040	79.2	71.82	85.06
Form 5	41	3,509	15.4	10.38	22.21	217	19,294	84.6	77.79	89.62

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

Socio-demographic characteristics	During past 12 months					Between 12-24 months ago				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	778	49,766	44.1	36.94	51.51	172	11,611	10.3	7.74	13.56
Locality of school										
Urban	495	31,946	43.5	34.74	52.70	96	6,639	9.0	6.05	13.29
Rural	283	17,820	45.2	33.35	57.64	76	4,972	12.6	8.93	17.53
Sex										
Male	317	21,842	39.2	31.49	47.58	93	6,818	12.2	8.46	17.42
Female	461	27,924	48.8	39.85	57.89	79	4,793	8.4	6.51	10.73
Form										
Form 1	133	9,043	38.1	29.51	47.45	37	2,624	11.0	7.19	16.60
Form 2	140	8,283	37.0	27.46	47.71	33	1,941	8.7	6.39	11.67
Form 3	177	9,523	42.8	34.02	51.97	31	1,591	7.1	4.47	11.22
Form 4	170	9,831	45.4	35.60	55.64	36	2,152	9.9	5.67	16.86
Form 5	158	13,086	57.4	43.93	69.83	35	3,304	14.5	9.23	22.01

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

Socio-demographic characteristics	More than 24 months ago					Never				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	114	7,347	6.5	5.17	8.17	175	11,768	10.4	7.16	14.95
Locality of school										
Urban	74	4,855	6.6	5.09	8.55	127	8,798	12.0	7.62	18.34
Rural	40	2,492	6.3	4.02	9.80	48	2,970	7.5	4.58	12.15
Sex										
Male	63	4,288	7.7	6.06	9.75	97	7,052	12.7	8.14	19.19
Female	51	3,059	5.3	3.99	7.14	78	4,716	8.2	5.08	13.10
Form										
Form 1	23	1,654	7.0	4.12	11.52	31	2,412	10.2	5.62	17.65
Form 2	23	1,322	5.9	3.99	8.65	46	2,710	12.1	7.88	18.17
Form 3	33	1,801	8.1	5.19	12.38	41	2,384	10.7	6.12	18.04
Form 4	21	1,251	5.8	3.58	9.20	43	2,722	12.6	7.47	20.42
Form 5	14	1,319	5.8	4.11	8.07	14	1,540	6.8	3.17	13.81
Form 5	14	1,319	5.8	4.11	8.07					

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

Socio-demographic characteristics	Don't know				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	508	32,353	28.7	23.07	35.01
Locality of school					
Urban	324	21,190	28.9	22.08	36.74
Rural	184	11,163	28.3	19.25	39.57
Sex					
Male	223	15,660	28.1	21.03	36.54
Female	285	16,693	29.2	23.43	35.71
Form					
Form 1	111	8,020	33.8	26.72	41.61
Form 2	140	8,123	36.3	27.14	46.56
Form 3	126	6,974	31.3	23.17	40.80

Table 5.4.1: Prevalence of last dental visit within the last 24 months among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-demographic characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	950	61,377	54.4	45.39	63.11
Locality of school					
Urban	591	38,585	52.5	41.80	63.07
Rural	359	22,792	57.8	42.16	72.06
Sex					
Male	410	28,660	51.5	39.74	63.07
Female	540	32,717	57.2	47.67	66.25
Form					
Form 1	170	11,666	49.1	37.41	60.92
Form 2	173	10,224	45.7	35.25	56.52
Form 3	208	11,114	49.9	40.99	58.82
Form 4	206	11,982	55.4	43.06	67.07
Form 5	193	16,390	71.9	56.66	83.32

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 Pulau Pinang, 2017

Socio-demographic characteristics	Yes					No				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	103	7,095	6.3	4.05	9.65	1,643	105,675	93.7	90.35	95.95
Locality of school										
Urban	66	4,649	6.3	3.47	11.29	1,050	68,779	93.7	88.71	96.53
Rural	37	2,446	6.2	3.48	10.86	593	36,897	93.8	89.14	96.52
Sex										
Male	52	3,725	6.7	3.60	12.13	740	51,860	93.3	87.87	96.40
Female	51	3,369	5.9	3.89	8.82	903	53,815	94.1	91.18	96.11
Form										
Form 1	26	1,939	8.2	4.09	15.62	309	21,813	91.8	84.38	95.91
Form 2	14	863	3.9	2.25	6.57	367	21,441	96.1	93.43	97.75
Form 3	14	801	3.6	1.70	7.44	394	21,472	96.4	92.56	98.30
Form 4	36	2,285	10.6	6.42	16.90	328	19,352	89.4	83.10	93.58
Form 5	13	1,206	5.3	2.54	10.70	245	21,597	94.7	89.30	97.46

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 Pulau Pinang, 2017

Socio-demographic characteristics	Yes					No				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	278	18,288	16.2	13.58	19.27	1,467	94,436	83.8	80.73	86.42
Locality of school										
Urban	179	12,161	16.6	12.70	21.31	937	61,266	83.4	78.69	87.30
Rural	99	6,127	15.6	14.21	17.08	530	33,170	84.4	82.92	85.79
Sex										
Male	110	8,018	14.4	10.28	19.87	682	47,568	85.6	80.13	89.72
Female	168	10,270	18.0	16.31	19.77	785	46,869	82.0	80.23	83.69
Form										
Form 1	47	3,266	13.8	9.54	19.43	288	20,486	86.2	80.57	90.46
Form 2	55	3,166	14.2	9.40	20.88	326	19,138	85.8	79.12	90.60
Form 3	61	3,407	15.3	12.16	19.14	346	18,821	84.7	80.86	87.84
Form 4	60	3,675	17.0	12.30	22.98	304	17,962	83.0	77.02	87.70
Form 5	55	4,774	20.9	15.27	28.01	203	18,029	79.1	71.99	84.73

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

Socio-demographic characteristics	Never or rarely use soap during hand washing					Sometimes				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	162	10,936	9.7	7.77	12.05	437	28,421	25.2	21.30	29.58
Locality of school										
Urban	100	7,180	9.80	7.27	13.08	278	18,475	25.21	20.13	31.07
Rural	62	3,756	9.53	7.04	12.78	159	9,945	25.23	19.68	31.73
Sex										
Male	106	7,537	13.56	11.25	16.25	208	14,707	26.45	23.59	29.53
Female	56	3,399	5.95	4.65	7.59	229	13,714	24.01	18.52	30.52
Form										
Form 1	33	2,465	10.38	7.70	13.84	90	6,203	26.11	21.24	31.66
Form 2	40	2,363	10.56	8.40	13.19	102	5,996	26.79	21.05	33.44
Form 3	28	1,552	6.97	4.47	10.71	93	5,067	22.75	18.08	28.21
Form 4	37	2,130	9.87	6.43	14.86	92	5,426	25.15	19.23	32.17
Form 5	24	2,426	10.67	5.63	19.32	60	5,729	25.20	18.29	33.64

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

Socio-demographic characteristics	Most of the times and Always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	1,146	73,360	65.1	59.90	69.93
Locality of school					
Urban	736	47,644	65.0	58.67	70.84
Rural	410	25,717	65.2	56.00	73.46
Sex					
Male	478	33,355	60.0	56.08	63.78
Female	668	40,004	70.0	62.91	76.32
Form					
Form 1	212	15,084	63.5	58.66	68.10
Form 2	240	14,019	62.6	54.36	70.26
Form 3	287	15,654	70.3	64.26	75.68
Form 4	234	14,020	65.0	58.24	71.17
Form 5	173	14,580	57.1	46.61	66.93

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

Socio-demographic characteristics	Never or rarely wash hands before eating					Sometimes				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	95	6,761	6.0	4.04	8.82	197	13,306	11.8	7.53	18.01
Locality of school										
Urban	82	5,973	8.1	5.92	11.09	169	11,546	15.7	10.40	23.11
Rural	13	788	2.0	1.35	2.96	28	1,760	4.5	2.90	6.82
Sex										
Male	64	4,786	8.6	6.14	11.95	100	7,313	13.2	8.78	19.24
Female	31	1,975	3.5	2.27	5.22	97	5,994	10.5	5.45	19.21
Form										
Form 1	22	1,675	7.1	4.68	10.48	46	3,183	13.4	7.97	21.65
Form 2	20	1,191	5.3	2.98	9.31	27	1,568	7.0	4.22	11.42
Form 3	11	625	2.8	1.27	6.10	39	2,151	9.7	6.68	13.77
Form 4	22	1,265	5.9	2.99	11.18	50	2,895	13.4	7.67	22.43
Form 5	20	2,006	8.8	4.96	15.14	35	3,509	15.4	8.54	26.16

