



# Tobacco & E-cigarette

## Survey Among Malaysian Adolescents (TECMA) 2016



# **Tobacco & E-cigarette**

**Survey Among Malaysian  
Adolescents (TECMA)**

**2016** NMRR-16-108-28789



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## TABLE OF CONTENTS

<b>TEAM OF AUTHORS</b>	<b>4</b>
<b>ACKNOWLEDGEMENT</b>	<b>5</b>
<b>1. INTRODUCTION</b>	<b>15</b>
1.1 Objectives of the study	16
1.1.1 General Objectives	16
1.1.2 Specific Objectives	16
<b>2. METHODOLOGY</b>	<b>19</b>
2.1 Sampling Frame and Target Population	19
2.2 Sampling plan	19
2.3 Sample Size Calculation	19
2.4 Sample distribution	19
2.5 Data collection	20
2.5.1 Questionnaire	20
2.5.2 Field Data collection	22
2.6 Data Quality Control	22
2.7 Data Management and Analysis	23
2.8 Socio-demographic characteristics of respondents of the Tobacco & E-Cigarette Survey among Malaysian Adolescents (TECMA)	23
<b>3. TOBACCO USE</b>	<b>27</b>
3.1 Introduction	27
3.2 Tobacco Products Users	28
3.2.1 Current tobacco smokers	28
3.2.2 Ever tobacco smokers	28
3.2.3 Current smokeless tobacco users	28
3.2.4 Ever smokeless tobacco users	29
3.2.5 All tobacco product users (Smoked and Smokeless)	29
3.3 Current cigarette smokers	29
3.3.1 Prevalence of current cigarette smokers	29
3.3.2 Number of cigarettes smoked per day	29
3.3.3 Frequency of cigarette smoking in the past 30 days	30
3.3.4 Accessibility and availability of cigarettes	30
3.3.5 Level of nicotine addiction among current cigarette smokers	31
3.3.6 Cessation among current cigarette smokers	31
3.4 Ever smoked cigarette	31
3.4.1 Prevalence of ever cigarette smokers	31
3.4.2 Age at which cigarette smoking was initiated among ever cigarette smokers	32
3.5 Exposure to Second Hand Smoke (SHS)	32
3.6 Media and advertising	32
3.7 Knowledge and attitude towards smoking	33
3.8 Susceptibility to initiate tobacco use in the future	34



3.9 Conclusion	34
3.10 References	68
<b>4. E-CIGARETTE/VAPE USE</b>	<b>71</b>
4.1 Introduction	71
4.2 Current e-cigarette/vape users	72
4.2.1 Prevalence of current e-cigarette/vape users	72
4.2.2 Pattern of current e-cigarettes/vape usage in the last 30 days	72
4.2.3 Frequency of e-cigarettes/vape usage in a typical day in the last 30 days	72
4.2.4 Cessation indicators among current e-cigarette/vape users	72
4.2.5 Sources for obtaining e-cigarettes/vape among current users	72
4.2.6 Accessibility of e-cigarettes/vape	73
4.2.7 Estimated cost of e-cigarettes/vape per month among current e-cigarette/vape users	73
4.3 Prevalence of current single users (e-cigarettes/vape/cigarettes) and dual users (e-cigarettes/vape and cigarettes)	73
4.4 Types of e-cigarettes/vape last used among e-cigarette/vape users	73
4.5 Nicotine content in e-cigarettes/vape as reported by ever and current e-cigarette/vape users	73
4.6 Ever e-cigarette/vape users	74
4.6.1 Prevalence of ever heard of e-cigarettes/vape	74
4.6.2 Prevalence of ever e-cigarette/vape users	74
4.6.3 Initiation age of e-cigarettes/vape usage among ever e-cigarette/vape users	74
4.6.4 Prevalence of ever e-cigarette/vape users who first tried a conventional cigarette before the age of 14 years	74
4.6.5 Reasons to start using e cigarettes/vape among ever users	75
4.7 Ever read about danger of e-cigarettes/vape on posters or pamphlets	75
4.8 Commercial promotion of e-cigarettes/vape	75
4.9 Perception towards e-cigarettes/vape usage	75
4.10 Susceptibility to initiate e-cigarette/vape use among non e-cigarette/vape users	76
4.11 Conclusion	76
4.12 References	94
<b>5. SHISHA USE</b>	<b>97</b>
5.1 Introduction	97
5.2 Prevalence of current shisha smokers	97
5.3 Prevalence of ever shisha smokers	97
5.4 Conclusion	98
5.5 References	103
<b>6. RECOMMENDATIONS</b>	<b>107</b>

**LIST OF TABLES****METHODOLOGY**

Table 2.1	Response Rates for School Visits	20
Table 2.2	Questionnaire Structure	21
Table 2.3	Socio-demographic characteristics of respondents of the Tobacco & E-Cigarette Survey among Malaysian Adolescents (TECMA).	23

**TOBACCO USE**

Table 3.1	Prevalence of current tobacco smokers by socio-demographic characteristics	35
Table 3.2	Detailed tobacco use status among all adolescents by gender	35
Table 3.3	Types of tobacco products used by gender	37
Table 3.4	Prevalence of current cigarette smokers by socio-demographic characteristics	39
Table 3.5	Prevalence of current cigarette smokers by gender and age group	40
Table 3.6	Prevalence of current cigarette smokers by socio-demographic characteristics (13-17 years old)	42
Table 3.7	Number of cigarettes smoked per day among current cigarette smokers by gender	43
Table 3.8	Frequency of cigarettes smoked in the last 30 days among current cigarette smokers by gender	43
Table 3.9	Sources for obtaining cigarettes among current cigarette smokers by gender	44
Table 3.10	Types of cigarettes last bought in the past 30 days among current cigarette smokers	45
Table 3.11	The cost of a pack of cigarettes bought by the current cigarette smokers	46
Table 3.12	Level of nicotine addiction among current cigarette smokers by gender	47
Table 3.13	Tobacco smoking cessation indicators among current cigarette smokers by gender	48
Table 3.14	Prevalence of ever cigarettes smoking by socio- demographic characteristics	49
Table 3.15	Prevalence of ever cigarette smoking by gender and age group	50
Table 3.16	Age at which cigarette smoking was initiated among all adolescents by gender	50
Table 3.17	Age at which cigarette smoking was initiated among adolescents 13-17 years of age by gender	51
Table 3.18	Prevalence of those who tried their first cigarette before the age of 14 among those who ever smoked cigarettes	51
Table 3.19	Age at which cigarette smoking was initiated among ever cigarette smokers by gender	52
Table 3.20	Second Hand Smoke (SHS) exposure among all adolescents during the past 7 days by gender	53
Table 3.21	Exposure to tobacco smoking activities among all adolescents during the past 30 days by gender	54
Table 3.22	Second Hand Smoke (SHS) exposure among non-smokers during the past 7 days by gender	55
Table 3.23	Exposure to tobacco smoking activities among non-smokers during the past 30 days by gender	56
Table 3.24	Anti-tobacco information noticed by all adolescents by gender	57
Table 3.25	Anti-tobacco information noticed among current cigarette smokers by gender	58
Table 3.26	Anti-tobacco information noticed among non-cigarette smokers by gender	59
Table 3.27	Ownership and receptivity to tobacco marketing among all adolescents by gender	60
Table 3.28	Tobacco promotion noticed among all adolescents by gender	61
Table 3.29	Tobacco promotion noticed among current cigarette smokers by gender	62

Table 3.30	Tobacco promotion noticed among non-smokers by gender	63
Table 3.31	Knowledge and attitude towards smoking, smoking cessation and social smoking among all adolescents by gender	64
Table 3.32	Noticed health warnings on cigarette packages among current and never cigarette smokers by gender	66
Table 3.33	Susceptibility to tobacco/other tobacco products usage	67

### **E-CIGARETTE/VAPE USE**

Table 4.1	Prevalence of current e-cigarette/vape users by socio-demographic characteristics among all adolescents	76
Table 4.2	Prevalence of current e-cigarette/vape users by gender and age group	78
Table 4.3	Pattern of e-cigarettes/vape usage in the last 30 days among current e-cigarette/vape users	78
Table 4.4	Frequency of e-cigarette/vape usage per day among current users in a typical day in the last 30 days	79
Table 4.5	Cessation indicators among current e-cigarette/vape users by gender	80
Table 4.6	Sources for obtaining e-cigarettes/vape among current e-cigarette/vape users by gender	81
Table 4.7	Estimated cost of e- cigarettes /vape per month among current e-cigarette/vape users	82
Table 4.8	Prevalence of current single users (e-cigarettes/vape) and dual users (e-cigarettes/ vape and cigarettes)	82
Table 4.9	Type of product used when initiating smoking (cigarette/e-cigarettes/vape) among current dual users by gender	83
Table 4.10	Types of e-cigarette/vape last used among ever e-cigarette/vape users by gender	84
Table 4.11	Type of e-cigarette/vape last used among current e-cigarette/users by gender	85
Table 4.12	Nicotine content in e-cigarettes/vape as reported by ever users by gender	86
Table 4.13	Nicotine content in e-cigarettes/vape as reported by current users by gender	86
Table 4.14	Prevalence of ever heard of e-cigarettes/vape by socio-demographic characteristics among all adolescents	87
Table 4.15	Prevalence of ever e-cigarette/vape users by socio-demographic characteristics among all adolescents	88
Table 4.16	Prevalence of ever e-cigarette/vape users by gender and age group	89
Table 4.17	Age of initiation among ever e-cigarette/vape users by gender	89
Table 4.18	E- cigarette/vape initiation before the age of 14 among ever e-cigarette/ vape users	90
Table 4.19	Reason/s for e-cigarette/vape use among ever e-cigarette/vape users by gender	91
Table 4.20	Commercial promotion of e-cigarettes/vape among all adolescents	92
Table 4.21	Perception towards e-cigarette/vape usage compared to cigarette smoking among all adolescents	92
Table 4.22	Perception on harm of e-cigarettes/vape usage compared to cigarette smoking among current e-cigarette/vape users by gender	93

### **SHISHA**

Table 5.1	Prevalence of current shisha smokers by socio-demographic characteristics	98
Table 5.2	Prevalence of current shisha smokers by gender and age group	99
Table 5.3	Frequency of shisha smoked in the last 30 days among current shisha smokers by gender	99

Table 5.4	Prevalence of ever shisha smokers by socio-demographic characteristics	100
Table 5.5	Prevalence of ever shisha smokers by gender and age group	101
Table 5.6	Age of initiation of shisha smoking among ever shisha smokers by gender	101
Table 5.7	Shisha initiation before the age of 14 among ever Shisha smokers	102





# INTRODUCTION



## 1. INTRODUCTION

Smoking-related diseases are the major causes of premature death globally. Each year 6 million smoking-related deaths were reported worldwide (CDC, 2015). If there is no change in the current smoking pattern, 8 million deaths are expected by 2030, in which 80% will occur in lower and middle income countries (LMIC) (WHO, 2011). Without exception, Malaysia is also facing a similar situation. With 10,000 deaths reported each year, smoking related diseases was a major cause of mortality among the Malaysian population since 1980s. If the trend of smoking persists, the mortality is expected to triple to 30,000 by 2030 (MOH CPG, 2003).

Plethora of studies revealed that smoking is a behaviour learned and started during adolescents (Hopkins et al. 2013; Robinson & Bugler 2008; Kyrlesi et al. 2007; GYTSCC 2002). The earlier an individual starts to smoke, the higher the likelihood he or she will continue the smoking habit into adulthood and the less likely the individual will cease smoking in view of the nicotine addiction (Breslau & Peterson 1996). In addition, a study has shown that early smoking initiation is associated with higher risk of developing lung cancer (BMA 2007). The younger the age of smoking initiation, the greater the harm it produces. Early uptake is associated with subsequent heavier smoking, higher levels of dependency, a lower chance to stop smoking, and higher mortality (RCP 2010). Therefore, it is vital for the government to take actions in the prevention of initiation of smoking among adolescents in order to ensure long term reduction of smoking prevalence among Malaysians.

The first Global Youth Tobacco Survey (GYTS) conducted in 2003 reported that 20.2% (CI 16.6 – 24.3) of 13-15 years' school-based adolescents were current smokers. The prevalence was seen higher among males (36.3%, CI 30.6-42.5) when compared to females (4.2%, CI 3.0-5.9). Subsequently, GYTS conducted in 2009 reported a reduction of prevalence of current cigarette smokers among adolescents, 18.2% (CI 14.6 – 22.5). This reduction was mainly due to the lower prevalence among male smokers of 30.9% (CI 25.0 – 37.4) in 2009. In contrast, an increase was observed among female smokers (5.3%, CI 3.5 – 7.9).

Apart from the burden of cigarettes, the use of electronic cigarettes or e-cigarettes has emerged as an alternative habit among Malaysian adolescents. The National Health and Morbidity Survey (NHMS) 2015 revealed that the prevalence of the current use of smokeless tobacco products which include e-cigarettes has increased tremendously from 1.9% (CI 0.9, 3.99) in 2011 to 10.9% (CI 10.1, 11.7) (GATS 2011, NHMS 2015). This tremendous increase was not observed in the previous NHMS studies. Correspondingly worldwide, many studies have reported increasing trends of e-cigarette usage. The National Youth Tobacco Survey (NYTS) in the US reported double the prevalence of e-cigarette usage among US high-school students from 4.7% in 2011 to 10% in 2012 (Centre for Disease Control and Prevention, 2013). In addition, a study in New Zealand among 14-15 year olds reported tripled increase of ever-use of e-cigarettes from 7% in 2012 to 20% in 2014 (White et al., 2015). Moreover, one in six of 15-year-olds in Greece reported ever used of e-cigarettes in 2014 (Fotiou et al., 2015).

E-cigarettes have been introduced as an alternative for smoking cessation. However, studies have revealed that there is no difference in rates of successful quitting between e-cigarette users & non-users (Lee et al. 2014). In addition, studies in six US states found that e-cigarette users were significantly less likely to quit after 7 months, compared to those who never tried e-cigarettes (Vickerman et al. 2014). This is substantiated by studies from Anand et al. (2015) and Goniewicz et al. (2014) which revealed that smokers who used e-cigarettes as a cessation tool ended up as dual users. Meanwhile, a national study of schools in the United States found that 80.5% of high school students used e-cigarettes concurrently with conventional cigarettes indicating a high level of dual users (USDCDP, 2013).



Studies have also revealed that a substantial number of adolescent e-cigarette users were non-conventional cigarette smokers. Studies by Bostean et al. (2015) found more than 50% (nearly 60,000 students) of adolescents in California who used e-cigarettes were not conventional cigarette smokers. Similarly, a study by Barringtons-Trimis et al. (2015) in the same locality had also revealed a similar proportion. Meanwhile in Europe, a longitudinal study in Germany by Hanewinkel & Isensee (2015) found that 23.8% adolescent e-cigarette users have never smoked conventional cigarettes. This evidence was supported by the findings from Dautzenberg et al. (2013) & Dutra & Glanz (2014) studies which concluded that adolescents did not use e-cigarettes as a measure to reduce or quit smoking but rather more towards experimentation. This increasing trend of behaviour among adolescents has seemed to influence other non-smoker peers to follow suit (Kong G. et al 2014). The popularity of e-cigarettes might be due to lack of local regulation in controlling the market of e-cigarettes with addition of various appealing flavours which were easily available over the counter for users (Kong G. et al 2014). Electronic media is also to be blamed for portraying e-cigarettes as a safer and more fashionable alternative to cigarettes (Grana & Ling, 2014, Rooke & Amos 2013). Despite the burden of smoking an e-cigarette, there is no complete information available in the local settings to support the formulation of policies to curb this electronic form of nicotine delivery system. Therefore, this study is vital to provide the most current information to assist in the formulation of suitable policies.

## **1.1 Objectives of the study**

### **1.1.1 General Objectives**

To monitor tobacco and e-cigarette use among school going adolescents in Malaysia.

### **1.1.2 Specific Objectives**

1. To determine the prevalence of tobacco use among Malaysian adolescents.
2. To assess the knowledge and behaviour towards tobacco among Malaysian adolescents.
3. To determine the prevalence of vape & e-cigarette users among Malaysian adolescents.
4. To assess knowledge and behaviour towards vape & e-cigarette usage among Malaysian adolescents.
5. To determine the prevalence of dual users.
6. To determine the prevalence of usage of other tobacco related products (Shisha) & Smokeless Tobacco Product among Malaysian adolescents.



## **METHODOLOGY**



## 2. METHODOLOGY

This cross-sectional study was designed to represent the school-going adolescents aged 10-19 years old at public and private schools, both at the national and urbanity level.

### 2.1 Sampling Frame and Target Population

The sampling frame was provided by the Ministry of Education (MOE) based on an updated data of school-going adolescents in 2014. Students from standard four until standard six from primary schools and form one until form six from secondary schools were eligible as respondents. Participants were required to be able to understand the Malay language or English. Special Education Schools (*Sekolah Pendidikan Khas*) were excluded in the sampling frame.

### 2.2 Sampling plan

In order to ensure representativeness of the samples, a two stage stratified cluster sampling design was used in this survey. Malaysia was stratified into 15 states (including WP Kuala Lumpur & WP Putrajaya) and by schools urbanity status according to the MOE's definition. Schools formed the Primary Sampling Unit (PSU). The first stage involved the selection of the PSU for each states taking account the urbanity status from the school sampling frame. This was performed by using systematic probability sampling proportional to the students enrolment size of standard four (primary school) until upper six (secondary school) students. The second stage involved the selection of class at the selected schools. Classes formed the Secondary Sampling Unit (SSU). This was performed by using a simple random sampling method. All students from the selected classes were then recruited for the survey.