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

Socio-demographic characteristics	Most of the times and Always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	1,454	92,716	82.2	73.96	88.26
Locality of school					
Urban	864	55,848	76.1	67.11	83.28
Rural	590	36,868	93.5	90.75	95.52
Sex					
Male	628	43,501	78.2	70.01	84.70
Female	826	49,215	86.1	76.73	92.05
Form					
Form 1	267	18,894	79.5	70.16	86.55
Form 2	335	19,620	87.7	80.22	92.58
Form 3	358	19,496	87.5	81.68	91.71
Form 4	291	17,416	80.7	69.60	88.45
Form 5	203	17,288	75.8	61.02	86.26

Table 3.5.9: Prevalence of handwashing after using the toilet in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 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
PULAU PINANG	65	4,323	3.8	2.59	5.66	105	6,639	5.9	4.30	8.03
Locality of school										
Urban	38	2,574	3.5	1.92	6.35	47	2,991	4.1	2.92	5.68
Rural	27	1,749	4.4	3.11	6.30	58	3,648	9.3	7.18	11.85
Sex										
Male	45	3,033	5.5	3.28	8.94	47	3,191	5.7	3.81	8.56
Female	20	1,290	2.3	1.26	4.04	58	3,448	6.0	4.28	8.48
Form										
Form 1	12	866	3.6	1.99	6.59	20	1,525	6.4	4.24	9.60
Form 2	10	650	2.9	0.99	8.24	23	1,397	6.2	3.64	10.50
Form 3	18	1,043	4.7	2.68	8.11	34	1,818	8.2	5.75	11.51
Form 4	19	1,130	5.2	2.44	10.87	18	1,109	5.1	3.51	7.47
Form 5	6	634	2.8	1.07	7.09	10	791	3.5	2.01	5.98

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

Socio-demographic characteristics	Most of the times and Always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	1,574	101,686	90.3	87.03	92.76
Locality of school					
Urban	1,028	67,666	92.4	88.58	95.02
Rural	546	34,019	86.3	83.04	89.03
Sex					
Male	700	49,375	88.8	83.99	92.31
Female	874	52,310	91.7	88.22	94.21
Form					
Form 1	303	21,361	89.9	85.88	92.92
Form 2	349	20,332	90.9	82.84	95.34
Form 3	355	19,361	87.1	83.15	90.28
Form 4	326	19,337	89.6	83.94	93.45
Form 5	241	21,292	93.7	89.77	96.22

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 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, $P < 0.00$).

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 1,744 secondary school students in Pulau Pinang who responded to this module, of which 189 students did not surf the internet for the past 30 days and 1,522 students completed the MVIAT. The overall prevalence of internet use was 88.5% (95% CI: 83.56, 92.11) with an estimated projection to 99,708 school-going adolescents. In terms of school locality, there was no significant difference in internet usage between students studying in urban areas (87.0%; 95% CI: 81.17, 91.17) and students from rural areas (91.4%; 95% CI: 81.18, 96.31). There were 86.7% (95% CI: 80.06, 91.41) of male students and 90.2% (95% CI: 84.23, 94.11) of female students used internet in the past 30 days in Pulau Pinang. Students in higher forms were more likely to use internet in the past 30 days (**Table 3.6.1**).

The prevalence of internet addiction among school-going adolescents in Pulau Pinang was 32.9% (95% CI: 27.20, 39.19). In terms of school locality, there was no significant difference of the internet addiction between students studying in urban areas (31.3%; 95% CI: 25.27, 38.05) and students from rural areas (35.9%; 95% CI: 25.05, 48.44). There were 32.0% (95% CI: 24.25, 40.87) of male students and 33.8% (95% CI: 27.91, 40.26) of female students with positive MVIAT (**Table 3.6.2**). Smartphone was the most prevalent device used by the internet users and addicts followed by the computer, laptop or notebook group and tablet or iPad group (**Table 3.6.3 & Table 3.6.4**).

3.6.5 Discussion/ Conclusion

The prevalence of internet usage and internet addiction in Pulau Pinang did not differ significantly compared to the national prevalence. Students in higher forms were observed as having higher prevalence of internet usage and internet addiction, however there were no significant differences in terms of school locality and sex of the respondents. Most of the students used smartphones to surf the internet.

3.6.6 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.

3.6.7 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 in Pulau Pinang, 2017

Socio-demographic characteristics	Internet Users				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	1,555	99,708	88.5	83.56	92.11
Locality of school					
Urban	972	63,748	87.0	81.17	91.17
Rural	583	35,961	91.4	81.18	96.31
Sex					
Male	691	48,160	86.7	80.06	91.41
Female	864	51,548	90.2	84.23	94.11
Form					
Form 1	259	18,149	76.6	61.37	87.08
Form 2	328	19,058	85.2	70.68	93.18
Form 3	383	20,703	93.2	85.95	96.87
Form 4	338	20,053	93.0	86.16	96.56
Form 5	247	21,745	95.4	88.46	98.22

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

Socio-demographic characteristics	Positive Internet Addiction Test				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	581	37,080	32.9	27.20	39.19
Locality of school					
Urban	345	22,949	31.3	25.27	38.05
Rural	236	14,131	35.9	25.05	48.44
Sex					
Male	260	17,766	32.0	24.25	40.87
Female	321	19,314	33.8	27.91	40.26
Form					
Form 1	66	4,477	18.9	12.89	26.83
Form 2	93	5,220	23.3	15.19	34.06
Form 3	150	8,010	36.1	26.65	46.69
Form 4	154	9,077	42.1	34.96	49.54
Form 5	118	10,297	45.2	35.99	54.67

Table 3.6.3: Percentage of reported devices used by internet user among Form 1 to Form 5 students in Pulau Pinang, 2017

Type of Devices	Unweighted Count	Percentage (%)	95% CI	
			Lower	Upper
Smartphone	1,435	92.4	89.95	94.35
Computer, Laptop, Notebook	1,056	67.6	58.88	75.20
Tablet, Ipad use	498	32.5	25.41	40.49

Table 3.6.4: Percentage of reported devices used by internet addict among Form 1 to Form 5 students in Pulau Pinang, 2017

Type of Devices	Unweighted Count	Percentage (%)	95% CI	
			Lower	Upper
Smartphone	555	95.4	93.58	96.67
Computer, Laptop, Notebook	427	73.0	62.57	81.31
Tablet, Ipad use	223	38.4	29.76	47.79

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, 9.2% (95%CI: 6.79, 12.30) of secondary school students in Pulau Pinang reported that they felt lonely “most of the time or always” (**Table 3.7.1**). A total 7.0% (95% CI: 5.13, 9.53) of students reported unable to sleep “most of the time or always” due to worry (**Table 3.7.2**). In the past 12 months prior to the survey, suicidal ideation, plan and attempt, were reported by 9.5% (95% CI: 5.96, 14.89), 7.0% (95% CI: 4.18, 11.40), and 6.0% (95% CI: 3.33, 10.50) of students, respectively. Suicidal ideation, plan and attempts were observed as significantly higher in urban areas compared to the rural areas; 12.7% vs 3.7%, 9.2% vs 2.9%, and 8.2% vs 1.9%, respectively. **Table 3.7.6** showed that 3.3% (95% CI: 2.34, 4.51) of the students had no close friend.

3.7.5 Discussion/ Conclusion

The prevalence of being lonely and ““has no close friend”” among secondary school students in Pulau Pinang reduced from 9.4% and 4.1% in Pulau Pinang GSHS 2012⁵ to 9.2% and 3.3% in this current survey. However, this survey noted an increase prevalence of “inability to sleep due to worry” from only 4.7% in Pulau Pinang GSHS 2012⁵ to 7.0%, while the suicidal behaviours was observed as worsening compared to the prevalence in Pulau Pinang GSHS 2012⁵. Suicidal ideation, plan and attempts increased from 8.2% to 9.5%, 5.5% to 7.0%, and 5.7% to 6.0%, respectively. The prevalence of suicidal behaviours in Pulau Pinang AHS 2017 was comparable to the national figures.

3.7.6 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

3.7.7 References

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

Socio-demographic characteristics	unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	161	10335	9.2	6.79	12.30
Locality of school					
Urban	121	7860	10.7	7.96	14.31
Rural	40	2475	6.3	3.34	11.53
Sex					
Male	61	4322	7.8	5.74	10.51
Female	100	6013	10.5	7.39	14.74
Form					
Form 1	23	1477	6.2	3.61	10.51
Form 2	27	1577	7.1	4.84	10.30
Form 3	44	2391	10.7	7.05	16.01
Form 4	29	1716	8.0	5.64	11.12
Form 5	38	3173	13.9	8.74	21.44

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

Socio-demographic characteristics	unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	120	7900	7.0	5.13	9.53
Locality of school					
Urban	90	6143	8.4	5.98	11.62
Rural	30	1757	4.5	3.01	6.59
Sex					
Male	50	3557	6.4	4.54	9.00
Female	70	4343	7.6	5.08	11.21
Form					
Form 1	16	1080	4.5	2.87	7.12
Form 2	15	835	3.7	2.22	6.23
Form 3	31	1666	7.5	5.03	11.08
Form 4	28	1676	7.8	5.09	11.68
Form 5	30	2644	11.6	5.77	21.93

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

Socio-demographic characteristics	unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	156	10,713	9.5	5.96	14.89
Locality of school					
Urban	132	9,248	12.7	8.17	19.10
Rural	24	1,464	3.7	2.05	6.65
Sex					
Male	61	4,808	8.7	4.15	17.32
Female	95	5,905	10.3	7.29	14.47
Form					
Form 1	31	2,175	9.2	3.81	20.43
Form 2	13	755	3.4	1.68	6.78
Form 3	31	1,716	7.7	4.67	12.45
Form 4	45	2,754	12.8	8.97	18.05
Form 5	36	3,312	14.6	7.93	25.25

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

Socio-demographic characteristics	unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	114	7,843	7.0	4.18	11.40
Locality of school					
Urban	96	6,715	9.2	5.51	14.87
Rural	18	1,129	2.9	1.56	5.24
Sex					
Male	42	3,379	6.1	2.65	13.44
Female	72	4,464	7.8	5.15	11.67
Form					
Form 1	26	1,833	7.7	3.40	16.58
Form 2	14	819	3.7	1.62	8.18
Form 3	19	1,044	4.7	2.56	8.46
Form 4	31	1,904	8.8	4.98	15.19
Form 5	24	2,243	9.8	4.98	18.50

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

Socio-demographic characteristics	unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	101	6,722	6.0	3.33	10.50
Locality of school					
Urban	90	5,993	8.2	4.69	13.91
Rural	11	729	1.9	0.78	4.34
Sex					
Male	35	2,564	4.6	2.10	9.91
Female	66	4,158	7.3	4.23	12.26
Form					
Form 1	24	1,616	6.8	2.67	16.27
Form 2	11	669	3.0	1.61	5.60
Form 3	19	1,035	4.7	2.29	9.26
Form 4	31	1,966	9.1	4.92	16.36
Form 5	16	1,435	6.3	2.72	13.88

Table 3.7.6: Prevalence of not having any close friend among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-demographic characteristics	unweighted count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	52	3,657	3.3	2.34	4.51
Locality of school					
Urban	38	2,735	3.7	2.74	5.08
Rural	14	922	2.3	1.05	5.17
Sex					
Male	28	2,198	4.0	2.56	6.11
Female	24	1,459	2.6	1.73	3.77
Form					
Form 1	10	705	3.0	1.65	5.30
Form 2	10	539	2.4	1.37	4.27
Form 3	6	364	1.6	0.69	3.83
Form 4	12	691	3.2	1.64	6.18
Form 5	14	1,358	6.0	2.79	12.27

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 1,741 secondary school students who responded to this module. 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 was 21.5% (95% CI: 19.61, 23.45), with an estimated projection to 112,488 school-going adolescents. In terms of school locality, it was significantly higher in rural areas [29.5% (95% CI: 26.13, 33.21)] compared to urban areas [17.1% (95% CI: 15.01, 19.52)]. By sex, the prevalence was significantly higher

in males [25.1% (95% CI: 22.23, 28.21)] than in females [17.9% (95% CI: 15.64, 20.50)]. Form 3 had the highest prevalence [25.8% (95% CI: 21.91, 30.03)], followed by Form 2 [22.9% (95% CI: 19.04, 27.26)] and Form 1 [20.9% (95% CI: 16.67, 25.77)] (**Table 3.8.1**).

Regarding sitting activities, the prevalence of spending at least three hours in a typical or usual day in sitting activities was 56.8% (95% CI: 54.43, 59.16). In terms of school locality, it was higher in urban areas [57.6% (95% CI: 54.65, 60.57)] compared to rural areas [55.3% (95% CI: 51.33, 59.16)]. By sex, the prevalence among males [54.5% (95% CI: 50.88, 58.03)] was lower than females [59.1% (95% CI: 55.95, 62.15)]. By form, Form 4 had the highest prevalence [65.5% (95% CI: 60.46, 70.29)], followed by Form 5 [64.8% (95% CI: 58.52, 70.54)] and Form 3 [59.4% (95% CI: 54.57, 64.12)] (**Table 3.8.2**).

3.8.5 Discussion/ Conclusion

The prevalence of school-going adolescents being physically active for a total of at least 60 minutes daily for five days or more in the past seven days in Pulau Pinang [21.5% (95% CI: 19.61, 23.45)] was higher than the national prevalence [19.8% (95% CI: 19.21, 20.40)] but lower than the previous Pulau Pinang GSHS 2012⁷ [22.4% (95% CI: 17.88, 27.74)]. Male students and students resided in urban areas were observed to be more physically active. However, there was no significant difference in terms of forms of the students. The prevalence of students who spent at least three hours in sitting activities in a typical or usual day [56.8% (95% CI: 54.43, 59.16)] was higher than the national prevalence [50.1% (95% CI: 49.38, 50.85)] and the previous Pulau Pinang GSHS 2012⁷ [49.9% (95% CI: 43.92, 55.93)]. There were no significant differences in terms of locality, sex and form of the students.

3.8.6 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.

3.8.7 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 among Form 1 to Form 5 students in Pulau Pinang 2017

Socio-demographic characteristics	Physically Active for at least 5 days or more				
	Unweighted Count	Prevalence (%)	Estimated Population	95% CI	
				Lower	Upper
PULAU PINANG	384	24,143	21.5	19.61	23.45
Locality of school					
Urban	197	12,561	17.1	15.01	19.52
Rural	187	11,581	29.5	26.13	33.21
Sex					
Male	209	13,907	25.1	22.23	28.21
Female	175	10,236	17.9	15.64	20.50
Form					
Form 1	68	4,925	20.9	16.67	25.77
Form 2	89	5,094	22.9	19.04	27.26
Form 3	105	5,721	25.8	21.91	30.03
Form 4	71	4,088	19.0	15.33	23.19
Form 5	51	4,314	18.9	14.68	24.04

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

Socio-demographic characteristics	spending at least 3 hours on sedentary activities				
	Unweighted Count	Prevalence (%)	Estimated Population	95% CI	
				Lower	Upper
PULAU PINANG	1,003	63,932	56.8	54.43	59.16
Locality of school					
Urban	651	42,212	57.6	54.65	60.57
Rural	352	21,720	55.3	51.33	59.16
Sex					
Male	443	30,239	54.5	50.88	58.03
Female	560	33,693	59.1	55.95	62.15
Form					
Form 1	141	9,886	41.8	36.43	47.31
Form 2	207	11,970	53.6	48.56	58.61
Form 3	241	13,206	59.4	54.57	64.12
Form 4	241	14,101	65.5	60.46	70.29
Form 5	173	14,769	64.8	58.52	70.54

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

In Pulau Pinang, the prevalence of truancy among students in the past 30 days was 24.2% (95% CI: 16.49, 34.01) of which males were 24.6% (95% CI: 17.26,33.73) and females were 23.8% (95% CI: 14.83, 35.94). Prevalence of truancy according to forms was 16.8% (95% CI: 11.23, 24.44), 22.3% (95% CI: 13.98, 33.62), 26.2% (95% CI: 17.03, 38.05), 32.5% (95% CI: 21.87, 45.33) and 23.9% (95% CI: 12.69, 40.32) from Form 1 to Form 5 respectively. In terms of school locality, prevalence of truancy in rural areas was 20.5% (95% CI: 11.92, 32.87) and urban areas was 26.2% (95% CI: 15.93, 39.90) (**Table 3.9.1**).

Overall, prevalence of having peer support among students in Pulau Pinang was 48.1% (95% CI: 40.07, 56.23); of which 39.9% (95% CI: 31.03, 49.58) in males and 56.0% (95% CI: 47.95, 63.78) in females (**Table 3.9.2**). Total prevalence of having parental or guardian supervision was 11.8% (95% CI: 8.44, 16.26) which was 11.95% (95% CI: 8.31, 16.90) in males, 11.65% (95% CI: 7.91, 16.82) in females (**Table 3.9.3**). The overall prevalence of having parental or guardian connectedness was 33.8% (95% CI: 26.51, 41.90) of which 30.7% (95% CI: 23.98, 38.30) in males and 36.8% (95% CI: 28.18, 46.33) in females. In term of school locality, prevalence of having parental or guardian connectedness was 26.6% (95% CI: 21.73, 32.04) in urban areas and 47.2% (95% CI: 37.35, 57.31) in rural areas (**Table 3.9.4**). The overall prevalence of having parental or guardian bonding was 46.1% (95% CI: 40.77, 51.45) which was 44.7% (95% CI: 39.59, 49.98) in males, 47.4% (95% CI: 40.54, 54.30) in females (**Table 3.9.5**). A total of 74.2% (95% CI: 70.94, 77.17) students reported having parental or guardian respect for privacy, 74.4% (95% CI: 70.60, 77.79) in males, 74.0% (95% CI: 70.52, 77.19) in females, (**Table 3.9.6**).