### 2.3 Sample Size Calculation

The sample size required was calculated by using a single proportion formula based on the lowest expected prevalence of the variables, taking account the level of confidence and the margin of error desired.

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

The sample size was calculated based on an estimated prevalence of 3% e-cigarette used among adolescents from a regional study (Lee et. al, 2014) with 1.5% margin of error and 95% confidence interval. This was then adjusted to the total number of target population (N) (Based on estimated school going adolescents in 2014), design effect of 1.5 and expected non-response rates of 20%. A total sample of 932 students per state was required. Therefore, a total of 13,980 students from 138 schools from 15 states were needed to be recruited for this survey.

### 2.4 Sample distribution

Table 2.1 shows the distribution and response rate of the selected schools. Altogether 138 schools were selected in which 82 schools were situated in the urban area and 56 schools were from the rural area. Out of this, 136 schools gave approval for the study (Schools Response Rate 98.6%). A total of 13162 adolescents had agreed to participate in the survey from 537 selected classes (classes response rate = 99.0%) giving students a response rate of 88.7%. The overall response rate for the survey was 86.6%.

Unsuccessful surveys at the student level were due to:

- Refusal: The students refused to be interviewed.
- Absent: The students were absent on the day of the survey.
- Not consented: The students had no parental consent.
- Unable to read: The students had difficulty in reading.

**Table 2.1: Response Rates for Schools Visit**

No	States	Schools			Classes			Students		
		Schools	Eligible	Response rate %	Classes	Eligible	Response rate %	Eligible	Responded	Response rate %
1	Johor	9	9	100	32	32	100	938	811	86
2	Kedah	9	9	100	32	32	100	1028	946	92
3	Kelantan	9	9	100	36	36	100	1000	912	91
4	Melaka	9	9	100	34	34	100	969	888	92
5	Negeri Sembilan	9	9	100	36	36	100	961	825	86
6	Pahang	9	9	100	39	39	100	940	854	91
7	Pulau Pinang	10	9	90	42	42	100	1060	932	88
8	Perak	9	9	100	38	38	100	987	853	86
9	Perlis	9	9	100	40	40	100	986	788	80
10	Selangor	10	9	90	37	33	89.2	994	924	93
11	Terengganu	9	9	100	36	36	100	1009	926	92
12	Sabah	9	9	100	35	35	100	990	883	89
13	Sarawak	9	9	100	33	33	100	985	870	88
14	WPKL	10	10	100	37	37	100	1002	857	86
15	Putrajaya	9	9	100	34	34	100	983	893	91
	<b>Total</b>	<b>138</b>	<b>136</b>	<b>98.6</b>	<b>541</b>	<b>537</b>	<b>99.0</b>	<b>14832</b>	<b>13162</b>	<b>88.7</b>

## 2.5 Data collection

### 2.5.1 Questionnaire

This survey used a structured questionnaire which had been developed with input from researchers and experts in tobacco and smoking from the Ministry of Health. Questions from WHO, Global Youth Tobacco Survey were also adopted in the questionnaire. The questionnaire was prepared in bilingual (Bahasa Melayu and English) and was pre-tested and validated. Table 2.2 shows the structure of the questionnaire.

Questionnaires and OMR used were as shown in **Appendices**.

Table 2.2: Questionnaire Structure

No	Section	Description
1	Introduction	Brief description of the survey and guide on filling the questionnaire.
2	Demographic characteristics	<ol style="list-style-type: none"> <li>1. Age</li> <li>2. Gender</li> <li>3. Standard/ form</li> <li>4. Ethnicity</li> <li>5. Daily school pocket money</li> </ol>
3	Tobacco Module	<ol style="list-style-type: none"> <li>1. User status (ever smoke)</li> <li>2. Age of initiation</li> <li>3. Frequency (days of smoking past one month)</li> <li>4. Frequency (times per day past one month)</li> <li>5. Method of buying (last bought)</li> <li>6. Cost per pack</li> <li>7. User status - Ever used of: <ol style="list-style-type: none"> <li>i. Shisha</li> <li>ii. Traditional hand-rolled cigarette</li> <li>iii. 'Roll-your-own' with cigarette paper</li> <li>iv. Cigar</li> <li>v. Pipe</li> <li>vi. E-cigarette or vape</li> <li>vii. Chewing tobacco</li> <li>viii. Snuff</li> </ol> </li> <li>8. User status - Current user of: <ol style="list-style-type: none"> <li>i. Shisha</li> <li>ii. Traditional hand-rolled cigarette</li> <li>iii. 'Roll-your-own' with cigarette paper</li> <li>iv. Cigar</li> <li>v. Pipe</li> <li>vi. E-cigarette or vape</li> <li>vii. Chewing tobacco</li> <li>viii. Snuff</li> </ol> </li> <li>9. Level of addictiveness</li> <li>10. Quit attempt <ol style="list-style-type: none"> <li>a. Desire to quit</li> <li>b. Attempts in the past one year</li> <li>c. Perception on quitting</li> <li>d. Methods used to quit</li> </ol> </li> <li>11. Exposure to cigarette smoke (home, public places)</li> <li>12. Methods of getting cigarette</li> <li>13. Anti-tobacco advertisement</li> <li>14. Law on cigarette for under age</li> <li>15. Health warnings on cigarette package</li> <li>16. Knowledge on tobacco learned at school</li> <li>17. Knowledge on messages of tobacco advertisement (televisions, media social, points of sale)</li> <li>18. Owning products with tobacco brand</li> <li>19. Offered free tobacco product</li> <li>20. Knowledge and attitudes towards cigarette smoking</li> </ol>

	<ol style="list-style-type: none"> <li>1. Ever heard</li> <li>2. User status (ever tried)</li> <li>3. Age of initiation</li> <li>4. Current status</li> <li>5. Frequency (days of smoking past one month)</li> <li>6. Frequency (times per day past one month)</li> <li>7. Method of buying (last bought)</li> <li>8. Type</li> <li>9. Nicotine content</li> <li>10. Cost (past one month)</li> <li>11. Reasons of use</li> <li>12. Exposure on anti-vaping or anti-e-cigarette advert</li> <li>13. Perception on quitting</li> <li>14. Quit attempt               <ol style="list-style-type: none"> <li>a. Desire to quit</li> <li>b. Attempts in the past one year</li> <li>c. Methods used for quit attempt</li> </ol> </li> <li>15. Experience of refusal to get e-cigarette because of age</li> <li>16. Offered free e-cigarette/ vape product</li> <li>17. Perception on danger and likeliness to try</li> </ol>
E-cigarette/ vape	
5 Shisha	<ol style="list-style-type: none"> <li>1. Ever tried</li> <li>2. Age of initiation</li> <li>3. Frequency (days of smoking past one month)</li> <li>4. Place of shisha smoking</li> <li>5. Experience of refusal to have shisha because of age</li> <li>6. Quit attempt</li> </ol>

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### 2.5.2 Field Data collection

Field data collection was conducted about a month starting from the 4<sup>th</sup> until the 30<sup>th</sup> April 2016. Malaysia was divided into six zones and the data collection was conducted concurrently at each zone. Each zone was headed by a Field Supervisor (FS) with a team of Research Assistants (RA) for data collection. A total of 16 teams were formed, one team was allocated to each state except for Sarawak in which two teams were formed. Each RA was specifically trained to conduct the survey. Each team was headed by a team leader (TL) with one driver and two data collectors. The person-in-charge in each school was contacted prior to the data collection. School approval was obtained from the schools highest authority. Parental and students consent forms were given to the person-in-charge for distribution. On the day of the data collection, parental and students consents forms were collected prior to the survey. Students who had consented to participate in the survey were assembled at the allocated location in the school. Each respondent was given a set of questionnaire together with the OMR form. Respondents were required to fill the answers in the OMR form. Both the questionnaire and the OMR form were then collected and were returned to the Institute for Public Health at an allocated date and time for each zone.

### 2.6 Data Quality Control

Data quality check was performed in two phases. Phase 1 check were conducted at the field in which the Field Supervisor (FS) were given the responsibility to supervise the data collection process and

to review all filled OMR forms and questionnaires at the end of the survey. Phase 2 data quality check was performed at the Institute for Public Health. First, quality check started at Station 1 where the bundles of the filled OMR forms and questionnaires were received. The schools' ID, class ID and students' ID were examined and compared with the original lists. Any discrepancy was referred back to the team leader. Once cleared, the OMR forms were transferred to Station 2. Here the forms were scanned. After scanning, the OMR forms were transferred to Station 3. Here, the data captured by the scanner was verified by the verifiers.

## 2.7 Data Management and Analysis

Data captured by the scanner in Excel forms were exported to SPSS statistical software for analysis. Quality of the data was then examined and data cleaning was performed. An appropriate statistical analysis was used to measure the prevalence of smoking, e-cigarette usage and other relevant analysis. A complex sample analysis was used and the analysis was conducted based on the dummy tables prepared by the research team.

## 2.8 Socio-demographic characteristics of respondents of the Tobacco & E- Cigarette Survey among Malaysian Adolescents (TECMA)

Table 2.3 shows the socio-demographic characteristics of respondents of the Tobacco & E-Cigarette Survey among Malaysian Adolescents (TECMA). The distribution of male and female students was almost equal, 50.1% and 49.9% respectively. The respondents from the urban areas (58.5%) were more compared to the rural areas (41.5%). There were more secondary schools students (69.4%) who were respondents compared to primary school students (39.6%). This is due to the age range that was used in this survey which is 10 to 19 years.

**Table 2.3: Socio-demographic characteristics of respondents of the Tobacco & E-Cigarette Survey among Malaysian Adolescents (TECMA).**

Socio-demographic Characteristics	Count	%
<b>Sex</b>		
Male	6582	50.1
Female	6554	49.9
<b>School Level</b>		
Primary education	4020	30.6
Secondary education	9116	69.4
<b>Standard/Form</b>		
Standard 4	1282	9.8
Standard 5	1371	10.4
Standard 6	1446	11.0
Form 1/Remove Class	1636	12.5
Form 2	1838	14.0
Form 3	1813	13.8
Form 4	2195	16.7
Form 5	1442	11.0
Form 6	113	0.9



<b>Location</b>		
Urban	7688	58.5
Rural	5448	41.5
<b>State</b>		
Johor	808	6.2
Kedah	942	7.2
Kelantan	910	6.9
Melaka	886	6.7
Negeri Sembilan	824	6.3
Pahang	854	6.5
Penang	931	7.1
Perak	851	6.5
Perlis	788	6.0
Selangor	922	7.0
Terengganu	924	7.0
Sabah & WP Labuan	880	6.7
Sarawak	866	6.6
WP Kuala Lumpur	858	6.5
WP Putrajaya	892	6.8



## **TOBACCO USE**



### 3. TOBACCO USE

#### Key findings

- 14.2% (95% CI: 12.4, 16.3) of adolescents were current tobacco smokers while 27.2% (95% CI: 25.1, 29.5) of them were ever tobacco smokers
- The prevalence of current cigarette smokers among adolescents was 11.7% while the prevalence of ever cigarette smokers was 21.4%.
- The prevalence of current cigarette smokers among adolescents aged 13-15 years old was 14.8% (95% CI: 11.7, 18.5).
- 78.7% of ever cigarette smokers tried their first cigarette before the age of 14.
- 39.7% of current cigarette smokers did not have nicotine dependence, while a further 28.5% had very low nicotine dependence.
- 76.7% of current cigarette smokers wanted to stop smoking.
- A total of 37.8% of the adolescents were exposed to Second Hand Smoke (SHS) at home and 51.2% were exposed in public places.
- Nearly nine in ten (87.3%) adolescents had seen anti-tobacco messages.

#### 3.1 Introduction

The tobacco epidemic is one of the biggest public health threats the world has ever faced. Nearly 80% of the more than 1 billion smokers worldwide live in low- and middle-income countries (WHO, 2015).

Plethora of studies revealed that smoking is a behaviour learned and started during adolescents (Hopkins et al. 2013; Robinson & Bugler 2008; Kyrleski et al. 2007). The earlier an individual starts to smoke, the likelihood he or she will continue the smoking habit into adulthood is higher and the less likely the individual will cease smoking in view of nicotine addiction (Breslau & Peterson 1996). In addition, a study has shown that, the earlier the starting age, the higher the risk of developing lung cancer (BMA 2007).

The first Global Youth Tobacco Survey (GYTS) conducted in 2003 reported that 20.2% (95% CI: 16.6, 24.3) of 13-15 year old school-based adolescents were current smokers. The prevalence was seen higher among males [36.3% 95%, CI 30.6-42.5) compared to females (4.2%, 95% CI: 3.0, 5.9). Subsequently, the GYTS conducted in 2009 reported a reduced prevalence of current cigarette smokers among adolescents, 18.2% (95% CI: 14.6, 22.5).

This study was aimed to identify the prevalence of tobacco use, smoking cessation, exposure to second hand smoke, knowledge and behaviour towards tobacco among Malaysian adolescents aged 10 to 19 years old.

## 3.2 Tobacco Products Users

### 3.2.1 Current Tobacco Smokers

Overall, 14.2% (95% CI: 12.4, 16.3) of Malaysian adolescents aged 10 to 19 years were current tobacco smokers. It was noticed that the prevalence was significantly higher in males 24.3% (95% CI: 21.39, 27.47) as compared to females 3.7% (95% CI: 2.8, 5.0). Perlis had the highest prevalence of current tobacco smokers [22.9% (95% CI: 17.1, 30.0)] while Terengganu had the lowest prevalence of current tobacco smokers [10.0% (95% CI: 6.3, 15.3)] (**Table 3.2**).

Among the adolescents, 3.6% (95% CI: 3.0, 4.4) were current traditional hand rolled cigarette smokers. More males [(6.5%, 95% CI: 5.3, 7.9)] than females [0.6%, 95% CI: 0.4, 0.9)] were current traditional hand rolled cigarette smokers (**Table 3.3**).

It was found that 2.2%, (95% CI: 1.8, 2.7) of the adolescents were current 'roll your own' with cigarette paper users with a higher percentage among males [3.9%, (95% CI: 3.1, 4.8)] as compared to females [0.5%, (95% CI: 0.3, 0.8)] (**Table 3.3**).

It was found that 1.2% (95% CI: 0.9, 1.5) of the adolescents currently smoked cigars and 0.8% (95% CI: 0.6, 1.1) smoked pipes (**Table 3.3**).

### 3.2.2 Ever Tobacco Smokers

A total of 27.2% (95% CI: 25.1, 29.5) of the adolescents were ever tobacco smokers, with males having a higher prevalence [41.4%, 95% CI: 38.1, 44.8)] as compared to females [12.4%, 95% CI: 10.8, 14.2)] (**Table 3.2**).

It was estimated that 8.5% (95% CI: 7.4, 9.8) of the adolescents had ever smoked traditional hand roll cigarettes. The prevalence was five times higher in males [14.1% (95% CI: 12.1, 16.3)] as compared to females [2.6% (95% CI: 2.0, 3.5)] (**Table 3.3**).

Another type of tobacco product used by the adolescents was the 'roll-your-own' with cigarette paper. It was estimated that 4.8% (95% CI: 4.1, 5.6) were ever users, with 8.2% (95% CI: 7.0, 9.6) males and 1.2% (95% CI: 0.9, 1.7) females (**Table 3.3**).

It was found that 2.2% (95% CI: 1.7, 2.8) ever smoked cigars and 1.4% (95% CI: 1.1, 1.8) ever smoked a pipe (**Table 3.3**).

### 3.2.3 Current Smokeless Tobacco Users

The prevalence of current smokeless tobacco users among the adolescents was 11.0% (95% CI: 9.6, 12.5). More male adolescents [17.1% (95% CI: 15.2, 19.2)] were current smokeless tobacco users compared to the female adolescents [4.5% (95% CI: 3.5, 6.0)] (**Table 3.2**).

It was found that 3.5% (95% CI: 2.9, 4.1) of the adolescents were current snuff users and the prevalence was higher among males (4.5%, 95% CI: 3.8, 5.4) as compared to females (2.4%, 95% CI: 1.6, 3.4). The prevalence of current chewing tobacco users was 0.6% (95% CI: 0.4, 0.8) (**Table 3.3**).

### 3.2.4 Ever Smokeless Tobacco Users

Overall, 22.9% (95% CI: 20.9, 25.0) of the adolescents had ever used smokeless tobacco. The prevalence was significantly higher among males (33.7%, 95% CI: 30.8, 36.8) as compared to females (11.5%, 95% CI: 9.8, 13.5) (**Table 3.2**).

It was found that 5.6% (95% CI: 4.9, 6.6) of the adolescents had ever used snuff. More males [7.1%, 95% CI: 6.1, 8.3) had ever used snuff compared to females [4.1% 95% CI: 3.1, 5.4)]. The prevalence of ever chewing tobacco users was 0.6% (95% CI: 0.5, 0.9) (**Table 3.3**).

### 3.2.5 All Tobacco Product Users (Smoked and Smokeless)

More than a quarter [28.6% (95% CI: 26.5, 30.9)] of the adolescents were ever tobacco users with males having a significantly higher prevalence of 42.8% (95% CI: 39.5, 46.1) compared to females [13.8% (95% CI: 12.2, 15.6)] (**Table 3.2**).

In total, 16.0% (95% CI: 14.1, 18.0) of the adolescents were found to be current tobacco users. There was a significant difference in terms of gender with 26.2% (95% CI: 23.4, 29.3) of males being current tobacco users compared to 5.3% (95% CI: 4.2, 6.7) of females (**Table 3.2**).