3.9.5 Discussions/ Conclusion

Prevalence of truancy and protective factors (peer support, parental or guardian supervision, parental or guardian connectedness, parental or guardian bonding and parental or guardian respect for privacy) among students in Pulau Pinang within the past 30 days shows no significant difference from the national prevalence. There were also no significant difference in the prevalence of truancy and protective factors reported between the national AHS 2017 and Pulau Pinang GSHS 2012.⁵

3.9.6 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

3.9.7 References

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Table 3.9.1 : Prevalence of truancy *(one or more days) in the past 30 days among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-demographic Characteristics	Truancy				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	408	27,265	24.2	16.49	34.01
Locality of school					
Urban	284	19,208	26.2	15.93	39.90
Rural	124	8,057	20.5	11.92	32.87
Sex					
Male	192	13,664	24.6	17.26	33.73
Female	216	13,602	23.8	14.83	35.94
Form					
Form 1	55	3,986	16.8	11.23	24.44
Form 2	80	4,989	22.3	13.98	33.62
Form 3	102	5,837	26.2	17.03	38.05
Form 4	114	7,013	32.5	21.87	45.33
Form 5	57	5,440	23.9	12.69	40.32

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

Socio-demographic Characteristics	*Most of the time or always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	865	54,169	48.1	40.07	56.23
Locality of school					
Urban	506	32,219	43.9	35.00	53.26
Rural	359	21,949	55.9	43.49	67.59
Sex					
Male	325	22,179	39.9	31.03	49.58
Female	540	31,990	56.0	47.95	63.78
Form					
Form 1	161	10,969	46.2	37.53	55.07
Form 2	197	11,406	51.0	41.33	60.53
Form 3	214	11,471	51.7	40.16	63.00
Form 4	170	10,199	47.3	39.85	54.84
Form 5	123	10,123	44.6	31.47	58.45

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

Socio-demographic Characteristics	*Most of the time or always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	212	13,283	11.8	8.44	16.26
Locality of school					
Urban	105	6,604	9.0	6.07	13.18
Rural	107	6,679	17.0	11.83	23.81
Sex					
Male	98	6,636	12.0	8.31	16.90
Female	114	6,647	11.6	7.91	16.82
Form					
Form 1	48	3,495	14.8	9.44	22.45
Form 2	73	4,352	19.5	15.41	24.34
Form 3	47	2,465	11.1	6.63	17.89
Form 4	36	2,223	10.3	6.27	16.49
Form 5	8	748	3.3	1.04	9.83

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

Socio-demographic Characteristics	*Most of the time or always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	608	38,071	33.8	26.51	41.90
Locality of school					
Urban	310	19,491	26.6	21.73	32.04
Rural	298	18,580	47.2	37.35	57.31
Sex					
Male	247	17,033	30.7	23.98	38.30
Female	361	21,039	36.8	28.18	46.33
Form					
Form 1	123	8,651	36.4	26.71	47.39
Form 2	155	8,980	40.1	32.14	48.68
Form 3	154	8,279	37.2	31.91	42.75
Form 4	104	6,190	28.8	19.93	39.62
Form 5	72	5,971	26.2	15.80	40.13

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

Socio-demographic Characteristics	*Most of the time or always				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	
PULAU PINANG	812	51,766	46.1	40.77	51.45
Locality of school					
Urban	487	31,262	42.7	36.54	49.12
Rural	325	20,504	52.3	46.78	57.85
Sex					
Male	357	24,712	44.7	39.59	49.98
Female	455	27,054	47.4	40.54	54.30
Form					
Form 1	152	10,899	45.9	38.03	53.95
Form 2	192	11,279	50.4	41.73	59.04
Form 3	204	11,115	50.0	44.16	55.89
Form 4	154	9,122	42.6	33.82	51.95
Form 5	110	9,351	41.3	30.97	52.53

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

Socio-demographic Characteristics	Never or rarely				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI Lower Upper	
PULAU PINANG	1,282	83,224	74.2	70.94	77.17
Locality of school					
Urban	839	55,311	75.9	71.56	79.69
Rural	443	27,913	71.1	68.74	73.27
Sex					
Male	581	41,104	74.4	70.60	77.79
Female	701	42,119	74.0	70.52	77.19
Form					
Form 1	246	17,407	73.3	64.87	80.30
Form 2	279	16,440	74.1	68.53	78.95
Form 3	289	15,726	70.8	64.45	76.38
Form 4	266	15,801	73.7	66.82	79.59
Form 5	202	17,850	79.0	71.73	84.80

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 Pulau Pinang was 6.9% (95% CI: 5.18, 9.23). Prevalence of ever-had sex among male students were 9.6% (95% CI: 5.50,13.25) while female students were at 5.3% (95% CI: 3.74, 7.48). Form 4 students showed the highest prevalence of 8.3% (95% CI: 4.96, 13.54) (**Table 3.10.1**). The prevalence of Form 1 to Form 5 students that were currently having sexual intercourse in Pulau Pinang was 5.6% (95% CI: 4.07, 7.54). Form 5 students showed the highest prevalence of 7.4% (95% CI:3.48, 14.98) compared to other forms (**Table 3.10.2**).

Of those who ever-had sex, 22.8% (95% CI: 15.16, 32.81) of them had sex before the age of 14 years. Form 4 students showed the highest percentage at 36.7% (95% CI:20.00, 57.35) (**Table 3.10.3**). It was noted that 6.9% (95% CI: 2.95, 15.15) of those who were ever-had sex, had at least two sexual partners in which, male students were 8.6% (95% CI: 3.85, 18.22) and females were 4.1% (95% CI: 0.86, 17.33) (**Table 3.10.4**). Only 7.8% (95% CI: 3.95, 14.90) of those who ever-had sex used a condom during their last sexual intercourse while 10.5% (95% CI: 5.86, 18.00) used other birth control methods (**Table 3.10.5 &Table 3.10.6**).

3.10.5 Discussion/ Conclusion

The prevalence of ever-had sexual intercourse in Pulau Pinang AHS 2017 (6.9%) was lower as compared to the national prevalence in 2017 (7.3%) however the prevalence was higher than the previous Pulau Pinang GSHS in 2012⁴ (6.3%).

3.10.6 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.

3.10.7 References

1. The Lancet's Maternal Survival and Women Deliver Series 2006/2007: 2005 World Health Report
2. Satterwhite CL, Torrone E, Meites E, Dunne EF, Mahajan R, Ocfemia MC, et al. Sexually transmitted infections among US women and men: prevalence and incidence estimates, 2008. *Sex Transm Dis.* 2013;40(3):187-93.
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

3.10.1 : Prevalence of ever had sexual intercourse among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-demographic characteristics	ever had sexual intercourse				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	115	7,817	6.9	5.18	9.23
Locality of school					
Urban	83	5,747	7.8	5.37	11.29
Rural	32	2,070	5.3	3.24	8.43
Sex					
Male	65	4,785	8.6	5.50	13.25
Female	50	3,033	5.3	3.74	7.48
Form					
Form 1	26	1,887	7.9	4.91	12.60
Form 2	13	770	3.4	2.12	5.56
Form 3	28	1,584	7.1	4.94	10.20
Form 4	30	1,787	8.3	4.96	13.54
Form 5	18	1,788	7.8	3.78	15.55

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

Socio-demographic characteristics	current sexual intercourse				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	90	6,269	5.6	4.07	7.54
Locality of school					
Urban	63	4,495	6.1	4.08	9.09
Rural	27	1,774	4.5	2.56	7.82
Sex					
Male	50	3,796	6.8	4.32	10.63
Female	40	2,473	4.3	2.91	6.37
Form					
Form 1	18	1,385	5.8	3.15	10.55
Form 2	13	770	3.4	2.12	5.56
Form 3	22	1,253	5.6	3.50	8.93
Form 4	20	1,178	5.5	3.25	9.04
Form 5	17	1,682	7.4	3.48	14.98

Table 3.10.3 : Percentage of first sex before the age of 14 years among those who ever had sex among Form 1 to Form 5 students in Pulau Pinang, 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
PULAU PINANG	29	1,782	22.8	15.16	32.81
Locality of school					
Urban	22	1,358	23.6	13.73	37.58
Rural	7	424	20.5	9.78	37.94
Sex					
Male	16	1,036	21.6	11.69	36.55
Female	13	747	24.6	14.56	38.50
Form					
Form 1	8	502	26.6	11.78	49.58
Form 2	2	138	17.9	4.10	52.66
Form 3	10	581	36.7	20.00	57.35
Form 4	9	561	31.4	17.46	49.73
Form 5					