## 3.3 Current cigarette smokers

### 3.3.1 Prevalence of current cigarette smokers

The prevalence of current cigarette smokers among the adolescents was 11.7% (95% CI: 10.0, 13.6) (**Table 3.4**). More than one in five male adolescents were current cigarette smokers [21.1% (95% CI: 18.2, 24.2)]. The prevalence was significantly lower among females where only 2.1% (95% CI: 1.4, 3.1) were current cigarette smokers.

The prevalence was almost three times higher among adolescents in secondary schools [15.2% (95% CI: 12.8, 17.9)], as compared to those in primary schools [5.8% (95% CI: 4.4, 7.5)]. The prevalence of current cigarette smokers in rural schools was almost twice as much [14.9% (95% CI: 12.2, 18.1)] compared to the prevalence in urban schools [7.9% (95% CI: 6.4, 9.5)].

The three states with the highest prevalence of current cigarette smokers were Perlis [15.8% (95% CI: 11.2, 21.9)], Sabah & WP Labuan [14.1% (95% CI: 8.9, 21.6)] and Johor [14.0% (95% CI: 7.6, 24.4)]; while the states with the lowest prevalence were Terengganu [7.4% (95% CI: 4.4, 12.1)], WP Kuala Lumpur [8.4% (95% CI: 5.0, 13.7)] and WP Putrajaya [8.9% (95% CI: 5.6, 13.7)]. The prevalence of current cigarette smokers among adolescents aged 13-15 years old was 14.8% (95% CI: 11.7, 18.5). The GYTS in 2009 reported a prevalence of 18.2% (95% CI: 14.6, 22.5) of current cigarette smokers in this same age group (**Table 3.4**).

### 3.3.2 Number of cigarettes smoked per day

Overall, more than a third of current cigarette smokers smoked 2 – 5 cigarette sticks per day [36.8% (95% CI: 30.4, 43.7)] (**Table 3.7**). About a quarter smoked only 1 cigarette stick per day [25.7% (95% CI: 22.1, 29.7)]. A smaller percentage smoked 11 – 20 cigarette sticks per day [3.4% (95% CI: 2.2, 5.2)] while only 2.3% (95% CI: 1.3, 3.9) smoked more than 20 cigarette sticks per day.

Among the male current cigarette smokers, most of them [38.7% (95% CI: 32.1, 45.8)] smoked 2 – 5 cigarette sticks per day, while among the females, majority was reported to have smoked less than 1 cigarette stick per day [42.9% (95% CI: 23.5, 64.8)] (**Table 3.7**).

### 3.3.3 Frequency of cigarette smoking in the past 30 days

Most of the adolescents who were current cigarette smokers smoked for 1-2 days in the past one month [42.8% (95% CI: 37.4, 48.4)]. Among the female current cigarette smokers, majority of them [76.0% (95% CI: 57.0, 88.3)] smoked for 1-2 days in the past one month as compared to their male counter parts [39.6% (95% CI: 34.5, 45.0)]. More than 1 in 10 current cigarette smokers smoked every day in the past one month [13.9% (95% CI: 11.3, 17.0)] (**Table 3.8**).

### 3.3.4 Accessibility and availability of cigarettes

The legal age for purchasing cigarettes in Malaysia is 18 years and above. The findings of this survey indicated that 50.6% (95% CI: 45.5, 55.7) of adolescents below the age of 18 years were not prevented from buying cigarettes. Nearly half [49.0% (95% CI: 43.6, 54.4)] of the male adolescents and 55.5% (95% CI: 44.0, 66.6) of the female adolescents were not prevented from buying cigarettes due to their age.

Sources for obtaining cigarettes among the adolescent smokers, in the past 30 days, mostly was by purchasing them from supermarkets, grocery stores or roadside stalls [42.5% (95% CI: 37.9, 47.2)]. This was followed by sharing the cost of cigarettes with their friends [28.5% (95% CI: 25.3, 32.0)]. Other sources include (a) getting cigarettes from someone else [18.6% (95% CI: 15.2, 22.5)], (b) paying someone else to buy cigarettes [9.5% (95% CI: 7.3, 12.2)], (c) borrowing cigarettes from someone else [8.3% (95% CI: 6.1, 11.1)], (d) stealing cigarettes [3.4% (95% CI: 2.0, 5.7)], (e) getting cigarettes from family members [3.2% (95% CI: 2.2, 4.6)] or (f) getting cigarettes in some other way [5.9% (95% CI: 3.0, 11.0)] (**Table 3.9**).

Among the male current cigarette smokers, majority of them purchased their cigarettes from supermarkets, grocery stores or roadside stalls [44.1% (95% CI: 39.4, 48.9)]. Nearly a third [29.7% (95% CI: 26.4, 33.2)] of them shared the cost of cigarettes with friends, while 17.9% (95% CI: 14.8, 21.5) got them from someone else. Similarly, most of the female current cigarette smokers either purchased cigarettes from supermarkets, grocery stores or roadside stalls [25.5% (95% CI: 15.0, 40.1)], got them from someone else [25.3% (95% CI: 13.4, 42.8)] or shared the cost of cigarettes with friends [15.9% (95% CI: 8.8, 27.0)] (**Table 3.9**).

More than half of the current cigarette smokers [52.1% (95% CI: 45.3, 58.7)] bought the cigarettes in a pack while 41.7% (95% CI: 35.4, 48.2) of them bought individual cigarette sticks. Only a small number of them bought traditional hand-rolled cigarettes [5.1% (95% CI: 3.2, 7.9)]. Among the males, 53.4% (95% CI: 46.9, 59.8) bought cigarettes in packs; while among females, 56.9% (95% CI: 35.0, 76.4)] bought individual cigarette sticks (**Table 3.10**).

Majority [71.6% (95% CI: 64.2, 77.9)] of the current cigarette smokers who bought cigarettes in packs spent less than RM9.00 per pack. Less than 10.0% [9.2% (95% CI: 6.0, 14.0)] spent RM17.00 or more per pack (**Table 3.11**).

### 3.3.5 Level of nicotine addiction among current cigarette smokers

The level of nicotine addiction was assessed using the Heaviness of Smoking Index (Kozlowski et al. 1994). Overall, around two in five current cigarette smokers [39.7%, (95% CI: 32.9, 47.0)] did not have nicotine dependence, with 40.9% (95% CI: 34.7, 47.4) males and 27.1% (95% CI: 11.9, 50.6) females (**Table 3.12**).

Approximately a third of current cigarette smokers had very low dependence [28.5% (95% CI: 22.9, 34.8)] or low to moderate dependence [(29.3% (95% CI: 22.6, 37.0)]. A similar trend was observed among males. However, more than half of females [52.7% (95% CI: 31.6, 72.8)] were found to have low to moderate dependence (**Table 3.12**).

The prevalence of current cigarette smokers with moderate dependence was 1.6% (CI: 0.8, 3.0) while those with high dependence was only 0.9% (95% CI: 0.5, 1.7) (**Table 3.12**).

### 3.3.6 Cessation among current cigarette smokers

Among the adolescents who were current cigarette smokers, three quarters of them wanted to stop smoking now [76.7%, (95% CI: 71.0, 81.5)]. 75.5% (95% CI: 69.6, 80.6) of male current cigarette smokers wanted to stop smoking now as compared with 89.1% (95% CI: 57.9, 98.0) of the female current cigarette smokers (**Table 3.13**).

Similarly, three quarters of current cigarette smokers had tried to stop smoking in the past twelve months [75.5% (95% CI: 69.7, 80.5)]. 74.5 % (95% CI: 68.4, 79.9) of the male adolescents and 85.7% (95% CI: 60.4, 95.9) of the female adolescents had tried to stop smoking in the past twelve months (**Table 3.13**).

Generally, adolescents who were current cigarette smokers seldom received help to stop smoking. Less than one third of the adolescents had ever received help from a professional (32.0%, 95% CI: 28.8, 35.4) or from a quit smoking programme in school (27.6%, 95% CI: 24.6, 31.0). Furthermore, approximately a quarter of the adolescents (24.2%, 95% CI: 20.8, 28.0) who smoked never received any help/ advice at all (**Table 3.13**).

## 3.4 Ever smoked cigarette

### 3.4.1 Prevalence of ever cigarette smokers

The prevalence of those who ever smoked a cigarette among the adolescents was 21.4% (95% CI: 19.2, 23.8) (**Table 3.14**). The prevalence was almost five times higher among males [35.1% (95% CI: 31.7, 38.7)] as compared to females [7.1% (95% CI: 5.7, 8.8)]. More adolescents from secondary schools had ever tried a cigarette [27.9% (95% CI: 25.3, 30.7)] as compared to those in primary schools [10.2% (95% CI: 8.2, 12.5)].

The prevalence of adolescents who ever smoked a cigarette was almost twice as much in rural areas [26.6% (95% CI: 23.4, 30.1)] as compared to those in urban areas [15.1% (95% CI: 13.0, 17.6)] (**Table 3.14**).



The three states with the highest prevalence of adolescents who ever smoked a cigarette were Perlis [29.2% (95% CI: 23.1, 36.1)], Sabah & WP Labuan [26.9% (95% CI: 20.0, 35.1)] and Kelantan [26.2% (95% CI: 19.6, 34.1)]; while the three states with the lowest prevalence were WP Kuala Lumpur [15.2% (95% CI: 10.1, 22.2)], Perak [17.0% (95% CI: 12.3, 22.9)] and Penang [17.3% (95% CI: 11.1, 26.0)] (**Table 3.14**).

### 3.4.2 Age at which cigarette smoking was initiated among ever cigarette smokers

Overall, among those who had ever smoked a cigarette, 78.7% (95% CI: 75.0, 82.0) tried their first cigarette before the age of 14 (**Table 3.18**) and a third [33.1% (95% CI: 30.2, 36.1)] of them had their first cigarette at the age of 12 to 13. Similarly, among male adolescents, more than a third [34.8% (95% CI: 31.7, 38.1)] of them had their first cigarette at that age. Alarmingly, one in four females who had ever smoked a cigarette had their first cigarette at a tender age of 7 years or younger [25.1% (95% CI: 17.4, 34.7)] (**Table 3.19**).

### 3.5 Exposure to Second Hand Smoke (SHS)

Overall, [37.8% (95% CI: 35.8, 39.9)] of the adolescents were exposed to SHS at home and more than half of them [51.2%, (95% CI: 49.2, 53.2)] were exposed in public places in the past 7 days. There was no significant difference between the genders for SHS exposure (**Table 3.20**).

The adolescents reported that they had the highest SHS exposure in the highway Rest & Relax stop areas [30.3%, 95% CI: 28.6, 32.0)], followed by inside public transport [26.9%, (95% CI: 25.1, 28.9)] and inside parents'/ guardians' transport [23.3%, 95% CI: 21.6, 25.1] during the past 7 days (**Table 3.20**).

More than two thirds of the adolescents [69.0%, 95% CI: 66.7, 71.1)] stated that they saw someone smoking outside the school compound in the last 30 days, while 27.3% (95% CI: 25.1, 29.5) claimed that they have seen someone smoking inside the school compound in the last 30 days. A higher percentage of males [31.9%, 95% CI: 29.2, 34.7)] compared to females [22.4%, 95% CI: 20.1, 24.9)] saw someone smoking inside the school compound (**Table 3.21**).

### 3.6 Media and advertising

Almost nine in ten [87.3% (95% CI: 86.0, 88.5)] of all the adolescents had seen anti-tobacco advertisements in the past 12 months either on television, cinemas, internet or social media. The prevalence was higher among females [89.2% (95% CI: 87.5, 90.7)] as compared to males [85.5% (95% CI: 83.7, 87.1)]. Nearly half [48.0% (95% CI: 45.3, 50.8)] of those who attended sports events in the past 30 days had noticed anti-tobacco messages. Three quarters [76.1% (95% CI: 74.0, 78.1)] of the adolescents were taught about the danger of smoking tobacco during the last school year (**Table 3.24**).

On the other hand, among the current cigarette smokers, 74.2% (95% CI: 69.9, 78.2) of them claimed that they were taught about the danger of smoking during the last school year. Almost 9 in 10 [89.6% (95% CI: 87.0, 91.7)] of them had seen anti-tobacco advertisements in the past 12 months on television, cinemas and social media. Within the last 30 days, 50.2% (95% CI: 43.0, 57.4) of the current cigarette smokers who attended sports events had noticed anti-tobacco messages.

There was no significant difference in the prevalence between current cigarette smokers and never cigarette smokers (**Table 3.25**).

Brand stretching and promotion of tobacco products on merchandised items are still on-going and this current study showed that 4.7% (95% CI: 4.1, 5.5) of the adolescents owned t-shirts, pens and back packs with tobacco-related brands and logos on it. The percentage was higher among males [7.0% (95% CI: 5.9, 8.4)] as compared to females [2.4% (95% CI: 1.8, 3.0)]. Among non-tobacco users, 2.7% (95% CI: 2.2, 3.3) owned something that had a tobacco brand or logo on it. The percentage was almost 3 times higher among male non-tobacco users [4.4% (95% CI: 3.4, 5.7)] as compared to female non-tobacco users [1.5% (95% CI: 1.1, 2.0)] (**Table 3.27**).

In this study, the adolescents were also asked if they were ever offered free tobacco products from tobacco promoters. The findings showed that 2.5% (95% CI: 2.1, 2.9) of them were ever offered free tobacco products from tobacco promoters. The prevalence was significantly higher among males [3.7% (95% CI: 3.1, 4.4)] as compared to females [1.2% (95% CI: 0.8, 1.7)]. There was a high percentage of adolescents [77.2% (95% CI: 75.5, 78.9)] who reported ever watching scenes or actions of people smoking on television shows, videos or movies in the last 30 days (**Table 3.28**).

Overall, 37.4% (95% CI: 35.8, 39.1) of the adolescents noticed advertisements or promotions on tobacco products at points of sale and 34.2% (95% CI: 32.5, 35.9) claimed that neither those advertisements nor promotions did attract their attention. Only 3.2% (95% CI: 2.8, 3.8) of them reported that they were attracted by those advertisements or promotions (**Table 3.28**).

About 4 out of 10 [40.7% (95% CI: 36.6, 45.0)] of the current cigarette smokers and 36.5% (95% CI: 34.4, 38.7) of those who never smoked noticed advertisements or promotions on any tobacco products at points of sale (**Table 3.29 and Table 3.30**). Among those who never smoked, 5.2% (95% CI: 3.9, 6.8) claimed that they were attracted by those advertisements or promotions (**Table 3.30**).

### 3.7 Knowledge and attitude towards smoking

Overall, four in five [80.4% (95% CI: 78.4, 82.2)] adolescents knew that smoking below the age of 18 is an offence under the law and there was no significant difference between males [78.4% (95% CI: 76.0, 80.5)] and females [82.4% (95% CI: 80.1, 84.5)]. Majority [70.9% (95% CI: 68.7, 73.0)] knew that it is an offence for underage adolescents to buy cigarettes; and the percentage was similar between males [69.4% (95% CI: 67.1, 71.6)] and females [75.2% (95% CI: 69.8, 75.1)]. In addition, majority [72.0% (95% CI: 70.2, 73.8)] of them knew that possessing cigarettes under the age of 18 is an offence under the law and it was significantly higher among female adolescents [74.7% (95% CI: 72.8, 76.6)] compared to male adolescents [69.4% (95% CI: 66.9, 71.9)] (**Table 3.31**).

Overall, majority of the adolescents [89.6% (95% CI: 88.0, 91.0)] knew that exposure to other people's cigarette smoke is harmful for their own health and it was significantly higher among females [92.7% (95% CI: 91.1, 94.0)] compared to males [86.7% (95% CI: 84.8, 88.4)]. More than four in five students [86.3% (95% CI: 84.3, 88.0)] favoured banning smoking inside enclosed public places (such as in shops, restaurants, buses, taxis, trains, school playgrounds, gymnasiums, sports centers and shopping malls). The percentage was higher among female adolescents [89.4% (95% CI: 87.5, 91.1)], compared to male adolescents [83.2% (95% CI: 80.9, 85.3)] (**Table 3.31**).

Almost a third [32.0% (95% CI: 30.6, 33.5)] of the adolescents thought that it is definitely difficult to quit once someone has started smoking tobacco whereas 17.7% (95% CI: 15.9, 19.6) thought that it is definitely not difficult to quit smoking. A higher prevalence of male adolescents [21.4% (95% CI: 19.3, 23.6)] thought that it is not difficult to quit smoking compared to the female adolescents [13.8% (95% CI: 11.9, 15.9)] (**Table 3.31**).

In addition, about [7.8% (95% CI: 6.9, 8.9)] of the adolescents thought that smoking tobacco helps people feel more comfortable during celebrations, parties or social gatherings. This perception was significantly higher among male adolescents [9.7% (95% CI: 8.4, 11.1)] compared to female adolescents [6.0% (95% CI: 5.0, 7.10)]. However, more than two thirds [67.0% (95% CI: 65.0, 69.0)] thought that smoking tobacco would make you feel less comfortable during celebrations, parties or social gatherings. A quarter [25.1% (95% CI: 23.6, 26.7)] of the adolescents thought that smoking tobacco does not make any difference during celebrations, parties or social gatherings (**Table 3.31**).

### 3.8 Susceptibility to initiate tobacco use in the future

Overall, 10.4% (95% CI: 9.1, 11.8) of the adolescents who had never used tobacco products were susceptible to tobacco use in the future. This was more significant among males [14.4% (95% CI: 12.6, 16.5)] as compared to females [7.6% (95% CI: 6.4, 9.1)]. Overall, 2.2% (95% CI: 1.7, 3.0) of non-smoking adolescents thought they might enjoy smoking a cigarette (**Table 3.33**).

### 3.9 Conclusion

The prevalence of current tobacco smokers among Malaysian adolescents is quite high at 14.2% with more than one in ten 11.7% being current cigarette smokers. The prevalence of current cigarette smokers among adolescents aged 13-15 years was 14.8%. This is comparatively lower than the prevalence found by the Global Youth Tobacco Survey in 2009, which was 18.2%.

Majority of the adolescents who were current cigarette smokers had no or low nicotine dependence and three quarters of them wanted to quit smoking. Nearly all adolescents knew that smoking is harmful to their health. Nonetheless, one in ten non-smoking adolescents was susceptible to start smoking in the future. Many were still exposed to cigarette smoke at home and in public places. Four in five of them supported banning smoking inside enclosed public places.

Table 3.1: Prevalence of current tobacco smokers by socio-demographic characteristics

Socio-demographic Characteristics	Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
<b>MALAYSIA</b>	1807	524232	14.2	12.4	16.3
<b>Sex</b>					
Male	1585	457065	24.3	21.4	27.5
Female	222	67167	3.7	2.8	5.0
<b>School Level</b>					
Primary education	397	123069	9.1	7.3	11.3
Secondary education	1410	401163	17.2	14.8	20.0
<b>Age</b>					
12 or younger	402	125714	9.2	7.4	11.4
13-15	803	249951	17.4	14.2	21.2
16-19	602	148567	16.9	13.7	20.6
13-19	1405	398517	17.2	14.8	19.9
<b>Location</b>					
Urban	910	177980	10.6	8.8	12.7
Rural	897	346252	17.3	14.5	20.4
<b>State</b>					
Johor	87	68134	16.1	9.0	27.0
Kedah	162	45889	17.4	12.8	23.2
Kelantan	143	38305	17.3	13.1	22.4
Melaka	55	16107	11.4	7.7	16.6
Negeri Sembilan	93	26505	15.1	10.8	20.6
Pahang	105	23499	12.7	7.9	19.9
Penang	138	23528	11.9	6.9	19.8
Perak	100	37751	12.5	8.5	18.0
Perlis	170	8020	22.9	17.1	30.0
Selangor	132	87458	13.2	8.4	20.0
Terengganu	104	16536	10.0	6.3	15.3
Sabah & WP Labuan	149	55330	15.4	10.1	22.7
Sarawak	139	50815	15.2	9.9	22.7
WP Kuala Lumpur	130	179169	12.2	8.0	18.2
WP Putrajaya	100	1477	10.8	7.2	15.9

Table 3.2: Detailed tobacco use status among all adolescents by gender

	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
<b>Smoked tobacco</b>															
Current tobacco smokers <sup>1</sup>	1807	524232	14.2	12.4	16.3	1585	457065	24.3	21.39	27.47	222	67167	3.7	2.8	5.0
Current cigarette smokers <sup>2</sup>	1367	413436	11.7	10.0	13.6	1264	377290	21.1	18.19	24.24	103	36146	2.1	1.4	3.1
Frequent cigarette smokers <sup>3</sup>	281	90666	2.6	1.9	3.4	275	88772	5.0	3.7	6.6	6	1894	-	-	-
Ever tobacco smokers <sup>4</sup>	3587	1002898	27.2	25.1	29.5	2785	779143	41.4	38.1	44.8	802	223755	12.4	10.8	14.2
Ever cigarette smokers <sup>5</sup>	2789	788412	21.4	19.2	23.8	2350	660960	35.1	31.7	38.7	439	127452	7.1	5.7	8.8
Ever smokers of other tobacco products <sup>6</sup>	1593	451795	12.3	11.0	13.6	1189	341833	18.2	16.1	20.5	404	109962	6.1	5.2	7.1
<b>Smokeless Tobacco</b>															
Current smokeless tobacco users <sup>7</sup>	1486	404174	11.0	9.6	12.5	1172	322136	17.1	15.2	19.2	314	82038	4.5	3.5	6.0
Ever smokeless tobacco users <sup>8</sup>	3102	842224	22.9	20.9	25.0	2318	634848	33.7	30.8	36.8	784	207376	11.5	9.8	13.5

Table 3.2: Detailed tobacco use status among all adolescents by gender (cont.)

	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
<b>Tobacco Use</b>															
Current tobacco users <sup>9</sup>	2071	588667	16.0	14.1	18.0	1721	493475	26.2	23.4	29.3	350	95191	5.3	4.2	6.7
Ever Tobacco Users <sup>10</sup>	3789	1054395	28.6	26.5	30.9	2875	804917	42.8	39.5	46.1	914	249478	13.8	12.2	15.6

<sup>1</sup>Smoked tobacco any time during the past 30 days.

<sup>7</sup>Used smokeless tobacco any time during the past 30 days.

<sup>2</sup>Smoked cigarettes at any time during the past 30 days.

<sup>8</sup>Ever used smokeless tobacco

<sup>3</sup>Smoked cigarettes on 20 or more days of the past 30 days.

<sup>9</sup>Smoked tobacco and/or used smokeless tobacco any time during the past 30 days.

<sup>4</sup>Ever smoked any tobacco, even one or two puffs.

<sup>10</sup>Ever smoked tobacco and/or used smokeless tobacco.

<sup>5</sup>Ever smoked cigarettes, even one or two puffs.

<sup>6</sup>Ever smoked tobacco other than cigarettes, even one or two puffs.

Table 3.3: Types of tobacco products used by gender

Types of tobacco products	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Traditional hand rolled cigarettes															
Current traditional hand rolled cigarette smokers <sup>1</sup>	543	132433	3.6	3.0	4.4	496	122150	6.5	5.3	7.9	47	10283	0.6	0.4	0.9
Ever Traditional hand rolled cigarette smokers <sup>2</sup>	1255	312313	8.5	7.4	9.8	1068	264594	14.1	12.1	16.3	187	47719	2.6	2.0	3.5
Roll-your-own <sup>1</sup> with cigarette paper															
Current 'Roll-your-own <sup>1</sup> with cigarette paper smokers <sup>1</sup>	273	82322	2.2	1.8	2.7	241	72919	3.9	3.1	4.8	32	9404	0.5	0.3	0.8
Ever 'Roll-your-own <sup>1</sup> with cigarette paper smokers <sup>2</sup>	586	176019	4.8	4.1	5.6	515	153917	8.2	7.0	9.6	71	22102	1.2	0.9	1.7

Table 3.3: Types of tobacco products used by gender (cont.)

	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Cigar															
Current cigar smokers <sup>1</sup>	157	44023	1.2	0.9	1.5	136	38270	2.0	1.6	2.7	21	5753	0.3	0.2	0.5
Ever Cigars smokers <sup>2</sup>	285	81136	2.2	1.7	2.8	261	74033	3.9	3.1	5.1	24	7103	0.4	0.3	0.6
Pipe smoking															
Current pipe smokers <sup>1</sup>	116	30565	0.8	0.6	1.1	92	24608	1.3	1.0	1.7	24	5957	0.3	0.2	0.6
Ever Pipe smokers <sup>2</sup>	169	53256	1.4	1.1	1.8	146	45639	2.4	1.9	3.2	23	7617	-	-	-
Chewing tobacco															
Current	88	21796	0.6	0.4	0.8	70	17856	1.0	0.7	1.3	18	3940	-	-	-
Chewing tobacco users <sup>1</sup>															
Ever Chewing tobacco <sup>2</sup>	99	23902	0.6	0.5	0.9	76	19184	1.0	0.7	1.4	23	4718	0.3	0.2	0.4
Snuff															
Current Snuff <sup>1</sup>	485	127248	3.5	2.9	4.1	318	84604	4.5	3.8	5.4	167	42644	2.4	1.6	3.4
Ever Snuff <sup>2</sup>	820	208018	5.6	4.9	6.6	520	133927	7.1	6.1	8.3	300	74091	4.1	3.1	5.4



Table 3.4: Prevalence of current cigarette smokers by socio-demographic characteristics

Socio-demographic characteristics	Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
<b>MALAYSIA</b>	1367	413436	11.7	10.0	13.6
<b>Sex</b>					
Male	1264	377290	21.1	18.2	24.2
Female	103	36146	2.1	1.4	3.1
<b>School Level</b>					
Primary education	237	76166	5.8	4.4	7.5
Secondary education	1130	337270	15.2	12.8	17.9
<b>Age</b>					
12 or younger	242	78811	5.9	4.6	7.6
13-15	611	202971	14.8	11.7	18.5
16-19	514	131654	15.7	12.7	19.3
13-19	1125	334625	15.1	12.8	17.8
<b>Location</b>					
Urban	677	128075	7.9	6.4	9.5
Rural	690	285361	14.9	12.2	18.1
<b>State</b>					
Johor	69	56892	14.0	7.6	24.4
Kedah	103	29298	11.5	7.1	18.1
Kelantan	95	28041	13.3	9.7	18.0
Melaka	46	13341	10.0	6.1	15.9
Negeri Sembilan	72	20144	12.1	8.5	17.1
Pahang	89	19774	11.1	6.7	17.7
Penang	103	17889	9.4	5.1	16.5
Perak	80	31323	10.7	7.0	16.1
Perlis	108	5258	15.8	11.2	21.9
Selangor	99	72078	11.3	6.7	18.4
Terengganu	75	11493	7.4	4.4	12.1
Sabah & WP Labuan	131	48426	14.1	8.9	21.6
Sarawak	118	41679	12.8	8.1	19.5
WP Kuala Lumpur	98	16625	8.4	5.0	13.7
WP Putrajaya	81	1173	8.9	5.6	13.7

Table 3.5: Prevalence of current cigarette smokers by gender and age group

Age	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
12 or younger	242	78811	5.9	4.6	7.6	222	71933	10.5	8.0	13.6	20	6878	1.1	0.6	1.9
13-15	611	202971	14.8	11.7	18.5	578	187348	26.1	21.2	31.7	33	15623	-	-	-
16-19	514	131654	15.7	12.7	19.3	464	118008	30.5	25.2	36.4	50	13645	3.0	2.1	4.4
13-19	1125	334625	15.1	12.8	17.8	1042	305356	27.6	23.8	31.8	83	29268	2.6	1.6	4.2

**Table 3.6: Prevalence of current cigarette smokers by socio-demographic characteristics (13-17 years old)**

Socio-demographic characteristics	Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
<b>MALAYSIA</b>	1106	330575	15.2	12.8	17.9
<b>Sex</b>					
Male	1026	302244	27.8	23.9	31.9
Female	80	28331	2.6	1.6	4.3
<b>Location</b>					
Urban	543	91578	11.3	9.3	13.8
Rural	563	238997	17.5	14.0	21.6
<b>State</b>					
Johor	46	51453	20.5	10.6	36.0
Kedah	66	21286	13.1	7.2	22.8
Kelantan	72	15357	12.1	7.8	18.3
Melaka	37	10079	13.2	7.8	21.6
Negeri Sembilan	53	15361	14.4	9.9	20.4
Pahang	73	11535	10.8	6.1	18.4
Penang	96	15082	12.1	6.0	23.0
Perak	72	27235	14.2	9.3	20.9
Perlis	87	4007	17.9	12.3	25.2
Selangor	85	63213	16.9	10.6	25.8
Terengganu	42	8539	8.7	4.9	15.1
Sabah & WP Labuan	106	38200	19.1	11.3	30.6
Sarawak	104	35451	18.1	11.6	27.2
WP Kuala Lumpur	88	12659	9.5	5.2	16.9
WP Putrajaya	79	1119	15.1	10.9	20.6

Table 3.7: Number of cigarettes smoked per day among current cigarette smokers by gender

Number of cigarettes smoked per day	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
<b>MALAYSIA</b>															
Less than 1 per day	271	81717	21.5	17.8	25.9	240	67863	19.6	16.1	23.5	31	13854	42.9	23.5	64.8
1 per day	338	97502	25.7	22.1	29.7	312	85879	24.7	20.4	29.7	26	11624	36.0	19.9	56.0
2 - 5 per day	451	139658	36.8	30.4	43.7	429	134371	38.7	32.1	45.8	22	5287	16.4	8.5	29.3
6 - 10 per day	130	38933	10.3	8.0	13.1	127	38102	11.0	8.6	14.0	3	831	-	-	-
11-20 days	39	12891	3.4	2.2	5.2	39	12891	3.7	2.4	5.7					
More than 20 per day	29	8603	2.3	1.3	3.9	27	7930	2.3	1.3	4.1	2	673	-	-	-

Table 3.8: Frequency of cigarettes smoked in the last 30 days among current cigarette smokers by gender

Frequency of cigarettes smoked	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
<b>MALAYSIA</b>															
1-2 days	601	176887	42.8	37.4	48.4	526	149419	39.6	34.5	45.0	75	27468	76.0	57.0	88.3
3-5 days	221	63770	15.4	12.8	18.4	210	59150	15.7	12.4	19.6	11	4621	12.8	4.3	32.5
6-9 days	133	43360	10.5	7.0	15.4	125	41774	11.1	7.3	16.5	8	1586	-	-	-
10 -19 days	131	38753	9.4	7.1	12.3	128	38175	10.1	7.7	13.2	3	577	-	-	-
20-29 days	99	33168	8.0	5.0	12.7	95	31981	8.5	5.3	13.4	4	1187	-	-	-
All 30 days	182	57497	13.9	11.3	17.0	180	56791	15.1	12.3	18.3	2	707	-	-	-

Table 3.9: Sources for obtaining cigarettes among current cigarette smokers by gender

Current smokers	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Purchased from a supermarket, grocery store or roadside stall	543	175518	42.5	37.9	47.2	516	166284	44.1	39.4	48.9	27	9233	25.5	15.0	40.1
I shared the cost of cigarettes with my friends	380	117928	28.5	25.3	32.0	363	112180	29.7	26.4	33.2	17	5749	15.9	8.8	27.0
I got them from someone else	248	76768	18.6	15.2	22.5	225	67608	17.9	14.8	21.5	23	9160	25.3	13.4	42.8
I paid someone else to buy them	139	39139	9.5	7.3	12.2	128	36409	9.7	7.3	12.6	11	2730	-	-	-
I borrowed them from someone else	127	34274	8.3	6.1	11.1	117	30225	8.0	5.9	10.8	10	4049	-	-	-
I got them some other way	54	24206	5.9	3.0	11.0	49	23215	6.2	3.1	11.9	5	991	-	-	-
I stole them	38	13947	3.4	2.0	5.7	33	12905	3.4	1.9	6.0	5	1042	-	-	-
I got them from my family members	47	13147	3.2	2.2	4.6	40	9682	2.6	1.7	4.0	7	3465	-	-	-

Table 3.10: Types of cigarettes last bought in the past 30 days among current cigarette smokers

Current smokers	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Packs	484	158032	52.1	45.3	58.7	455	148758	53.4	46.9	59.8	29	9274	37.3	19.1	60.0
Individual sticks	428	126457	41.7	35.4	48.2	403	112322	40.3	34.4	46.5	25	14135	56.9	35.0	76.4
Traditional hand rolled	63	15442	5.1	3.2	7.9	59	14677	5.3	3.3	8.3	4	765	-	-	-
Loose tobacco for hand-rolled cigarettes	13	3622	-	-	-	12	2957	-	-	-	1	665	-	-	-

Table 3.11: The cost of a pack of cigarettes bought by the current cigarette smokers

Cost per pack	Overall						Male						Female					
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI				
				Lower	Upper				Lower	Upper				Lower	Upper			
< RM 9.00 per pack	443	143794	71.6	64.2	77.9	428	137364	71.4	63.8	78.0	15	6430	75.2	50.7	90.0			
RM 9.00- RM11.90 per pack	56	15468	7.7	4.9	11.9	52	14938	7.8	4.9	12.2	4	531	-	-	-			
RM 12.00- RM15.40 per pack	45	13140	6.5	3.9	10.8	42	12388	6.4	3.8	10.8	3	752	-	-	-			
RM 15.50- RM16.90 per pack	39	10020	5.0	2.8	8.7	36	9800	5.1	2.8	9.0	3	220	-	-	-			
RM17.00 and above per pack	58	18525	9.2	6.0	14.0	54	17912	9.3	6.0	14.2	4	613	-	-	-			

Table 3.12: Level of nicotine addiction among current cigarette smokers by gender

Level of Nicotine Addiction	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
No dependence	459	130619	39.7	32.9	47.0	435	122910	40.9	34.7	47.4	24	7709	27.1	11.9	50.6
Very low dependence (Score 1-2)	293	93758	28.5	22.9	34.8	282	88704	29.5	23.9	35.8	11	5054	17.8	7.6	36.4
Low to Moderate dependence (Score 3)	279	96347	29.3	22.6	37.0	249	81380	27.1	21.3	33.7	30	14967	52.7	31.6	72.8
Moderate dependence (Score 4)	14	5263	1.6	0.8	3.0	13	4992	1.7	0.9	3.2	1	271	-	-	-
High dependence (Score 5)	12	2965	0.9	0.5	1.7	11	2562	0.9	0.4	1.7	1	402	-	-	-



**Table 3.13: Tobacco smoking cessation indicators among current cigarette smokers by gender**

Current Smokers	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Tried to stop smoking in the past 12 months	813	240622	75.5	69.7	80.5	759	216867	74.5	68.4	79.9	54	23755	85.7	60.4	95.9
Want to stop smoking now	761	229413	76.7	710	81.5	711	207015	75.5	69.6	80.6	50	22398	89.1	57.9	98.0
Thought they would be able to stop smoking if they wanted to	814	253048	81.4	76.8	85.3	761	229065	80.0	75.0	84.3	53	23982	96.9	86.3	99.4
Have ever received help/ advice from a programme or professional to stop smoking	300	96158	32.0	28.8	35.4	281	91036	32.6	29.3	36.2	19	5121	24.2	11.2	44.6
Have ever received help/ advice from quit smoking programmes in school	262	82997	27.6	24.6	31.0	245	79576	28.5	25.2	32.1	17	3420	16.2	6.5	35.0
Have ever received help/ advice from quit smoking programmes in clinic	38	13161	4.4	2.8	6.7	36	11460	4.1	2.6	6.4	2	1701	-	-	-
Never received help/ advice at all	303	95829	24.2	20.8	28.0	276	83697	23.1	19.7	26.8	27	12132	36.4	18.3	59.4