Table 3.10.4 : Percentage of having at least two sexual partners among who ever had sex among Form 1 to Form 5 students in Pulau Pinang, 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
PULAU PINANG	7	537	6.9	2.95	15.15
Locality of school					
Urban	5	402	7.0	2.33	19.11
Rural	2	135	6.5	1.15	29.45
Sex					
Male	5	413	8.6	3.85	18.22
Female	2	124	4.1	0.86	17.33
Form					
Form 1	1	106	5.6	0.59	37.23
Form 2					
Form 3	2	118	7.4	1.98	24.25
Form 4	3	207	11.6	2.82	37.09
Form 5	1	106	5.9	0.71	35.87

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

Socio-demographic characteristics	condom use				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	10	611	7.8	3.95	14.90
Locality of school					
Urban	8	510	8.9	4.37	17.21
Rural	2	101	4.9	0.43	38.08
Sex					
Male	7	448	9.4	4.01	20.38
Female	3	163	5.4	1.43	18.16
Form					
Form 1	3	163	8.6	2.05	29.98
Form 2					
Form 3	3	173	10.9	3.72	27.96
Form 4	3	169	9.5	2.43	30.55
Form 5	1	106	5.9	0.71	35.87

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

Socio-demographic characteristics	other birth control methods				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	13	818	10.5	5.86	18.00
Locality of school					
Urban	9	575	10.0	5.32	18.05
Rural	4	243	11.7	3.19	34.92
Sex					
Male	6	365	7.6	2.93	18.42
Female	7	454	15.0	5.90	33.03
Form					
Form 1	3	163	8.6	2.05	29.98
Form 2	1	75	9.7	0.99	53.66
Form 3	3	159	10.0	1.73	41.41
Form 4	4	255	14.3	5.14	33.83
Form 5	2	167	9.3	1.28	44.96

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 11.8% (95% CI: 7.05, 19.16) (**Table 3.11.1**). It was significantly higher among males (19.2%; 95% CI: 11.25, 30.74) as compared to females (4.7%; 95% CI: 2.37, 9.03). Form 4 students had the highest prevalence of 15.4% (95% CI: 8.65, 25.84) with no significant difference across all forms.

The prevalence of current cigarette smokers was 8.6% (95% CI: 4.99, 14.52) (**Table 3.11.2**). It was significantly higher among males (14.4%; 95% CI: 7.98, 24.61) as compared to females (3.0%; 95% CI: 1.73, 5.21). Form 4 students had the highest prevalence of 11.5% (95% CI: 6.29, 19.93) with no significant difference across all forms. Among those who ever smoked cigarettes, 72.8% (95% CI: 53.5, 8.62) had first tried a cigarette before the age of 14 years, with no significant difference between genders (**Table 3.11.6**).

Overall, 14.1% (95% CI: 8.92, 21.47) currently use any tobacco products and it was significantly higher among males (21.5%; 95% CI: 13.05, 33.19) as compared to females (6.9%; 95% CI: 3.86, 11.96) (**Table 3.11.3**). Form 4 students had the highest prevalence of 18.0% (95% CI: 10.20, 29.65) with no significant difference across all forms.

The prevalence of using shisha/hookah in the past 30 days was 6.8% (95% CI: 3.73, 12.08) (**Table 3.11.5**). The prevalence of traditional rolled cigarette use was 4.2% (95% CI: 2.55, 6.84), it was significantly higher among males (7.3%; 95% CI: 4.29, 12.22) as compared to females (1.2%; 95% CI: 0.62, 2.20) (**Table 3.11.5**). The prevalence of rolled your own cigarette was 2.7% (95% CI: 1.49, 4.95) (**Table 3.11.5**). About 2.2% (95% CI: 0.93, 4.95) of the students used cigar (**Table 3.11.5**). The prevalence of using pipe was 2.2% (95% CI: 1.15, 4.05) (**Table 3.11.5**).

Among those who smoked cigarettes in the past 12 months, 64.5% (95% CI: 46.63, 79.07) had tried to stop smoking (**Table 3.11.8**). It was significantly higher among males (72.7%; 95% CI: 55.25, 85.17) as compared to females (22.9%; 95% CI: 8.94, 47.43). Form 3 students had the highest prevalence of had tried to stop smoking in the past 12 months (82.1%; 95% CI: 59.61, 93.45).

A total of 35.4% (95% CI: 30.08, 41.00) reported having been exposed to people who smoked in their presence in the past seven days, there was no significant difference between genders (**Table 3.11.10**). Form 5 students had the highest prevalence of 41.9% (95% CI: 29.65, 55.20). Overall, 32.9% (95% CI: 26.78, 39.57) of students reported having parents or guardian who used any form of tobacco products. (**Table 3.11.11**). Form 1 students had the highest prevalence of having parents or guardian who used any form of tobacco products (35.2%; 95% CI: 24.18, 48.12).

The prevalence of current E-cigarette use was 5.2% (95% CI: 2.87, 9.20), it was significantly higher among males (9.3%; 95% CI: 5.13, 16.41) as compared to females (1.2%; 95% CI: 0.27, 4.75) (**Table 3.11.4**). Form 5 students had the highest prevalence of current e-cigarette use (7.0%; 95% CI: 3.06, 15.30). Among those who ever smoked e-cigarette/vape, 43.7% (95% CI: 28.93, 59.69) had first tried e-cigarette/vape before the age of 14 years (**Table 3.11.7**). Among those who used e-cigarette/vape in the past 12 months, 57.0% (95% CI: 47.26, 66.16) had tried to stop using e-cigarette/vape. Form 2 students had the highest prevalence (62.2%; 95% CI: 37.21, 82.09) of trying to stop using e-cigarette/vape. (**Table 3.11.9**). Overall, 7.4% (95% CI: 5.41, 10.10) of students reported having parents or guardian who used e-cigarette/vape and there was no significant difference between genders (**Table 3.11.12**). Form 4 students

had the highest prevalence (9.3%; 95% CI: 6.55, 13.09) of having parents or guardian who used e-cigarette/vape.

The prevalence of chewing tobacco was 2.2% (95% CI: 1.10, 4.50) (**Table 3.11.5**) while prevalence of snuff use was 4.4% (95% CI: 2.87, 6.64) (**Table 3.11.5**).

3.11.5 Discussion / Conclusions

Overall, the prevalence of current smoking was 11.8%; there was no significant difference from the national prevalence of 15.9%. Similarly, the prevalence of having tried a cigarette before the age of 14 among ever cigarette smokers and the prevalence of having been exposed to people who smoke in their presence in the past seven days showed no significant difference compared to the national prevalence.

3.11.6 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.

3.11.7 References

1. Institute for Public Health (IPH). Report of the Global Adult Tobacco Survey (GATS) Malaysia, 2011, Ministry of Health Malaysia, 2012.

Table 3.11.1: Prevalence of current smoker among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-Demographic Characteristics	Current Smokers				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	189	13,318	11.8	7.05	19.16
Locality of school					
Urban	129	9,231	12.6	6.11	24.19
Rural	60	4,086	10.4	6.57	16.04
Sex					
Male	146	10,647	19.2	11.25	30.74
Female	43	2,671	4.7	2.37	9.03
Form					
Form 1	28	2,243	9.4	4.16	20.05
Form 2	36	2,224	10.0	6.46	15.14
Form 3	47	2,855	12.8	7.96	19.99
Form 4	55	3,316	15.4	8.65	25.84
Form 5	23	2,680	11.8	5.04	25.06

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

Socio-Demographic Characteristics	Current Cigarette Smokers				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	142	9,723	8.6	4.99	14.52
Locality of school					
Urban	93	6,498	8.9	4.17	17.85
Rural	49	3,224	8.2	4.16	15.50
Sex					
Male	114	7,997	14.4	7.98	24.61
Female	28	1,725	3.0	1.73	5.21
Form					
Form 1	25	2,033	8.6	3.97	17.47
Form 2	29	1,789	8.0	4.74	13.31
Form 3	36	2,202	9.9	5.75	16.48
Form 4	41	2,470	11.5	6.29	19.93
Form 5	11	1,229	5.4	1.97	13.90

Table 3.11.3: Prevalence of current any tobacco product use among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-Demographic Characteristics	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	226	15,842	14.1	8.92	21.47
Locality of school					
Urban	145	10,339	14.1	7.19	25.83
Rural	81	5,503	14.0	9.49	20.14
Sex					
Male	162	11,913	21.5	13.05	33.19
Female	64	3,929	6.9	3.86	11.96
Form					
Form 1	36	2,841	12.0	6.04	22.31
Form 2	45	2,786	12.5	8.28	18.48
Form 3	54	3,241	14.6	9.29	22.08
Form 4	64	3,873	18.0	10.20	29.65
Form 5	27	3,101	13.6	6.59	25.98