Table 3.14: Prevalence of ever cigarettes smoking by socio- demographic characteristics

Socio-demographic characteristics	Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper
<b>MALAYSIA</b>	2789	788412	21.4	19.2	23.8
<b>Sex</b>					
Male	2350	660960	35.1	31.7	38.7
Female	439	127452	7.1	5.7	8.8
<b>School Level</b>					
Primary education	449	138365	10.2	8.2	12.5
Secondary education	2340	650047	27.9	25.3	30.7
<b>Age</b>					
12 or younger	459	141610	10.3	8.4	12.7
13-15	1258	391693	27.3	23.9	30.9
16-19	1072	255109	29.0	24.9	33.4
13-19	2330	646802	27.9	25.3	30.7
<b>Location</b>					
Urban	1406	254022	15.1	13.0	17.6
Rural	1383	534390	26.6	23.4	30.1
<b>State</b>					
Johor	137	103825	24.5	15.5	36.6
Kedah	195	53624	20.4	15.4	26.4
Kelantan	224	58070	26.2	19.6	34.1
Melaka	121	30749	21.8	15.4	30.0
Negeri Sembilan	154	42843	24.4	18.6	31.3
Pahang	191	37758	20.5	13.9	29.1
Penang	195	34070	17.3	11.1	26.0
Perak	145	51245	17.0	12.3	22.9
Perlis	224	10205	29.2	23.1	36.1
Selangor	197	135717	20.4	14.9	27.3
Terengganu	187	36098	21.7	15.9	28.9
Sabah & WP Labuan	278	96772	26.9	20.0	35.1
Sarawak	184	63999	19.2	13.1	27.2
WP Kuala Lumpur	182	30956	15.2	10.1	22.2
WP Putrajaya	175	2481	18.1	12.5	25.5

Table 3.15: Prevalence of ever cigarette smoking by gender and age group

Age	Overall						Male						Female					
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI				
				Lower	Upper				Lower	Upper				Lower	Upper			
12 or younger	459	141610	10.3	8.4	12.7	392	121111	17.0	13.6	21.1	67	20499	3.1	2.2	4.4			
13-15	1258	391693	27.3	23.9	30.9	1109	339644	44.9	39.9	50.0	149	52050	7.7	5.0	11.6			
16-19	1072	255109	29.0	24.9	33.4	849	200205	48.5	42.6	54.4	223	54903	11.7	9.3	14.7			
13-19	2330	646802	27.9	25.3	30.7	1958	539849	46.2	42.3	50.1	372	106953	9.3	7.3	11.8			

Table 3.16: Age at which cigarette smoking was initiated among all adolescents by gender

Age at which cigarette smoking was initiated (Years)	Overall						Male						Female					
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI				
				Lower	Upper				Lower	Upper				Lower	Upper			
Never smoked	10347	2896348	80.1	77.8	82.3	4232	1220171	66.3	62.7	69.8	6115	1676178	94.4	92.9	95.6			
7 or younger	295	86780	2.4	1.9	3.1	210	61919	3.4	2.6	4.3	85	24861	1.4	0.9	2.1			
8-9	275	83231	2.3	1.9	2.8	222	68688	3.7	2.9	4.8	53	14543	0.8	0.5	1.2			
10-11	544	157696	4.4	3.7	5.1	484	136085	7.4	6.3	8.7	60	21611	1.2	0.7	2.0			
12-13	823	237468	6.6	5.6	7.7	748	215484	11.7	9.9	13.8	75	21984	1.2	0.8	2.0			
14-15	487	123617	3.4	2.8	4.2	427	110656	6.0	4.9	7.4	60	12961	0.7	0.4	1.3			
16-19	115	29228	0.8	0.5	1.2	102	26082	1.4	0.9	2.2	13	3146	-	-	-			



Table 3.19: Age at which cigarette smoking was initiated among ever cigarette smokers by gender

Age at which cigarette smoking was initiated (Years)	Overall					Male					Female				
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
7 or younger	295	86780	12.1	9.5	15.3	210	61919	10.0	7.8	12.7	85	24861	25.1	17.4	34.7
8-9	275	83231	11.6	9.5	14.1	222	68688	11.1	8.7	14.0	53	14543	14.7	9.4	22.1
10-11	544	157696	22.0	19.3	24.9	484	136085	22.0	18.9	25.4	60	21611	21.8	14.5	31.4
12-13	823	237468	33.1	30.2	36.1	748	215484	34.8	31.7	38.1	75	21984	22.2	13.6	34.0
14-15	487	123617	17.2	14.6	20.2	427	110656	17.9	15.0	21.2	60	12961	13.1	8.2	20.2
16-19	115	29228	4.1	2.7	6.1	102	26082	4.2	2.7	6.5	13	3146	-	-	-

Table 3.20: Second Hand Smoke (SHS) exposure among all adolescents during the past 7 days by gender

All	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Exposed to tobacco smoke at home in the past 7 days	4644	1393009	37.8	35.8	39.9	2352	706525	37.6	35.2	40.1	2292	686484	38.1	35.3	40.9
Exposed to tobacco smoke in any public place in the past 7 days	6680	1886632	51.2	49.2	53.2	3527	1001060	53.2	50.9	55.5	3153	885572	49.1	46.7	51.5
<b>Inside entertainment centers such as cinemas, karaoke centers, game arcades</b>	1743	485441	13.2	11.9	14.5	1046	290271	15.5	13.7	17.4	697	195169	10.8	9.4	12.4
<b>Inside Public Transport</b>	1913	580327	15.8	14.6	17.0	919	291414	15.5	14.1	17.0	994	288914	16.0	14.5	17.7
<b>Public Transport stations</b>	3437	992434	26.9	25.1	28.9	1759	508416	27.0	24.8	29.4	1678	484018	26.8	24.5	29.3
<b>Inside schools, colleges, or universities</b>	1982	491574	13.4	11.6	15.4	1188	302236	16.1	14.0	18.4	794	189338	10.5	8.7	12.6
<b>Inside school buses</b>	825	281540	7.6	6.7	8.7	431	150583	8.0	6.8	9.4	394	130957	7.3	6.3	8.4
<b>Inside shopping complexes</b>	2723	775503	21.1	19.8	22.4	1349	394286	21.0	19.5	22.6	1374	381216	21.2	19.2	23.2

Table 3.20: Second Hand Smoke (SHS) exposure among all adolescents during the past 7 days by gender (cont.)

All	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		
				Lower	Upper			Lower	Upper				Lower	Upper	
1850	510187	13.9	12.8	15.0	1211	343312	18.3	16.5	20.1	639	166875	9.3	8.1	10.5	
2849	857360	23.3	21.6	25.1	1403	423826	22.5	20.7	24.5	1446	433535	24.1	21.9	26.4	
3954	1114810	30.3	28.6	32.0	1992	573725	30.6	28.5	32.7	1962	541085	30.0	28.1	32.0	

Inside sports stadiums, sports complexes, or gymnasiums  
Inside parent's/guardian's transport  
In R&R area on highways

Table 3.21: Exposure to tobacco smoking activities among all adolescents during the past 30 days by gender

All	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		
				Lower	Upper			Lower	Upper				Lower	Upper	
3714	1002628	27.3	25.1	29.5	2251	598328	31.9	29.2	34.7	1463	404300	22.4	20.1	24.9	
8953	2532785	69.0	66.7	71.1	4466	1278683	68.1	65.6	70.5	4487	1254102	69.8	67.1	72.4	

Saw someone smoking inside the school compound in the last 30 days  
Saw someone smoking outside the school compound in the last 30 days







Table 3. 24: Anti-tobacco information noticed by all adolescents by gender

	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Been taught on the danger of tobacco smoking during the last school year	9858	2803769	76.1	74.0	78.1	4846	1409594	75.0	72.8	77.0	5012	1394175	77.3	74.5	79.9
Seen anti-tobacco advertisements in the past 12 months on television, cinemas, social media	11384	3212462	87.3	86.0	88.5	5594	1605964	85.5	83.7	87.1	5790	1606498	89.2	87.5	90.7
Anti-tobacco messages noticed at sports events in the past 30 days (Among those who attended)	3603	1000791	48.0	45.3	50.8	2014	569776	49.2	46.1	52.3	1589	431015	46.6	42.8	50.4

Table 3.25: Anti-tobacco information noticed among current cigarette smokers by gender

Current Smokers	Overall			Male			Female						
	Count	Estimated Population	Prevalence (%)	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
							Lower	Upper				Lower	Upper
Been taught on the danger of tobacco smoking during the last school year	1005	306949	74.2	923	283119	75.0	70.2	79.3	82	23831	65.9	45.3	81.9
Seen anti-tobacco advertisements in the past 12 months on television, cinemas, social media	1213	369279	89.6	1121	337105	89.6	86.6	92.1	92	32174	89.0	78.7	94.7
Anti-tobacco messages noticed at sports events in the past 30 days (Among those who attended)	500	141017	50.2	465	131223	51.4	45.1	57.7	35	9794	38.2	19.6	61.0



Table 3.27: Ownership and receptivity to tobacco marketing among all adolescents by gender

	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Students who owned something with a tobacco brand logo on it <sup>1</sup>	601	174331	4.7	4.1	5.5	448	131667	7.0	5.9	8.4	153	42665	2.4	1.8	3.0
Non-tobacco users who owned something with a tobacco brand logo on it, or might in the future <sup>2,3</sup>	235	70572	2.7	2.2	3.3	149	47437	4.4	3.4	5.7	86	23135	1.5	1.1	2.0

<sup>1</sup>For example, a T-shirt, pen, backpack.

<sup>2</sup>Those who might use or wear something that has a tobacco company or product name or picture on it.

<sup>3</sup>Considered highly receptive to tobacco marketing (at risk for future tobacco use).

Table 3.28: Tobacco promotion noticed among all adolescents by gender

All	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
During the last 30 days, have you noticed/ever seen :															
a. Any scene / action of people smoking on TV shows / videos / movies in the last 30 days	10105	2846058	77.2	75.5	78.9	5013	1458589	77.5	75.6	79.3	5092	1387469	76.9	74.5	79.2
b. Any advertisements or promotions of tobacco products at points of sale	4914	1377740	37.4	35.8	39.1	2531	729885	38.8	36.7	40.9	2383	647855	35.9	33.1	38.8
-(a)Yes, it attracted my attention	438	119635	3.2	2.8	3.8	325	87465	4.7	3.9	5.5	113	32170	1.8	1.3	2.4
-(b)(Yes but it did not attract my attention	4476	1258105	34.2	32.5	35.9	2206	642420	34.2	32.1	36.3	2270	615685	34.2	31.4	37.0
Ever offered a free tobacco product from a tobacco company representative	316	90645	2.5	2.1	2.9	241	68908	3.7	3.1	4.4	75	21737	1.2	0.8	1.7

Table 3.29: Tobacco promotion noticed among current cigarette smokers by gender

Current Smoker	Overall				Male				Female							
	Count	Estimated Population	Prevalence (%)		95% CI		Count	Estimated Population	Prevalence (%)		95% CI					
			Lower	Upper	Lower	Upper			Lower	Upper						
During the last 30 days, have you noticed/ever seen :																
a. Any scene / action of people smoking on TV shows / videos / movies in the last 30 days	1052	323371	78.2	81.6	74.4	81.6	965	294096	77.9	74.2	81.3	87	29275	81.0	67.6	89.7
b. Any advertisements or promotions for tobacco products at points of sale	581	168347	40.7	45.0	36.6	45.0	540	159428	42.3	37.8	46.8	41	8919	24.7	13.8	40.2
-(a) Yes, it attracted my attention	192	52208	12.6	14.8	10.7	14.8	180	50178	13.3	11.3	15.6	12	2031	5.6	1.9	15.1
-(b) (Yes but it did not attract my attention)	389	116139	28.1	31.9	24.5	31.9	360	109250	29.0	25.1	33.2	29	6888	19.1	10.4	32.4
Ever offered a free tobacco product from a tobacco company representative	118	36273	8.8	11.4	6.7	11.4	107	33591	8.9	6.8	11.6	11	2683	7.4	2.7	18.8

Table 3.30: Tobacco promotion noticed among non-smokers by gender

Never Smoker	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
During the last 30 days, have you noticed/ever seen :															
a. Any scene / action of people smoking on TV shows / videos / movies in the last 30 days	7908	2217692	76.6	74.6	78.5	3178	935079	76.6	74.2	79.0	4730	1282613	76.5	74.1	78.8
b. Any advertisements or promotions for tobacco products at points of sale	3746	1058151	36.5	34.4	38.7	1530	451457	37.0	34.6	39.4	2216	606695	36.2	33.1	39.4
-(a) Yes, it attracted my attention	190	54991	1.9	1.4	2.5	105	27802	2.3	1.7	3.1	85	27189	1.6	1.2	2.2
-(b) (Yes, but it did not attract my attention)	3556	1003160	34.7	32.6	36.8	1425	423654	34.8	32.4	37.2	2131	579506	34.6	31.6	37.8
Ever offered a free tobacco product from a tobacco company representative	161	46839	1.6	1.3	2.0	105	29084	2.4	1.8	3.1	56	17754	1.1	0.7	1.6



Table 3.31: Knowledge and attitude towards smoking, smoking cessation and social smoking among all adolescents by gender

Knowledge/ Attitude	Overall			Male				Female							
	Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI		Count	Estimated population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Definitely thought it is difficult to quit once someone starts smoking tobacco	4161	1179027	32.0	30.6	33.5	2030	592111	31.5	29.7	33.3	2131	586916	32.5	30.4	34.7
Definitely it is not difficult for them to quit once someone starts smoking tobacco	2170	650381	17.7	15.9	19.6	1340	401787	21.4	19.3	23.6	830	248594	13.8	11.9	15.9
Thought smoking tobacco helps people feel more comfortable at celebrations, parties and social gatherings.	1068	288966	7.8	6.9	8.9	681	181714	9.7	8.4	11.1	387	107252	6.0	5.0	7.1
Thought smoking tobacco helps people feel less comfortable at celebrations, parties and social gatherings.	8717	2467534	67.0	65.0	69.0	4019	1166679	62.1	59.8	64.3	4698	1300855	72.2	69.8	74.4
Thought smoking tobacco helps people feel no difference at celebrations, parties and social gatherings.	3341	924905	25.1	23.6	26.7	1878	531249	28.3	26.5	30.1	1463	393656	21.8	20.0	23.8
Thought the smoke from other people's cigarette smoking is harmful	11842	3302020	89.6	88.0	91.0	5748	1630576	86.7	84.8	88.4	6094	1671444	92.7	91.1	94.0

Table 3.31: Knowledge and attitude towards smoking, smoking cessation and social smoking among all adolescents by gender (cont.)

Knowledge/ Attitude	Overall				Male				Female			
	Count	Estimated population	Prevalence (%)	95% CI Lower Upper	Count	Estimated population	Prevalence (%)	95% CI Lower Upper	Count	Estimated population	Prevalence (%)	95% CI Lower Upper
Favour of banning smoking inside enclosed public places (such as shops, restaurants, buses, taxis, trains, schools, playgrounds, gymnasiums, sports center and shopping malls)	11365	3168437	86.3	84.3 88.0	5504	1559679	83.2	80.9 85.3	5861	1608758	89.4	87.5 91.1
Knew that smoking under the age of 18 is an offence under the law	10587	2960285	80.4	78.4 82.2	5190	1473550	78.4	76.0 80.5	5397	1486735	82.4	80.1 84.5
Knew that buying cigarettes under the age of 18 is an offence under the law	9469	2609486	70.9	68.7 73.0	4645	1303541	69.4	67.1 71.6	4824	1305946	72.5	69.8 75.1
Knew that possessing cigarettes under the age of 18 is an offence under the law	9578	2649749	72.0	70.2 73.8	4636	1304252	69.4	66.9 71.9	4942	1345497	74.7	72.8 76.6

Table 3.32: Noticed health warnings on cigarette packages among current and never cigarette smokers by gender

	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)		Count	Estimated Population	Prevalence (%)		Count	Estimated Population	Prevalence (%)				
			Lower	Upper			Lower	Upper			Lower	Upper			
Current smokers who noticed health warnings	1211	369047	89.3	86.5	91.5	1122	337528	89.5	86.6	91.7	89	31519	87.2	74.2	94.2
Current smokers who noticed health warnings & thought of quitting smoking	718	203331	55.1	49.3	60.7	665	185865	55.1	48.7	61.3	53	17466	55.4	43.3	66.9
Those who never smoked who noticed health warnings & thought of not starting to smoke	3428	947530	47.4	44.8	50.1	1569	436587	50.1	46.6	53.5	1859	510943	45.4	42.2	48.7

Table 3.33: Susceptibility to tobacco/other tobacco products usage

Susceptibility to tobacco/other tobacco product usage	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Never tobacco users susceptible to tobacco use in the future <sup>11</sup>	957	273136	10.4	9.1	11.8	517	155147	14.4	12.6	16.5	440	117989	7.6	6.4	9.1
Non-smokers who thought they might enjoy smoking a cigarette <sup>12</sup>	219	64987	2.2	1.7	3.0	158	48900	4.0	2.9	5.6	61	16087	1.0	0.7	1.4

<sup>11</sup>Susceptible to future tobacco use includes those who answered “Definitely yes”, “Probably yes”, or “Probably not” to using tobacco if one of their best friends offered it to them, or those who answered “Definitely yes”, “Probably yes”, and “Probably not” to using tobacco during the next 12 months.

<sup>12</sup>Those who answered “Agree” or “Strongly agree” to the statement: “I think I might enjoy smoking a cigarette”.

### 3.10 References

1. Hopkinson, NS., Lester-George, A., Ormiston-Smith, N., Cox, A. & Arnott, D. Child uptake of smoking by area across the UK. *Thorax* 2013. doi:10.1136/thoraxjnl-2013-204379Breslau, N. and E.L.
2. Peterson, *Smoking cessation in young adults: age at initiation of cigarette smoking and other suspected influences*. *American journal of public health*, 1996. 86(2): p. 214-220.
3. *Global Youth Tobacco Survey (GYTS) Malaysia*. Kuala Lumpur, Malaysia: Ministry of Health Malaysia, 2003.
4. *Global Youth Tobacco Survey (GYTS) Malaysia*. Kuala Lumpur, Malaysia: Ministry of Health Malaysia, 2009.
5. Kyrlesi, A., et al., *Tobacco use among students aged 13–15 years in Greece: the GYTS project*. *BMC Public Health*, 2007. 7(1): p. 3.
6. Robinson, S. and C. Bugler, *General lifestyle survey 2008*. Smoking and drinking among adults, 2008.
7. WHO 2015. WHO Tobacco Fact Sheet N°339. Updated June 2016.  
<http://www.who.int/mediacentre/factsheets/fs339/en/>



## **E-CIGARETTE / VAPE USE**



## 4. E-CIGARETTE/VAPE USE

### Key findings

- The prevalence of current e-cigarette/vape users among Malaysian adolescents aged 10-19 years was 9.1% while the prevalence of ever e-cigarette/vape users was 19.1%.
- The prevalence of current e-cigarette/vape users among Malaysian adolescents aged 13-15 years was 11.3%.
- 46.5% of ever e-cigarette/vape users tried their first e-cigarette/vape before the age of 14 years.
- The prevalence of current dual users (e-cigarettes/vape and cigarettes) was 5.2%.
- 46.1% of current dual users started with cigarette smoking first.
- Only 10.0% of current dual users started with e-cigarette/vape.
- 37.5% of current e-cigarette/vape users knew that their e-cigarette/vape contained nicotine.
- 67.5% of current e-cigarette/vape users wanted to quit immediately while 71.6% tried to quit in the past 12 months.
- 41.4% of all adolescents felt that e-cigarette/vape was equally harmful as cigarette smoking.

### 4.1 Introduction

An electronic cigarette (e-cigarette) is a handheld electronic device designed to deliver aerosol by vapourising flavoured liquid containing nicotine, glycerol or propylene glycol which users would inhale into the respiratory system<sup>1</sup>. The use of e-cigarettes has gained popularity worldwide since its introduction in the early 2000's<sup>2</sup>. E-cigarettes have been claimed to be less harmful than cigarette smoking and as an effective alternative or aid to quit cigarette smoking<sup>3</sup>. However, studies on the efficacy of e-cigarettes in smoking cessation are inconsistent<sup>2</sup>.

In Malaysia, the prevalence of e-cigarette use among adults aged 15 years and older in 2011 was 0.8%<sup>4</sup>. However, the prevalence of smokeless tobacco (including e-cigarettes) among adults aged 15 years and older was 10.9% in 2015<sup>5</sup>. At present, there is no nationally representative study on the use of e-cigarettes/vape among Malaysian adolescents. The objectives of this study were to determine the prevalence of e-cigarette/vape users among Malaysian adolescents, to assess student related knowledge and behaviour towards e-cigarette/vape usage and to determine the prevalence of dual users (tobacco smoking and e-cigarette/vape usage)



## 4.2 Current e-cigarette/vape users

### 4.2.1 Prevalence of current e-cigarette/vape users

This survey found that 9.1% (95% CI: 7.7, 10.7) of the adolescents were current users of e-cigarettes/vape. More male adolescents [16.0% (95% CI: 13.8, 18.5)] were current e-cigarettes/vape users compared to female adolescents [2.8% (95% CI: 1.9, 4.0)]. The highest prevalence of current e-cigarette/vape usage was among adolescents from Negeri Sembilan [13.1% (95% CI: 9.3-18.1)], followed by Perlis [12.7% (95% CI: 8.2, 19.2)] (**Table 4.1**).

The overall prevalence of current e-cigarettes/vape users was highest among the 16 – 19 year olds [13.0% (95% CI: 10.2, 16.4)] and lowest among adolescents aged 12 years or younger [4.8% (95% CI: 3.6, 6.4)] (**Table 4.2**).

### 4.2.2 Pattern of current e-cigarettes/vape usage in the last 30 days

Overall, 47.8% (95% CI: 43.3, 52.3) of the current users used e-cigarettes/vape for 1-2 days followed by 3- 5 days [23.0% (95% CI: 19.6, 26.9)] and 6-9 days [9.6% (95% CI: 7.4, 12.4)]. Similarly, about half of the male adolescents [45.3% (95% CI: 40.5, 50.2)] used e-cigarettes/vape for 1-2 days and 3-5 days [24.0% (95% CI: 20.1-28.3)]. A similar pattern of e-cigarettes/vape usage was observed among female adolescents, that is 1-2 days [61.4% (95% CI: 49.6, 71.9)] and 3-5 days [18.1% (95% CI: 11.8, 26.7)] (**Table 4.3**).

### 4.2.3 Frequency of e-cigarettes/vape usage in a typical day in the last 30 days

Overall, two in five adolescents [40.9% (95% CI: 36.9, 45.0)] used e-cigarettes/vape once a day and one in three adolescents [33.9% (95% CI: 30.2, 37.8)] used it 2-5 times a day. Among the male adolescents, the prevalence of using e-cigarettes/vape once a day and 2-5 times a day was 39.4% (95% CI: 35.1, 43.8)] and 34.0% (95% CI: 30.0, 38.2)] respectively. Among the female adolescents, the prevalence of using e-cigarettes/vape once a day and 2-5 times a day was 47.7% (95% CI: 37.9, 57.8) and 33.6% (95% CI: 22.6, 46.6) respectively (**Table 4.4**).

### 4.2.4 Cessation indicators among current e-cigarette/vape users

Overall, among the current e-cigarette/vape users, 67.5% (95% CI: 59.3, 74.7) wanted to quit immediately, 71.6% (95% CI: 64.2, 78.0) tried to quit in the past 12 months and 80.8% (95% CI: 75.6, 85.2) of them thought that they would be able to stop if they wanted to.

Among the adolescents, 24.2% (95% CI: 19.1, 30.1) had ever received help or advice from a programme or from a professional, 19.2% (95% CI: 15.1, 24.2) received help/advice from anti-smoking programmes in school and only 4.9% (95% CI: 3.2, 7.5) received help/advice from clinics or hospitals to quit smoking (**Table 4.5**).

### 4.2.5 Sources for obtaining e-cigarettes/vape among current users

Among the current e-cigarette/vape users, most of them obtained their e-cigarettes/vape from friends [43.3% (95% CI 38.5, 48.2)], followed purchasing them from shops/kiosks/shopping malls [17.5%

(95% CI: 14.3, 21.1)] and 15.0% (95% CI: 12.0, 18.6) got it from someone else. A similar pattern was observed among male adolescents. However, among female users, 19.6% (95% CI: 11.8, 30.7) obtained the e-cigarettes/vape from family members as compared to 10.3% (95% CI: 8.1, 13.1) of the male adolescents (**Table 4.6**).

#### 4.2.6 Accessibility of e-cigarettes/vape

Overall, more than half [53.2% (95% CI: 48.7, 57.7)] of the adolescents aged below 18 years were not prevented from buying the e-cigarettes/vape. More than half of the male adolescents [52.7% (95% CI: 47.4, 57.9)] and female adolescents [56.4% (95% CI: 46.8, 65.5)] who were current e-cigarette/vape users were not prevented from buying e-cigarettes/vape because of their age.

#### 4.2.7 Estimated cost of e-cigarettes/vape per month among current e-cigarette/vape users

Among the current e-cigarette/vape users, 34.9% (95% CI: 29.9, 40.2) had never bought any e-cigarettes/vape while 23.9% (95% CI: 20.2, 28.0) spent less than RM50.00 per month (**Table 4.7**).

#### 4.3 Prevalence of current single users (e-cigarettes/vape/cigarettes) and dual users (e-cigarettes/vape and cigarettes)

The prevalence of current dual users was 5.2% (95% CI: 4.1, 6.5) whereas the prevalence of current single users was 3.9 % (95% CI: 3.3, 4.7) (**Table 4.8**).

Among the current dual users, almost half of them started with cigarettes [46.1% (95% CI: 38.5, 53.8)], while 10.0 % (95% CI: 6.6, 14.8) started with e-cigarettes/vape (**Table 4.9**).

#### 4.4 Types of e-cigarettes/vape last used among e-cigarette/vape users

Approximately, one third of the adolescents (33.7%, 95% CI: 29.9, 37.8) who ever used e-cigarettes/vape used the modular system/Vape-MODS and 1 in 10 [13.4% (95% CI: 11.2, 16.0)] used disposable e-cigarettes. A similar pattern was observed among male students. However, among the female adolescents, 29.1% (95% CI: 19.4, 41.2) used a rechargeable e-cigarette kit containing a refillable liquid (**Table 4.10**).

Similar to the ever users, 34.6% (95% CI: 29.3, 40.4) of the current e-cigarette/vape users used the modular system/ Vape-MODS and 11.0% (95% CI: 8.8, 13.7) used disposable e-cigarettes and the female adolescents used a rechargeable e-cigarette kit containing a refillable liquid [36.6% (95% CI: 22.2, 53.8)] (**Table 4.11**).

#### 4.5 Nicotine content in e-cigarettes/vape as reported by ever and current e-cigarette/vape users

Among the ever e-cigarette/vape users, 45.0% (95% CI: 41.5, 48.6) of them were not sure whether the e-cigarette/vape they were using contained nicotine or not. 32.1% (95% CI: 29.0, 35.5) said that their e-cigarettes/vape contained nicotine whereas 22.8% (95% CI: 19.6, 26.4) said that it did not contain nicotine (**Table 4.12**).

While among the current e-cigarettes/vape users, 38.6% (95% CI: 33.9, 43.6) of them were not sure whether the e-cigarette/vape they were using contained nicotine or not. 37.5% (95% CI: 32.8, 42.6) said that their e-cigarettes/vape contained nicotine whereas 23.8% (95% CI: 20.1, 28.0) said that it did not contain nicotine (**Table 4.13**).

#### 4.6 Ever e-cigarette/vape users

##### 4.6.1 Prevalence of ever heard of e-cigarettes/vape

Overall, 87.1% (95% CI: 85.4, 88.7) of the adolescents had ever heard of e-cigarettes/vape. Almost nine in ten [87.1% (95% CI: 85.2, 88.7)] male adolescents and 87.2%, (95% CI: 85.1, 89.1) of female adolescents had ever heard of e-cigarettes/vape. The highest prevalence of ever having heard of e-cigarettes/vape was among those from WP Putrajaya [92.5% (95% CI: 88.0, 95.4)], followed by Pahang [92.4% (95% CI: 86.6, 95.8)] and Melaka [92.2% (95% CI: 84.7, 96.2)]. The lowest prevalence of ever heard of e-cigarettes/vape was among adolescents from Penang [76.8% (95% CI: 66.0, 85.0)] (**Table 4.14**).

##### 4.6.2 Prevalence of ever e-cigarette/vape users

This study showed that 19.1% (95% CI: 17.4, 21.0) of the adolescents had ever tried using e-cigarettes/vape. Male adolescents [29.5% (95% CI: 26.8, 32.4)] were almost four times more than female adolescents [8.3% (95% CI: 6.8, 10.0)] to have ever tried using e-cigarettes/vape. The highest prevalence of ever tried using e-cigarettes/vape was among those from Negeri Sembilan [24.7% (95% CI: 19.6, 30.6)], followed by Perlis [21.6% (95% CI: 16.8, 27.4)] and Sabah & WP Labuan [20.7% (95% CI: 15.5, 27.1)]. The lowest prevalence of ever tried using e-cigarettes/vape was among adolescents from Terengganu [16.0% (95% CI: 12.0, 21.1)] (**Table 4.15**).

The overall prevalence of ever tried using e-cigarettes/vape was highest among the 16 – 19 year olds [27.1% (95% CI: 24.2, 30.2)] followed by the 13 – 19 year olds [(24.4% (95% CI: 22.4, 26.4)]. The lowest prevalence was found among adolescents aged 12 years or younger at [10.3% (95% CI: 8.4, 12.5)]. Similar patterns of ever tried using e-cigarettes/vape were observed among male and female adolescents (**Table 4.16**).

##### 4.6.3 Initiation age of e-cigarettes/vape usage among ever e-cigarette/vape users

Overall, 36.9% (95% CI: 30.4, 44.0) of the adolescents started using e-cigarettes/vape at the age of 14-15 years, followed by 12-13 years [25.2% (95% CI: 20.0, 31.2)] and 16 years and above [16.5% (95% CI: 12.5, 21.6)] (**Table 4.17**).

##### 4.6.4 Prevalence of ever e-cigarette/vape users who first tried a conventional cigarette before the age of 14 years

Overall, 46.5% (95% CI: 39.8, 53.4) of ever e-cigarette/vape users first tried a conventional cigarette before the age of 14. The prevalence among male and female adolescents were 46.3 % (95% CI: 39.8, 53.3) and 47.8% (95% CI: 35.8, 60.0) respectively (**Table 4.18**).

#### 4.6.5 Reasons to start using e-cigarettes/vape among ever users

Among ever e-cigarette/vape users, 77.3% (95% CI: 73.9, 80.3) of the adolescents liked the taste and smell of e-cigarettes/vape, 63.8% (95% CI: 59.8, 67.7) wanted to experiment with them while 63.6% (95% CI: 60.3, 66.8) stated that e-cigarettes/vape was safer than tobacco cigarettes. Among females who were ever e-cigarette/vape users, the reasons to start using e-cigarettes/vape were liking the taste and smell [70.7% (95% CI: 61.5, 78.5)], followed by popularity [65.7% (95% CI: 56.6, 73.7)] and wanting to experiment with them [64.3% (95% CI: 55.5, 72.2)] (Table 4.19).

#### 4.7 Ever read about danger of e-cigarettes/vape on posters or pamphlets

Overall, 58.9% (95% CI: 57.1, 60.7) of the adolescents had ever read any posters or pamphlets on the dangers of e-cigarette/vape usage in the past 12 months. More female adolescents [61.8% (95% CI: 59.4, 64.1)] had ever read any posters or pamphlets on the dangers of e-cigarette/vape usage in the past 12 months compared to male adolescents [56.1% (95% CI: 54.0, 58.1)].

#### 4.8 Commercial promotion of e-cigarettes/vape

Overall, 10.6% (95% CI: 9.5, 11.9) of the adolescents had been offered a free trial session of e-cigarettes/vape and 7.9% (95% CI: 6.9, 9.0) had been offered free e-cigarettes/vape liquid by vendors. More male adolescents [16.4% (95% CI: 14.5, 18.5)] were offered a free trial session for e-cigarettes/vape as compared to female adolescents [4.8% (95% CI: 3.9, 5.8)]. Similarly, more male adolescents [11.6% (95% CI: 9.9, 13.4)] were offered free e-cigarette/vape liquid (e-liquid) as compared to female adolescents [4.2% (95% CI: 3.5, 5.0)] (Table 4.20).

#### 4.9 Perception towards e-cigarettes/vape usage

Overall, 11.9% (95% CI: 10.4, 13.6) of the adolescents who were non users thought they might enjoy using e-cigarettes/vape. More male adolescents [18.3% (95% CI: 16.0, 20.9)] thought that they would enjoy using e-cigarettes/vape as compared to female adolescents [5.2% (95% CI: 4.3, 6.4)].

Among all the adolescents, 41.4% (95% CI: 39.6, 43.1)] felt that e-cigarette/vape use was equally harmful as cigarette smoking, 39.5% (95% CI: 37.6, 41.5) felt that it was more harmful compared to cigarette smoking and 19.1% (95% CI: 17.9, 20.4) felt that it was less harmful compared to cigarette smoking (Table 4.21).

It was found that the perception about the harmfulness of e-cigarettes/vape compared to cigarette smoking was different among males and females. The prevalence of male adolescents who felt that e-cigarette/vape usage was equally harmful [37.2% (95% CI: 35.2, 39.2)] and more harmful [37.9% (95% CI: 35.9, 40.1)] compared to cigarette smoking was similar. On the other hand, almost half of the female adolescents [45.7% (95% CI: 43.3, 48.1)] felt e-cigarette/vape usage was equally harmful as cigarette smoking, 41.2% (95% CI: 38.5, 43.9) felt that it was more harmful compared to cigarette smoking and only 13.1% (95% CI: 11.8, 14.6) felt that it was less harmful compared to cigarette smoking (Table 4.21).

Among the current e-cigarette/vape users, 38.5% (95% CI: 34.2, 43.0) felt that e-cigarette/vape usage was equally harmful as cigarette smoking, 35.6% (95% CI: 30.5, 41.0) felt that it was less harmful compared to cigarette smoking and 25.9% (95% CI: 22.5, 29.6) felt that it was more harmful compared to cigarette smoking (Table 4.22).

#### 4.10 Susceptibility to initiate e-cigarette/vape use among non e-cigarette/vape users

Overall, 28.0% (95% CI: 25.9, 30.2)] of the non-users thought that they might use e-cigarettes/ vape use in the future. This was higher among male adolescents [39.8% (95% CI: 37.0, 42.7)] compared to female adolescents [15.7% (95% CI: 13.8, 17.8)].