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

Socio-Demographic Characteristics	Current e-Cigarette Users				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	79	5,839	5.2	2.87	9.20
Locality of school					
Urban	52	3,916	5.3	2.25	12.15
Rural	27	1,922	4.9	3.22	7.36
Sex					
Male	68	5,182	9.3	5.13	16.41
Female	11	657	1.2	0.27	4.75
Form					
Form 1	7	632	2.7	0.85	8.02
Form 2	15	913	4.1	2.33	7.14
Form 3	21	1,275	5.7	2.99	10.71
Form 4	23	1,417	6.6	2.96	14.02
Form 5	13	1,600	7.0	3.06	15.30

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 Pulau Pinang, 2017

	Total					Male				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Shisha Use	103	7,637	6.8	3.73	12.08	74	5,862	10.6	5.87	18.36
Traditional Rolled Cigarette Use	67	4,712	4.2	2.55	6.84	56	4,045	7.3	4.29	12.22
Roll-Your-Own" With Cigarette Paper Use"	42	3,067	2.7	1.49	4.95	30	2,311	4.2	2.38	7.23
Cigar Use	30	2,432	2.2	0.93	4.95	21	1,844	3.3	1.41	7.66
Pipe Smoking Use	32	2,430	2.2	1.15	4.05	24	1,944	3.5	1.78	6.78
Chewing Tobacco Use	33	2,512	2.2	1.10	4.50	23	1,874	3.4	1.55	7.25
Snuff Use	71	4,926	4.4	2.87	6.64	41	3,105	5.6	3.36	9.20

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 Pulau Pinang, 2017 (Cont.)

	Female				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
Shisha Use	29	1,775	3.1	1.25	7.57
Traditional Rolled Cigarette Use	11	667	1.2	0.62	2.20
Roll-Your-Own" With Cigarette Paper Use"	12	756	1.3	0.55	3.16
Cigar Use	9	587	1.0	0.44	2.39
Pipe Smoking Use	8	487	0.9	0.39	1.89
Chewing Tobacco Use	10	638	1.1	0.55	2.29
Snuff Use	30	1,821	3.2	1.86	5.46

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

	Total					Male				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Yes	125	8,278	72.8	53.5	86.2	119	7,933	74.5	54.7	87.6
No	42	3,092	27.2	13.8	46.5	36	2,718	25.5	12.4	45.3

Table 3.11.6: Prevalence of having tried a cigarette before the age of 14 years among ever smokers among Form 1 to Form 5 students in Pulau Pinang, 2017 (Cont.)

	Female				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
Yes	6	345	47.9	21.3	75.8
No	6	374	52.1	24.2	78.7

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 Pulau Pinang, 2017

	Total					Male				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
Yes	64	4,272	43.70	28.93	59.69	58	3,930	44.67	28.38	62.20
No	80	5,502	56.30	40.31	71.07	70	4,868	55.33	37.80	71.62

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 Pulau Pinang, 2017 (Cont.)

	Female				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
Yes	6	341	34.96	18.36	56.24
No	10	635	65.04	43.76	81.64

Table 3.11.8: Prevalence of quit smoking attempt in the past 12 month among those who ever smoked among Form 1 to Form 5 students in Pulau Pinang, 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
PULAU PINANG	95	6,244	64.5	46.63	79.07
Locality of school					
Urban	49	3,370	55.8	34.76	75.01
Rural	46	2,874	78.8	50.42	93.17
Sex					
Male	89	5,878	72.7	55.25	85.17
Female	6	366	22.9	8.94	47.43
Form					
Form 1	8	689	56.6	26.18	82.70
Form 2	21	1,240	59.6	31.02	82.88
Form 3	30	1,818	82.1	59.61	93.45
Form 4	31	1,829	66.2	35.49	87.45
Form 5	5	667	47.5	18.48	78.38

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 Pulau Pinang, 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
PULAU PINANG	74	4,949	57.0	47.26	66.16
Locality of school					
Urban	41	2,831	49.7	45.07	54.36
Rural	33	2,118	70.8	46.68	87.00
Sex					
Male	65	4,400	62.1	51.05	72.03
Female	9	549	34.2	20.53	51.21
Form					
Form 1	6	500	37.9	19.44	60.69
Form 2	21	1,245	62.2	37.21	82.09
Form 3	23	1,365	61.2	36.83	81.07
Form 4	17	1,000	57.8	41.84	72.26
Form 5	7	839	59.5	46.69	71.18

Table 3.11.10: Prevalence of being expose to people smoking in their presence for at least one day in the past 7 days among Form 1 to Form 5 students in Pulau Pinang, 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
PULAU PINANG	600	39,803	35.4	30.08	41.00
Locality of school					
Urban	395	26,633	36.4	30.97	42.12
Rural	205	13,169	33.5	23.02	45.84
Sex					
Male	301	21,445	38.7	32.96	44.69
Female	299	18,358	32.1	25.22	39.95
Form					
Form 1	89	6,662	28.0	19.77	38.15
Form 2	111	6,698	30.1	21.71	40.06
Form 3	146	8,161	36.8	29.63	44.51
Form 4	146	8,733	40.5	32.03	49.55
Form 5	108	9,550	41.9	29.65	55.20

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 Pulau Pinang, 2017

Socio-Demographic Characteristics	Either Father Or Mother Or Guardian				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	524	34,159	32.9	26.78	39.57
Locality of school					
Urban	291	19,521	29.5	22.24	38.04
Rural	233	14,639	38.7	31.72	46.10
Sex					
Male	226	16,089	32.0	22.96	42.62
Female	298	18,070	33.7	28.80	38.89
Form					
Form 1	102	7,496	35.2	24.18	48.12
Form 2	117	7,001	33.9	26.69	41.86
Form 3	125	6,895	32.7	25.49	40.82
Form 4	105	6,500	33.1	24.14	43.38
Form 5	75	6,268	29.5	21.82	38.48

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 Pulau Pinang, 2017

Socio-Demographic Characteristics	Either Father Or Mother Or Guardian				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	114	7,427	7.4	5.41	10.10
Locality of school					
Urban	71	4,652	7.2	4.92	10.55
Rural	43	2,775	7.7	4.50	12.99
Sex					
Male	50	3,425	7.0	4.49	10.61
Female	64	4,001	7.9	5.71	10.78
Form					
Form 1	19	1,439	7.1	3.64	13.44
Form 2	21	1,281	6.5	3.57	11.53
Form 3	26	1,419	7.1	4.69	10.52
Form 4	29	1,756	9.3	6.55	13.09
Form 5	19	1,531	7.2	3.58	14.04

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, 21.6% (95% CI: 18.89, 24.56) of them had been physically attacked, which was significantly higher in males [29.6% (95% CI: 26.47, 32.99)] compared to females [13.8% (95% CI: 11.30, 16.68)]. There was no significant difference found between urban [22.5% (95% CI: 18.66, 26.81)] and rural [19.9% (95% CI: 18.18, 21.84)] localities. Adolescents from Form 1 had the highest prevalence of being physically attacked; 31.9% (95% CI: 25.49, 39.18) while adolescents from Form 5 had the lowest prevalence at 10.2% (95% CI: 6.82, 14.86) **(Table 3.12.1)**.

Similarly, 22.7% (95% CI: 18.08, 28.10) of adolescents claimed to have been involved in physical fight(s), with significantly more males [30.0% (95% CI: 23.21, 37.73)] than females [15.6% (95% CI: 11.39, 21.06)] involved. There was no significant difference between urban and rural localities, with reported prevalence of 23.3% (95% CI: 16.77, 31.29) and 21.7% (95% CI: 17.40, 26.66) respectively. Adolescents from Form 1 had the highest prevalence at 32.1% (95% CI: 22.31, 43.73) **(Table 3.12.1)**.

With regards to bullying, 13.8% (95% CI: 10.73, 17.63) of adolescents reported to have been bullied and this was higher among males [16.2% (95% CI: 12.33, 20.93)] compared to females [11.5% (95% CI: 8.62, 15.28)]. There was no significant difference found between urban [13.7% (95% CI: 9.53, 19.37)] and rural [14.0% (95% CI: 10.70, 18.13)] localities. Adolescents from Form 3 had the highest prevalence of have been bullied; 19.6% (95% CI: 12.97, 28.39) **(Table 3.12.2)**.

The two most common forms of bullying were 'being made fun of because of how body or face looks' [14.9% (95% CI: 9.07, 23.56)] and 'made fun of with sexual jokes, comments or gestures' [12.6% (95% CI: 7.51, 20.35)]. Bullying in the form of 'being made fun of because of religion' was the least common at 4.5% (95% CI: 1.73, 11.36) **(Table 3.12.3)**.

Physical abuse at home was reported by 9.4% (95% CI: 6.62, 13.20) of the adolescents. Urban localities reported a significantly higher prevalence of 11.5% (95% CI: 7.91, 16.38) compared to rural at 5.5% (95% CI: 4.03, 7.56). There was no significant difference observed between males and females with a prevalence of 10.2% (95% CI: 7.27, 14.17) and 8.6% (95% CI: 5.48,

13.31) respectively. Form 5 adolescents reported the lowest prevalence at 8.1% (95% CI: 4.57, 13.86) (**Table 3.12.4**).