#### 4.11 Conclusion

The findings of the e-cigarette/vape module showed that the prevalence of ever e-cigarette/vape users was 19.1% while the prevalence of current e-cigarette/vape users was 9.1%. The prevalence was higher among male adolescents compared to female adolescent for both ever and current e-cigarette/vape users. It was found that 46.5% of ever e-cigarette/vape users tried their first e-cigarette/vape before the age of 14. The prevalence of current dual users of e-cigarettes/vape and cigarettes was 5.4%. Out of which, 10.8% of them started with e-cigarettes/vape before cigarettes. Almost three quarters (67.5%) of the current e- cigarette/vape users wanted to quit immediately while 71.6% tried to quit in the past 12 months. Less than half (41.4%) of all the adolescents felt that e-cigarettes/vape was equally harmful as cigarette smoking. Alarmingly, more than half (53.2%) of the current users who were below 18 years were not prevented from buying the e-cigarettes/vape.

**Table 4.1: Prevalence of current e-cigarette/vape users by socio-demographic characteristics among all adolescents**

Socio-demographic Characteristics	Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
<b>MALAYSIA</b>	1071	299214	9.1	7.7	10.7
<b>Sex</b>					
Male	911	252348	16.0	13.8	18.5
Female	160	46866	2.8	1.9	4.0
<b>School Level</b>					
Primary education	199	59919	4.7	3.5	6.2
Secondary education	872	239295	12.0	10.1	14.2
<b>Age</b>					
12 or younger	201	62306	4.8	3.6	6.4
13 -15	453	141233	11.3	8.9	14.2
16 -19	417	95675	13.0	10.2	16.4
13 -19	870	236908	11.9	10.1	14.1
<b>Location</b>					
Urban	611	121995	8.0	6.5	9.8
Rural	460	177219	10.1	8.0	12.7
<b>State</b>					
Johor	49	41943	11.1	6.1	19.2
Kedah	63	17132	7.3	5.3	10.1
Kelantan	62	14332	7.3	4.1	12.4
Melaka	31	8740	6.9	4.0	11.8
Negeri Sembilan	73	19891	13.1	9.3	18.1
Pahang	79	15465	9.3	5.8	14.4
Penang	89	16961	9.4	5.2	16.4
Perak	59	19825	7.5	5.2	10.7
Perlis	80	3982	12.7	8.2	19.2
Selangor	87	55552	9.5	5.5	16.0
Terengganu	53	8256	5.6	3.4	9.1
Sabah & WP Labuan	101	30611	9.7	5.6	16.3
Sarawak	82	29211	9.6	6.3	14.4
WP Kuala Lumpur	96	16356	9.0	5.4	14.7
WP Putrajaya	67	958	7.9	5.0	12.3

Table 4.2: Prevalence of current e-cigarette/vape users by gender and age group

Age	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
12 or younger	201	62306	4.8	3.6	6.4	160	48662	7.5	5.6	9.9	41	13644	2.1	1.4	3.2
13-15	453	141233	11.3	8.9	14.2	384	118970	19.5	15.8	23.9	69	22263	-	-	-
16-19	417	95675	13.0	10.2	16.4	367	84716	26.5	22.3	31.3	50	10959	2.6	1.7	4.0
13-19	870	236908	11.9	10.1	14.1	751	203686	21.9	19.0	25.2	119	33222	3.1	1.9	5.2

Table 4.3: Pattern of e-cigarettes/vape usage in the last 30 days among current e-cigarette/vape users

Frequency of E-Cigarettes/Vape used	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
<b>MALAYSIA</b>															
1-2 days	545	143034	47.8	43.3	52.3	448	114277	45.3	40.5	50.2	97	28757	61.4	49.6	71.9
3-5 days	222	68909	23.0	19.6	26.9	193	60439	24.0	20.1	28.3	29	8470	18.1	11.8	26.7
6-9 days	105	28752	9.6	7.4	12.4	89	26214	10.4	7.8	13.8	16	2538	5.4	2.5	11.2
10 -19 days	69	21594	7.2	5.1	10.1	63	19632	7.8	5.5	10.9	6	1962	-	-	-
20-29 days	40	10403	3.5	2.1	5.7	37	9630	3.8	2.3	6.3	3	772	-	-	-
All 30 days	90	26522	8.9	6.3	12.3	81	22156	8.8	6.4	11.9	9	4366	-	-	-

Table 4.4: Frequency of e-cigarette/vape usage per day among current users in a typical day in the last 30 days

Number of times E-Cigarettes/Vape was used per day	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
<b>MALAYSIA</b>															
Once per day	452	36.9	40.9	36.9	45.0	361	98827	39.4	35.1	43.8	91	25439	47.7	37.9	57.8
2-5 times per day	366	30.2	33.9	30.2	37.8	306	85210	34.0	30.0	38.2	60	17884	33.6	22.6	46.6
6-10 times per day	105	7.3	9.7	7.3	12.8	98	26684	10.6	7.6	14.7	7	2876	-	-	-
11-20 times per day	58	4.4	6.1	4.4	8.2	55	16838	6.7	4.9	9.2	3	1575	-	-	-
More than 20 times per day	109	6.5	9.5	6.5	13.6	94	23305	9.3	6.8	12.5	15	5524	10.4	3.9	24.7



Table 4.5: Cessation indicators among current e-cigarette/vape users by gender

Cessation indicators	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Tried to stop using e-Cigarettes/vape in the past 12 months	445	132686	71.6	64.2	78.0	381	110547	71.4	64.7	77.2	64	22139	72.7	55.5	85.0
Wanted to stop using e-cigarettes/vape now	395	113949	67.5	59.3	74.7	328	94797	67.2	58.3	75.1	67	19152	68.8	48.6	83.7
Thought they would be able to stop e-cigarettes/vape if they wanted to	447	127424	80.8	75.6	85.2	392	110968	82.2	76.5	86.7	55	16456	72.7	54.4	85.6
Have ever received help/advice from a programme or professional to stop e-cigarette/vape	203	63670	24.2	19.1	30.1	179	58471	26.3	20.9	32.4	24	5199	12.6	6.4	23.6
Have ever received help/advice from anti-smoking programmes in school	162	50711	19.2	15.1	24.2	144	47386	21.3	17.0	26.4	18	3325	8.1	3.7	16.6
Have ever received help/advice from clinics / hospitals to quit smoking	41	12959	4.9	3.2	7.5	35	11085	5.0	3.1	8.0	6	1873	-	-	-

Table 4.6: Sources for obtaining e-cigarettes/vape among current e-cigarette/vape users by gender

Source	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Purchased from shops / kiosks / shopping malls	217	59717	17.5	14.3	21.1	191	50741	18.2	14.9	21.9	26	8976	14.3	8.8	22.3
Purchased from roadside stalls / night markets / 'downtown' / 'uptown'	89	24486	7.2	5.3	9.6	79	22070	7.9	5.8	10.8	10	2415	3.8	1.5	9.4
Purchased online	62	15691	4.6	3.2	6.5	54	11827	4.2	2.9	6.1	8	3864	-	-	-
Got them from someone else	168	51423	15.0	12.0	18.6	144	44934	16.1	12.9	19.9	24	6489	10.3	4.2	23.2
Got them from friends	512	148080	43.3	38.5	48.2	440	120182	43.0	37.8	48.4	72	27898	44.3	32.5	56.8
Got them from my family members	123	35382	10.3	8.1	13.1	81	23054	8.3	6.2	10.9	42	12327	19.6	11.8	30.7
Purchased from pharmacy	25	7392	2.2	1.2	3.8	21	6400	2.3	1.2	4.2	4	992	-	-	-

Table 4.7: Estimated cost of e-cigarettes/vape per month among current e-cigarette/vape users

Estimated cost	Overall						Male						Female					
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI				
				Lower	Upper				Lower	Upper				Lower	Upper			
Never bought e-cigarettes/vape	409	102346	34.9	29.9	40.2	349	90411	36.6	31.6	41.9	60	11935	25.7	15.4	39.6			
Less than RM 50.00	237	70025	23.9	20.2	28.0	209	59518	24.1	20.5	28.1	28	10507	22.6	14.8	33.0			
RM 50.00 until RM100.00	125	42636	14.5	10.8	19.4	109	37508	15.2	10.9	20.8	16	5128	11.0	5.3	21.7			
RM 101.00 until RM 300.00	67	19341	6.6	4.7	9.2	58	15447	6.3	4.5	8.7	9	3894	8.4	3.5	18.9			
RM 301.00 until RM 500.00	30	11328	3.9	1.8	8.1	25	8234	3.3	1.8	6.0	5	3094	-	-	-			
RM 501.00 or more	27	5634	1.9	1.1	3.3	26	5059	2.0	1.2	3.5	1	575	-	-	-			
Don't know/don't remember	165	41981	14.3	11.3	17.9	125	30689	12.4	9.5	16.1	40	11293	24.3	13.9	39.0			

Table 4.8: Prevalence of current single users (e-cigarettes/vape) and dual users (e-cigarettes/vape and cigarettes)

Types of Users	Overall						Male						Female					
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI				
				Lower	Upper				Lower	Upper				Lower	Upper			
Current single users	494	129210	3.9	3.3	4.7	372	97586	6.2	5.1	7.4	122	31624	1.9	1.4	2.5			
Current dual users	577	170005	5.2	4.1	6.5	539	154763	9.8	8.0	12.0	38	15242	0.9	0.4	1.9			

Table 4.9: Type of product used when initiating smoking (cigarette/e-cigarettes/vape) among current dual users by gender

Current Dual User	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Concurrent initiation of cigarettes & e-cigarettes/vape	256	74790	44.0	36.2	52.1	233	64234	41.5	35.1	48.2	23	10556	69.3	42.9	87.1
Started with cigarette	260	78288	46.1	38.5	53.8	249	74224	48.0	41.0	55.0	11	4064	26.7	10.5	52.9
Started with e-cigarettes/vape	61	16927	10.0	6.6	14.8	57	16305	10.5	7.1	15.4	4	622	4.1	1.0	15.0

Table 4.10: Types of e-cigarette/vape last used among ever e-cigarette/vape users by gender

Types of e-cigarette/vape used	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Disposable e-cigarettes (not rechargeable): e.g. 'shisha-stick'	304	82081	13.4	11.2	16.0	241	65594	13.1	10.8	15.8	63	16487	15.2	10.3	21.8
E-cigarette kit that can be charged with a pre-cartridge replacement	562	183109	30.0	26.5	33.7	470	153307	30.5	26.7	34.7	92	29802	27.4	20.6	35.5
Rechargeable e-cigarette kit containing a refillable liquid	459	139358	22.8	20.2	25.7	379	107720	21.5	18.4	24.8	80	31638	29.1	19.4	41.2
5 Modular system/'Vape-MODS'	842	206041	33.7	29.9	37.8	712	175258	34.9	30.8	39.3	130	30782	28.3	20.6	37.6

Table 4.11: Type of e-cigarette/vape last used among current e-cigarette/users by gender

Types of e-cigarette/vape used	Overall				Male				Female				
	Count	Estimated Population	Prevalence (%)		Count	Estimated Population	Prevalence (%)		Count	Estimated Population	Prevalence (%)		
			Lower	Upper			Lower	Upper			Lower	Upper	
Disposable e-cigarettes (not rechargeable). e.g: 'shisha-stick'	157	43231	11.0	8.8	143	40856	11.6	9.3	14	2375	5.9	2.5	13.5
E-cigarette kit that can be charged with a pre-cartridge replacement	361	120576	30.7	26.2	327	110728	31.4	26.4	34	9848	24.6	14.3	39.1
Rechargeable e-cigarette kit containing a refillable liquid	312	92485	23.6	20.3	277	77878	22.1	18.6	35	14607	36.6	22.2	53.8
5 Modular system/'Vape-MODS'	531	135827	34.6	29.3	487	122696	34.8	29.7	44	13131	32.9	20.2	48.6

Table 4.12 Nicotine content in e-cigarettes/vape as reported by ever users by gender

Nicotine content in e-cigarettes/vape as reported by ever users	Overall						Male						Female					
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI				
				Lower	Upper				Lower	Upper				Lower	Upper			
Yes	599	176777	32.1	29.0	35.5	529	154411	34.8	31.2	38.6	70	22366	21.1	15.2	28.5			
No	469	125556	22.8	19.6	26.4	394	107678	24.3	20.7	28.3	75	17878	16.9	11.9	23.4			
Not Sure	861	247525	45.0	41.5	48.6	663	181702	40.9	37.3	44.7	198	65823	62.1	53.5	69.9			

Table 4.13: Nicotine content in e-cigarettes/vape as reported by current users by gender

Nicotine content in e-cigarettes/vape as reported by current users	Overall						Male						Female					
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI				
				Lower	Upper				Lower	Upper				Lower	Upper			
Yes	351	102985	37.5	32.8	42.6	.064	92069	40.0	35.1	45.1	35	10916	24.8	16.9	34.8			
No	237	65384	23.8	20.1	28.0	206	57399	24.9	20.9	29.5	31	7984	18.1	10.9	28.5			
Not Sure	369	105897	38.6	33.9	43.6	289	80700	35.1	30.2	40.3	80	25197	57.1	47.8	66.0			

**Table 4.14: Prevalence of ever heard of e-cigarettes/vape by socio-demographic characteristics among all adolescents**

Socio-demographic Characteristics	Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
<b>MALAYSIA</b>	11525	3210334	87.1	85.4	88.7
<b>Sex</b>					
Male	5741	1636867	87.1	85.2	88.7
Female	5784	1573467	87.2	85.1	89.1
<b>School Level</b>					
Primary education	3184	1078559	79.5	76.1	82.5
Secondary education	8341	2131775	91.6	89.9	93.1
<b>Age</b>					
12 or younger	3263	1089632	79.6	76.2	82.6
13 -15	4792	1300280	90.6	88.0	92.7
16 -19	3470	820422	93.2	90.9	94.9
13 -19	8262	2120702	91.6	89.8	93.1
<b>Location</b>					
Urban	6747	1429845	85.2	82.9	87.3
Rural	4778	1780488	88.7	86.3	90.8
<b>State</b>					
Johor	687	367965	86.9	80.6	91.4
Kedah	761	219052	83.2	74.7	89.2
Kelantan	828	197599	89.1	83.8	92.8
Melaka	841	129854	92.2	84.7	96.2
Negeri Sembilan	709	151128	86.0	78.4	91.3
Pahang	799	170486	92.4	86.6	95.8
Penang	779	151403	76.8	66.0	85.0
Perak	710	255336	84.7	77.1	90.0
Perlis	677	30306	86.7	79.9	91.5
Selangor	789	607448	91.5	88.1	94.0
Terengganu	848	152735	91.9	86.6	95.3
Sabah & WP Labuan	790	310226	86.4	80.1	90.9
Sarawak	725	278881	83.5	76.7	88.7
WP Kuala Lumpur	741	175258	85.9	81.1	89.6
WP Putrajaya	841	12656	92.5	88.0	95.4



**Table 4.15: Prevalence of ever e-cigarette/vape users by socio-demographic characteristics among all adolescents**

Socio-demographic Characteristics	Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
<b>MALAYSIA</b>	2536	704340	19.1	17.4	21.0
<b>Sex</b>					
Male	2012	555319	29.5	26.8	32.4
Female	524	149021	8.3	6.8	10.0
<b>School Level</b>					
Primary education	442	135826	10.0	8.2	12.2
Secondary education	2094	568514	24.4	22.4	26.6
<b>Age</b>					
12 or younger	467	140492	10.3	8.4	12.5
13 -15	1089	325591	22.7	20.1	25.5
16 -19	980	238257	27.1	24.2	30.2
13 -19	2069	563848	24.4	22.4	26.4
<b>Location</b>					
Urban	1468	279744	16.7	14.5	19.1
Rural	1068	424596	21.2	18.7	23.9
<b>State</b>					
Johor	112	86945	20.5	13.7	29.6
Kedah	160	45944	17.5	13.9	21.8
Kelantan	176	38590	17.4	11.3	25.8
Melaka	98	23632	16.8	12.6	21.9
Negeri Sembilan	165	43242	24.7	19.6	30.6
Pahang	181	32824	17.8	12.9	24.1
Penang	166	32964	16.7	10.9	24.9
Perak	168	56840	18.9	14.5	24.2
Perlis	164	7540	21.6	16.8	27.4
Selangor	206	134499	20.3	15.3	26.4
Terengganu	141	26626	16.0	12.0	21.1
Sabah & WP Labuan	222	74339	20.7	15.5	27.1
Sarawak	168	59334	17.8	12.9	24.0
WP Kuala Lumpur	231	38517	18.9	13.4	26.0
WP Putrajaya	178	2506	18.3	13.2	24.8

Table 4.16: Prevalence of ever e-cigarette/vape users by gender and age group

Age	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
12 or younger	467	140492	10.3	8.4	12.5	372	110897	15.6	12.9	18.7	35	29595	4.5	3.3	6.2
13-15	1089	325591	22.7	20.1	25.5	887	266114	35.2	30.9	39.7	202	59476	8.8	6.4	12.0
16-19	980	238257	27.1	24.2	30.2	753	178307	43.2	39.3	47.2	227	59950	12.8	10.3	15.9
13-19	2069	563848	24.4	22.4	26.4	1640	444421	38.0	34.9	41.2	429	119427	10.4	8.5	12.7