It was reported that 39.0% (95% CI: 38.78, 51.71) of adolescents were abused verbally at home. The prevalence of verbal abuse was significantly higher among females [44.5% (95% CI: 39.21, 49.99)] compared to males [33.3% (95% CI: 29.80, 36.95)]. There was no significant difference found between urban [38.2% (95% CI: 33.44, 43.12)] and rural [40.5% (95% CI: 34.17, 47.21)] localities. Adolescents from Form 4 had the highest prevalence of verbal abuse at home with a prevalence of 43.6% (95% CI: 35.77, 51.67) (**Table 3.12.4**).

It was found that 25.2% of adolescents in Pulau Pinang (95% CI: 21.96, 28.69) had been seriously injured in the past 12 months. There was no significant difference found between urban [24.6% (95% CI: 20.05, 29.83)] and rural [26.2% (95% CI: 23.55, 29.08)] localities. Prevalence of serious injury was higher among males [28.7% (95% CI: 22.55, 35.82)] as compared to females [21.7% (95% CI: 17.94, 26.04)]. Adolescents from Form 1 had the highest prevalence of serious injury at 28.3% (95% CI: 22.09, 35.43) while adolescents from Form 5 had the lowest prevalence at 21.6% (95% CI: 14.93, 30.29) (**Table 3.12.5**). Among those who had been seriously injured, the two most common injuries were 'a cut or stab wound' [21.6% (95% CI: 17.06, 26.89)] and 'a broken bone/dislocated joint' [13.5% (95% CI: 9.65, 18.64)] (**Table 3.12.6**). The two most common causes of serious injury were falls [33.0% (95% CI: 26.28, 40.57)] and motor vehicle accidents [12.5% (95% CI: 8.61, 17.78)] (**Table 3.12.7**).

3.12.5 Discussion / Conclusion

The prevalence of serious injury among school going adolescents in Pulau Pinang was lower than the national prevalence found in this study (25.2% vs. 29.9%), as well as the 28.7% reported in 2012⁴ in Pulau Pinang. The prevalence of being physically attacked and involved in physical fights among adolescents in Pulau Pinang was lower than the national prevalence (21.6% vs 25.3% and 22.7% vs 24.9% respectively). Physical attack prevalence showed no difference from the 21.6% reported in Pulau Pinang in 2012⁴, while involvement in physical fights was higher at 23.2% in 2012⁴.

The prevalence of bullying among school going adolescents in Pulau Pinang was lower than the reported national prevalence (13.8% vs 16.2%), as well as the prevalence of 14.4% reported in 2012⁴ in Pulau Pinang. The prevalence of physical abuse and verbal abuse at home among adolescents was lower in Pulau Pinang compared to the national prevalence (9.4% vs 11.8% and 39.0% vs 43.2% respectively) but higher than the Pulau Pinang prevalence reported in 2012⁴ (8.1% and 36.3% respectively).

Studies have shown that violence related behaviour is associated with other negative factors such as smoking, drug abuse, truancy and physical and mental health problems⁵. Thus, despite the successes achieved by our current programs, the relatively high prevalence found in this study reminds us that we should continue our efforts in addressing this issue.

3.12.6 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.

3.12.7 References

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Table 3.12.1: Prevalence of involvement in violence and had serious injury at least once in the past 12 months among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-demographic Characteristics	Having Been Physically Attacked At Least Once					Involvement In Physical Fight At Least Once				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	372	24,309	21.6	18.89	24.56	386	25,588	22.7	18.08	28.10
Locality of school										
Urban	249	16,461	22.5	18.66	26.81	254	17,059	23.3	16.77	31.29
Rural	123	7,848	19.9	18.18	21.84	132	8,529	21.7	17.40	26.66
Sex										
Male	239	16,450	29.6	26.47	32.99	240	16,659	30.0	23.21	37.73
Female	133	7,859	13.8	11.30	16.68	146	8,928	15.6	11.39	21.06
Form										
Form 1	99	7,569	31.9	25.49	39.18	99	7,621	32.1	22.31	43.73
Form 2	93	5,376	24.0	17.44	32.13	94	5,600	25.0	18.39	33.08
Form 3	78	4,472	20.1	14.52	27.21	93	5,383	24.2	17.44	32.63
Form 4	78	4,575	21.3	13.49	31.89	65	3,798	17.6	11.22	26.55
Form 5	24	2,317	10.2	6.82	14.86	35	3,185	14.0	8.39	22.36

Table 3.12.2: Prevalence of being bullied at least once in the past 12 months among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-demographic Characteristics	Having Been Bullied At Least Once				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	241	15,590	13.8	10.73	17.63
Locality of school					
Urban	151	10,078	13.7	9.53	19.37
Rural	90	5,512	14.0	10.70	18.13
Sex					
Male	131	8,992	16.2	12.33	20.93
Female	110	6,598	11.5	8.62	15.28
Form					
Form 1	52	3,822	16.1	11.47	22.11
Form 2	46	2,663	11.9	7.99	17.36
Form 3	77	4,356	19.6	12.97	28.39
Form 4	41	2,513	11.7	7.50	17.67
Form 5	25	2,236	9.8	6.17	15.24

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

	Unweighted Prevalence		95% CI	
	Count	(%)	Lower	Upper
Hit, kicked, pushed, shoved around or locked indoors	21	9.7	4.90	18.21
Made fun of because of race, nationality or colour	16	6.9	3.67	12.48
Made fun of because of religion	10	4.5	1.73	11.36
Made fun of with sexual jokes, comments or gestures	31	12.6	7.51	20.35
Left out of activities on purpose or completely ignored	18	6.6	2.76	15.02
Made fun of because of how body or face looks	35	14.9	9.07	23.56

Table 3.12.4: Prevalence of being abused at least once in the past 12 months among Form 1 to Form 5 students in Pulau Pinang, 2017

Socio-demographic Characteristics	Physical Abuse At Home At Least Once					Involvement In Physical Fight At Least Once				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI		Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper
PULAU PINANG	158	10,596	9.4	6.62	13.20	683	43,874	39.0	35.08	43.05
Locality of school										
Urban	126	8,422	11.5	7.91	16.38	428	27,929	38.2	33.44	43.12
Rural	32	2,174	5.5	4.03	7.56	255	15,945	40.5	34.17	47.21
Sex										
Male	79	5,671	10.2	7.27	14.17	264	18,441	33.3	29.80	36.95
Female	79	4,924	8.6	5.48	13.31	419	25,433	44.5	39.21	49.99
Form										
Form 1	34	2,618	11.0	7.32	16.26	128	8,631	36.3	28.94	44.45
Form 2	32	1,937	8.7	5.60	13.27	134	7,897	35.4	27.33	44.36
Form 3	38	2,143	9.6	5.51	16.29	160	8,802	39.6	32.51	47.23
Form 4	33	2,057	9.5	4.95	17.59	153	9,372	43.6	35.77	51.67
Form 5	21	1,840	8.1	4.57	13.86	108	9,172	40.3	31.27	50.14

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

Socio-demographic Characteristics	Having Had Serious Injury At Least Once				
	Unweighted Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
PULAU PINANG	433	28,392	25.2	21.96	28.69
Locality of school					
Urban	269	18,074	24.6	20.05	29.83
Rural	164	10,318	26.2	23.55	29.08
Sex					
Male	229	15,974	28.7	22.55	35.82
Female	204	12,418	21.7	17.94	26.04
Form					
Form 1	91	6,719	28.3	22.09	35.43
Form 2	92	5,454	24.4	18.54	31.33
Form 3	100	5,446	24.4	17.19	33.53
Form 4	97	5,838	27.1	21.10	33.98
Form 5	53	4,935	21.6	14.93	30.29

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

	Unweighted	Prevalence	95% CI	
	Count	(%)	Lower	Upper
Broken bone / dislocated Joint	54	13.5	9.65	18.64
A cut or stab wound	93	21.6	17.06	26.89
Concussion / head or neck injury, knocked out or could not breathe	21	4.9	3.08	7.75
Bad burn	10	2.5	1.22	5.11
Poisoned	1	0.3	0.03	2.15

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

	Unweighted	Prevalence	95% CI	
	Count	(%)	Lower	Upper
In a motor vehicle accident or hit by a motor vehicle	48	12.5	8.61	17.78
Fell	148	33.0	26.28	40.57
Something fell or hit him/her	30	6.5	4.61	9.10
Attacked or abused or fighting with someone	15	3.5	1.50	8.02
In a fire or too near a flame or something hot	4	6.5	4.61	9.10
Inhaled or swallowed something bad	4	0.8	0.32	2.19

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> Central Field Supervisors are expected to prepare for the initiation of data collection. The preparation tasks include:	Dr Nor Asiah Binti Muhamad Dr Nur Liana Binti Ab Majid

		<p>Conduct meeting with State Education Office, School Principals, Teacher in-charged for the selected schools.</p> <p>To ensure adequate logistic support for the data collection and liaise with the District Education Office, District Health Office and other relevant departments to ensure that:</p> <ul style="list-style-type: none"> • Human resources are available: Field Supervisors, Team leaders, Research Assistants and drivers. • Manage transport: Vehicles • Manage survey instruments and relevant form • Manage lodging for data collectors <p><u>During Data Collection</u></p> <p>Gather feedback from the field on the data collection status and problems related to logistics.</p> <p>Visit the field to help data collectors solve the problem if necessary.</p> <p>To ensure all data collection monitoring forms have been received on time.</p> <p>To ensure bundle from field received by the Operation Centre by hand and by post (Sabah, Sarawak, WP Labuan)</p> <p>Updating the monitoring board for state achievement and attending CCT meeting.</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>
5	Data Processing and management	<p>Setting up data processing facility</p> <p>Development of directory of variables database</p> <p>Development of quality control (QC) manual for data processing</p>	<p>Dr. Mohd Azahadi bin Omar</p> <p>Dr. Rajini a/p sooryanarayana</p>

		Specify data structure for data processing and data output requirement	Dr. Fazila Haryati Binti Ahmad
		Responsible for data entry and data cleaning	Pn. Nazirah Binti Alias
		Monitoring and evaluation of QC performance for data processing	
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

PULAU PINANG

Liaison Officer

Ms. Zuhaida Binti Harun

Field Supervisor

1. Ms. Nor Azna Binti Mahmud
2. Dr. Fazly Azri Bin Abdul Aziz

Nutritionist

1. Mr. Mohamad Faizal Bin Ibrahim
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
7. Mr. Shahrulnaz Norhazli Bin Nazri
8. Ms. Gan Xiang Ling
9. Ms. Nurliyana Binti Saidin
10. Ms. Teoh Chin Yen

Research Assistants

- | | |
|---------------------------------------|-------------------------------------|
| 1. Mr. Farhan Bin Adnan | Razak |
| 2. Mr. Muhammad Izzat Bin Ismail | 6. Mr. Muhamad Hafiz Bin Mahmud |
| 3. Mr. Muhammad Hafizuddin Bin Ismail | 7. Mr. Khairul Anwar Bin Noor Rahim |
| 4. Mr. Ahmad Hariz Bin Abd Halim | 8. Mr. Muhammad Luqman Bin Bahari |
| 5. Mr. Muhamad Shukur Bin Abdul | 9. Mr. Muhamad Arif Bin Misra |
| | 10. Mr. Ahmad Hasif Bin Abd Halim |



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 DIDEBAHKAN. 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.*

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
 FILL IN THE CIRCLES LIKE THIS



BUKAN SEPERTI INI
 NOT LIKE THIS



ATAU
 OR



TINJAUAN/SURVEY

1. Adakah ikan tinggal dalam air?

Do fish live in the water?

A. Ya

Yes

B. Tidak

No

Borang jawapan
 Answer sheet

1. B C D E F G H

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

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

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

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.

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

**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

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

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

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

28. Dalam 30 hari yang lepas, apakah perlakuan buli **paling kerap** anda alami?
*During the past 30 days, how were you bullied **most often**?*
- Saya tidak dibuli dalam 30 hari yang lepas
I was not bullied during the past 30 days
 - Saya telah dipukul, ditendang, ditolak atau dikunci dalam suatu tempat
I was hit, kicked, punched, shoved around, or locked indoors
 - Saya telah diejek kerana bangsa, kerakyatan atau warna kulit saya
I was made fun of because of my race, nationality or colour
 - Saya telah diejek kerana agama saya
I was made fun of because of my religion
 - Saya telah diejek dengan ejekan seksual seperti secara komen, perilaku atau gurauan
I was made fun of with sexual jokes, comments or gestures
 - Saya telah dipulau dari apa-apa aktiviti secara sengaja atau langsung tidak dipedulikan
I was left out of activities on purpose or completely ignored
 - Saya diejek kerana bentuk badan atau paras rupa saya
I was made fun of because of how my body or face looks
 - 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?
- 0 kali
0 times
 - 1 kali
1 time
 - 2 atau 3 kali
2 or 3 times
 - 4 atau 5 kali
4 or 5 times
 - 6 atau 7 kali
6 or 7 times
 - 8 atau 9 kali
8 or 9 times
 - 10 atau 11 kali
10 or 11 times
 - 12 kali atau lebih
12 or more times

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

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?

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

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

- a. Ya
Yes
- b. 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?

- a. Ya
Yes
- b. 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?

- a. 0 kali
0 times
- b. 1 kali
1 time
- c. 2 atau 3 kali
2 or 3 times
- d. 4 hingga 5 kali
4 to 5 times
- e. 6 kali atau lebih
6 or more times

36. Berapa ramai kawan rapat yang anda ada?
How many close friends do you have?

- a. 0 kawan
0 friends
- b. 1 kawan
1 friend
- c. 2 kawan
2 friends
- d. 3 atau lebih
3 or more

**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*

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

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. Siapakah 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

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

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?

- Saya tidak minum minuman beralkohol dalam 30 hari yang lepas
I did not drink alcohol during the past 30 days
- Kurang dari 1 minuman
Less than one drink
- 1 minuman
1 drink
- 2 minuman
2 drinks
- 3 minuman
3 drinks
- 4 minuman
4 drinks
- 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

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

- 0 kali
0 times
- 1 atau 2 kali
1 or 2 times
- 3 hingga 9 kali
3 or 9 times
- 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?

- 0 kali
0 times
- 1 atau 2 kali
1 or 2 times
- 3 hingga 9 kali
3 or 9 times
- 10 kali atau lebih
10 or more times

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

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

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

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

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

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

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

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

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

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 bertanya mengenai aktiviti anda (apa yang anda lakukan) di internet?	a	b	c	d	e

	<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 mengganggu 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 menyeronokkan? <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

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

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

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



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TINJAUAN KEBANGSAAN KESIHATAN DAN MORBIDITI 2017
KERTAS JAWAPAN TINJAUAN KESIHATAN REMAJA

ID PELAJAR

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

1 (A B C D E F G H)	34 (A B)	60 (A B)
2 (A B)	35 (A B C D E)	61 (A B C D E F G)
3 (A B C D E F)	36 (A B C D)	62 (A B C D E F G)
4 (A B C D E F)	37 (A B)	63 (A B C)
5 (A B C D E F)	38 (A B C D E F G)	64 (A B C D)
6 (A B C D E)	39.1 (A B)	65 (A B C D E F G H)
7 (A B C D E F G)	39.2 (A B)	66 (A B C D E F G H)
8 (A B C D E F G)	39.3 (A B)	67 (A B C D E F)
9 (A B C D E F G)	39.4 (A B)	68 (A B C D E)
10 (A B C D E F G)	39.5 (A B)	69 (A B C D E)
11 (A B C D E F G)	39.6 (A B)	70 (A B C D E)
12 (A B C D E F G H)	39.7 (A B)	71 (A B C D E)
13 (A B C D E F)	39.8 (A B)	72 (A B C D E)
14 (A B C)	40 (A B C D)	73 (A B C D E)
15 (A B)	41 (A B C D E)	74 (A B)
16 (A B C D E)	42 (A B C D E)	75.1 (A B)
17 (A B)	43 (A B)	75.2 (A B)
18 (A B)	44 (A B C D E F G)	75.3 (A B)
19 (A B C D E)	45 (A B C D)	76.1 (A B)
20 (A B C D E)	46 (A B C D E)	76.2 (A B)
21 (A B C D E)	47 (A B C D E F G)	76.3 (A B)
22 (A B C D E F G H)	48 (A B C D E F G)	76.4 (A B)
23 (A B C D E F G H)	49 (A B C D E F G)	77.1 (A B C D E)
24 (A B C D E F G H)	50 (A B C D E F G)	77.2 (A B C D E)
25 (A B C D E F G)	51 (A B C D)	77.3 (A B C D E)
26 (A B C D E F G H)	52 (A B C D)	77.4 (A B C D E)
27 (A B C D E F G)	53 (A B C D E F G)	77.5 (A B C D E)
28 (A B C D E F G H)	54 (A B C D E)	77.6 (A B C D E)
29 (A B C D E F G H)	55 (A B C D E)	77.7 (A B C D E)
30 (A B C D E F G H)	56 (A B C D E F G)	77.8 (A B C D E)
31 (A B C D E)	57 (A B C D E)	77.9 (A B C D E)
32 (A B C D E)	58 (A B C D E)	77.10 (A B C D E)
33 (A B)	59 (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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ISBN 978-983-2387-65-7



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