Table 4.17: Age of initiation among ever e-cigarette/vape users by gender

Age of initiation of ever E-Cigarette/Vape users	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
7 or younger	110	32745	6.0	4.5	7.9	88	24722	5.5	4.0	7.4	22	8023	8.5	4.6	15.1
8-9	92	29082	5.3	3.7	7.6	76	24682	5.5	3.7	8.1	16	4399	4.7	2.3	9.3
10-11	169	54794	10.0	7.6	13.2	151	47829	10.6	7.9	14.0	18	6965	7.4	3.8	13.8
12-13	475	137600	25.2	20.0	31.2	397	111809	24.7	19.9	30.3	78	25792	27.3	17.0	40.6
14-15	743	201888	36.9	30.4	44.0	623	167392	37.0	30.2	44.4	120	34496	36.5	25.7	48.8
16 and above	380	90431	16.5	12.5	21.6	318	75541	16.7	12.3	22.3	62	14890	15.7	10.1	23.8



Table 4.19: Reason/s for e-cigarette/vape use among ever e-cigarette/vape users by gender

Ever E-Cigarette/ Vape users	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Liked the taste and smell of E-Cigarettes/Vape	1608	444305	77.3	73.9	80.3	1357	370756	78.7	74.9	82.1	251	73549	70.7	61.5	78.5
E-cigarettes/Vape is safer than tobacco cigarettes	1280	360545	63.6	60.3	66.8	1064	292278	63.5	60.4	66.4	216	68267	64.0	55.8	71.4
Wanted to experiment with e-cigarettes / vape	1322	367046	63.8	59.8	67.7	1097	299701	63.7	59.5	67.7	225	67345	64.3	55.5	72.2
Felt that e-cigarettes / vape is popular	1268	354398	61.0	57.2	64.6	1039	283005	59.9	55.7	64.0	229	71394	65.7	56.6	73.7
Offered by friends or family members	835	234871	40.9	37.9	44.0	695	191955	41.2	37.7	44.7	140	42916	39.9	33.3	46.9
E-cigarettes/ vape can help me to quit smoking	758	214091	38.6	35.6	41.7	675	191760	42.1	38.1	46.1	83	22331	22.5	15.8	31.1
E-cigarettes / vape is more economical than cigarettes	723	205663	37.4	33.8	41.2	619	174657	38.7	34.7	42.7	104	31006	31.6	23.9	40.6
E-cigarettes / vape is affordable	663	199073	36.2	32.2	40.3	559	165272	36.6	31.9	41.6	104	33801	34.1	28.0	40.7
Follow celebrity / idol trend	398	116125	20.3	16.5	24.6	333	92950	19.9	16.4	23.9	65	23175	21.8	14.6	31.2
E-cigarettes / vape is the same as smoking tobacco cigarettes	482	147414	26.2	22.9	29.9	415	120063	25.9	22.5	29.5	67	27352	28.0	18.4	40.1

Table 4.20: Commercial promotion of e-cigarettes/vape among all adolescents

Commercial promotion	Overall				Male				Female					
	Count	Estimated Population	Prevalence (%)	95% CI	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
								Lower	Upper				Lower	Upper
Offered a free trial session of e-cigarette/vape	1308	370071	10.6	9.5 - 11.9	1009	288197	16.4	14.5 - 18.5	299	81874	4.8	3.9 - 5.8		
Offered a free e-cigarette/ vape liquid (e-liquid)	952	273404	7.9	6.9 - 9.0	698	201469	11.6	9.9 - 13.4	254	71935	4.2	3.5 - 5.0		

Table 4.21: Perception towards e-cigarette/vape usage compared to cigarette smoking among all adolescents

Perception towards E-Cigarettes/Vape	Overall				Male				Female					
	Count	Estimated Population	Prevalence (%)	95% CI	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
								Lower	Upper				Lower	Upper
Less harmful than cigarette smoking	2554	702501	19.1	17.9 - 20.4	1684	465910	24.9	23.2 - 26.6	870	236591	13.1	11.8 - 14.6		
Equally harmful with cigarette smoking	5424	1519545	41.4	39.6 - 43.1	2447	696841	37.2	35.2 - 39.2	2977	822704	45.7	43.3 - 48.1		
More harmful than cigarette smoking	5126	1452418	39.5	37.6 - 41.5	2429	710558	37.9	35.9 - 40.1	2697	741861	41.2	38.5 - 43.9		

Table 4.22: Perception on harm of e-cigarettes/vape usage compared to cigarette smoking among current e-cigarette/vape users by gender

Perception on harm of e-cigarettes/vape usage compared to cigarette smoking	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
Less harmful than cigarette smoking	435	105621	35.6	30.5	41.0	364	89150	35.6	30.9	40.7	71	16471	35.2	22.9	49.9
Equally harmful with cigarette smoking	372	114324	38.5	34.2	43.0	317	94827	37.9	33.6	42.5	55	19497	41.7	30.6	53.7
More harmful than cigarette smoking	259	76944	25.9	22.5	29.6	226	66131	26.4	22.6	30.7	33	10813	23.1	15.0	33.9

#### 4.12 References

1. U.S. Food and Drug Administration. 2015. "Electronic Cigarettes". Available: <http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm172906.htm>. Access on 10 Aug 2016.
2. Pepper JK, Brewer NT. Electronic nicotine delivery system (electronic cigarette) awareness, use, reactions and beliefs: a systematic review. *Tob Control*. 2014;23:375–84. doi:10.1136/tobaccocontrol-2013-05112.
3. Kong G, Morean ME, Cavallo DA, Camenga DR, Krishnan-Sarin S. Reasons for electronic cigarette experimentation and discontinuation among adolescents and young adults. *Nicotine Tob Res*. 2014. doi: 10.1093/ntr/ntu257.
4. Institute for Public Health (IPH). Report of the Global Adult Tobacco Survey (GATS) Malaysia, 2011, Ministry of Health Malaysia, 2012.
5. Institute for Public Health (IPH) 2015. National Health and Morbidity Survey 2015 – Report on smoking status among Malaysian adults



## SHISHA USE





## 5. SHISHA USE

### Key findings

- The prevalence of current shisha smokers was 3.5% while the prevalence of ever shisha smokers was 10.6%.
- The prevalence of current shisha smokers among adolescents aged 13-15 years old was 4.6%.
- 51.2% of ever shisha smokers tried their first shisha before the age of 14 years.

### Definition:

The definition for ever shisha smokers among adolescents is based on those who answered yes to the question “Have you ever tried or experimented with shisha smoking, even one or two puffs?” A current shisha smoker is defined as an adolescent who had answered ‘1 or more days’ to the question, “During the past 30 days (one month), on how many days did you smoke shisha?”

### 5.1 Introduction

Waterpipe shisha, also known as hookah, is one of the various smoked tobacco products. It was originated and invented in India as a cigarette substitute or a less harmful method of tobacco usage<sup>1</sup>; It is now available in many countries across the globe with an estimated 100 million users. Factors for its popularity include easy availability, attractive designs and flavoured aromatic tobacco and misconceptions regarding its use<sup>2</sup>.

### 5.2 Prevalence of current shisha smokers

A total of 3.5% (95%CI: 2.8, 4.3) of the adolescents were current shisha smokers. The prevalence of male adolescents [5.5% (95%CI: 4.4, 6.8)] was significantly higher than female adolescents [1.4% (95%CI: 0.9, 2.1)]. The prevalence of current shisha smokers was significantly higher among secondary school adolescents [4.5% (95%CI: 3.5, 5.6)] as compared to primary school adolescents [1.8% (95%CI: 1.3, 2.6)] (**Table 5.1**).

By age group, the highest prevalence of current shisha smokers was among the 13-15 year olds [4.6% (95%CI: 3.4, 6.4)]. The highest prevalence of current shisha smokers among male adolescents was among the 16-19 year old age group [7.7% (95%CI: 6.0, 9.7)] (**Table 5.2**).

Majority of the current shisha smokers smoked 1-2 days per month [61.2% (95% CI: 53.9, 68.0)]. The trend was similar for both male [61.8% (95% CI: 54.0, 69.0)] and female adolescents [58.7% (95% CI: 41.3, 74.2)] (**Table 5.3**).

### 5.3 Prevalence of ever shisha smokers

The overall prevalence of ever shisha smokers was 10.6% (95% CI: 9.5, 11.8). More male adolescents [15.3% (95% CI: 13.5, 17.3)] were ever shisha smokers compared to female adolescents [5.7% (95% CI: 4.9, 6.6)]. The prevalence of ever shisha smokers was significantly higher among

secondary school students [13.0% (95% CI: 11.6, 14.5)] as compared to primary school students [6.5% (95% CI: 5.4, 7.8)]. By age group, the highest prevalence of ever shisha smokers was among the 16-19 year old adolescents [15.3% (95%CI: 13.3, 17.4)] (**Table 5.4**).

More than one third, 36.3% (95% CI: 29.2,44.0) of ever shisha smokers initiated smoking at the age 14-15 years old, followed by those aged 12-13 years old [20.0% (95% CI: 15.4, 25.6)] (**Table 5.6**).

More than half of ever shisha smokers [51.2% (95% CI: 43.2, 59.1)] initiated shisha smoking before the age of 14. Similarly, more than half of both male and female students initiated shisha smoking before the age of 14 (**Table 5.7**).

#### 5.4 Conclusion

The findings of the shisha module showed that the prevalence of ever shisha smokers was 10.6% while the prevalence of current shisha smokers was 3.5%. Both were higher among males compared to females. It was found that, 51.2% of those who ever tried shisha did so before the age of 14.

**Table 5.1: Prevalence of current shisha smokers by socio-demographic characteristics**

Socio-demographic Characteristics	Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
<b>MALAYSIA</b>	470	128279	3.5	2.8	4.3
<b>Sex</b>					
Male	385	102747	5.5	4.4	6.8
Female	85	25532	1.4	0.9	2.1
<b>School Level</b>					
Primary education	79	24872	1.8	1.3	2.6
Secondary education	391	103407	4.4	3.5	5.6
<b>Age</b>					
12 or younger	80	25078	1.8	1.3	2.6
13 -15	211	66556	4.6	3.4	6.4
16 -19	179	36645	4.2	3.1	5.5
13 -19	390	103201	4.5	3.5	5.6
<b>Location</b>					
Urban	259	53303	3.2	2.4	4.2
Rural	211	74976	3.7	2.8	5.0

Table 5.2: Prevalence of current shisha smokers by gender and age group

Age	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
12 or younger	80	25078	1.8	1.3	2.6	62	17945	2.5	1.7	3.6	18	7133	-	-	-
13-15	211	66556	4.6	3.4	6.4	166	53169	7.1	5.0	9.9	45	13387	-	-	-
16-19	179	36645	4.2	3.1	5.5	157	31633	7.7	6.0	9.7	22	5012	-	-	-
13-19	390	103201	4.5	3.5	5.6	323	84802	7.3	5.7	9.2	67	18399	1.6	1.0	2.7

Table 5.3: Frequency of shisha smoked in the last 30 days among current shisha smokers by gender

	Overall					Male					Female				
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper				Lower	Upper				Lower	Upper
<b>MALAYSIA</b>															
1-2 days	296	78490	61.2	53.9	68.0	235	63491	61.8	54.0	69.0	61	14999	58.7	41.3	74.2
3-5 days	94	26870	20.9	14.6	29.2	85	22776	22.2	15.6	30.5	9	4094	-	-	-
6-10 days	38	9721	7.6	4.7	12.0	31	6754	6.6	4.0	10.7	7	2966	-	-	-
10 days and above	42	13199	10.3	6.3	16.3	34	9726	9.5	5.5	15.7	8	3473	-	-	-

**Table 5.4: Prevalence of ever shisha smokers by socio-demographic characteristics**

Socio-demographic Characteristics	Count	Estimated Population	Prevalence (%)	95% CI	
				Lower	Upper
<b>MALAYSIA</b>	1400	388321	10.6	9.5	11.8
<b>Sex</b>					
Male	1021	286217	15.3	13.5	17.3
Female	379	102104	5.7	4.9	6.6
<b>School Level</b>					
Primary education	260	88556	6.5	5.4	7.8
Secondary education	1140	299765	13.0	11.6	14.5
<b>Age</b>					
12 or younger	265	88855	6.5	5.4	7.8
13 -15	540	165644	11.6	9.8	13.7
16 -19	595	133821	15.3	13.3	17.4
13 -19	1135	299465	13.0	11.6	14.5
<b>Location</b>					
Urban	804	157917	9.4	8.1	11.0
Rural	596	230403	11.5	10.0	13.3

Table 5.5: Prevalence of ever shisha smokers by gender and age group

Age	Overall			Male			Female								
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI						
				Lower	Upper				Lower	Upper					
12 or younger	265	88855	6.5	5.4	7.8	189	58283	8.2	6.6	10.2	76	30572	4.7	3.6	6.0
13-15	540	165644	11.6	9.8	13.7	398	133351	17.8	14.8	21.3	142	32293	4.8	3.5	6.4
16-19	595	133821	15.3	13.3	17.4	434	94583	23.0	19.8	26.6	161	39238	8.4	6.9	10.2
13-19	1135	299465	13.0	11.6	14.5	832	227934	19.7	17.3	22.2	303	71531	6.3	5.2	7.5

Table 5.6: Age of initiation of shisha smoking among ever shisha smokers by gender

	Overall			Male			Female								
	Count	Estimated Population	Prevalence (%)	95% CI		Count	Estimated Population	Prevalence (%)	95% CI						
				Lower	Upper				Lower	Upper					
<b>MALAYSIA</b>															
7 or younger	140	41777	15.0	10.6	20.8	110	29724	13.7	10.5	17.5	30	12053	19.9	9.2	37.7
8-9	66	18431	6.6	4.4	9.8	58	16469	7.6	4.8	11.7	8	1962	3.2	1.3	8.0
10-11	81	26661	9.6	6.8	13.3	64	19604	9.0	6.2	12.9	17	7057	11.6	5.3	23.8
12-13	195	55640	20.0	15.4	25.6	144	43088	19.8	14.6	26.2	51	12552	20.7	12.7	31.9
14-15	363	101052	36.3	29.2	44.0	276	79851	36.7	29.0	45.0	87	21201	34.9	23.4	48.6
16 and above	151	34881	12.5	8.9	17.4	122	29009	13.3	9.0	19.3	29	5873	9.7	5.7	15.8

Table 5.7 : Shisha initiation before the age of 14 among ever Shisha smokers

Age Group	Overall				Male				Female						
	Count	Estimated Population	Prevalence (%)		Count	Estimated Population	Prevalence (%)		Count	Estimated Population	Prevalence (%)				
			Lower	Upper			Lower	Upper			Lower	Upper			
<b>All Adolescents</b>	482	142508	51.2	43.2	59.1	376	108885	50.0	41.4	58.6	106	33623	55.4	42.2	67.8
13-15	258	81992	61.2	46.5	74.1	206	66050	60.3	45.0	73.8	52	15942	65.1	39.8	84.0
16-19	114	25764	23.5	18.8	28.9	87	18332	21.9	16.6	28.4	27	7432	28.6	14.5	48.6
13-19	372	107756	44.2	35.6	53.2	293	84382	43.7	34.7	53.1	79	23374	46.3	32.0	61.3

## **5.5 References**

1. Anjum, Q., Ahmed, F., & Ashfaq, T. (2008). Knowledge, attitude and perception of water pipe smoking (Shisha) among adolescents aged 14-19 years. *JPMA. The Journal of the Pakistan Medical Association*, 58(6), 312.
2. Amin, T. T., Amr, M. A., Zaza, B. O., & Suleman, W. (2010). Harm perception, attitudes and predictors of waterpipe (shisha) smoking among secondary school adolescents in Al-Hassa, Saudi Arabia. *Asian Pac J Cancer Prev*, 11(2), 293-30







## RECOMMENDATIONS



## 6. RECOMMENDATIONS

Smoking prevalence among Malaysian adolescents is still quite high with a young smoking initiation age. It is apparent that smoking is still appealing to some Malaysian adolescents. Studies have shown that younger smoking initiation will lead to stronger nicotine addiction and it reduces the success rate of quitting.

It is imperative that smokefree advocacy towards Malaysian youth should be continued and strengthened. School based programmes, community based programmes and national based programmes must reinforce the message that smoking is harmful and Malaysian youth should stay away from initiating smoking or breathing in tobacco smoke. Smokefree advocacy should be instilled anywhere possible such as during physical education, art lessons, science lessons, civic or religious lessons, or at any opportunity available.

This study showed that rural adolescent males are at a higher risk of trying cigarettes. Perhaps smokefree advocacy programmes should be accentuated more in the rural areas. Rural community programmes such as KOSPEN could be tapped to disseminate anti-smoking messages among rural school children.

Intervention for young smokers should also be given priority as it is easier to treat a new addiction rather than an established adult chain smoker. School counselors could play an important role in helping young smokers to quit smoking and they should be equipped with proper guidelines and training on how to help the school going children who are smokers. Essential intervention programmes such as KOTAK (Kesihatan Oral Tanpa Asap Rokok) by the dental services must be supported by all quarters. Parents must also play a role in discouraging their children from smoking.

Now there is a new form of nicotine delivery which is through electronic devices. This study showed that most students have heard about electronic cigarettes / vape and one in five have even tried it. The technology is rapidly changing while the objective remains the same, which is to develop nicotine addiction among its users. Smokefree advocacy must depict our children with the (known and unknown) dangers of using electronic cigarettes/ vape. These products should be made illegal for underage users, whether they contain nicotine or not.

The overall implementation of the WHO Framework Convention on Tobacco Control MPOWER strategies must also be strengthened. Mass media campaigns on smokefree must be unremitting and supported, not only by the government, but also by non-governmental associations, communities and corporations. Total display ban at points of sale must be considered as it reduces the environmental influence on young smokers. Cigarette prices should be increased further through higher tobacco taxation to further reduce affordability for students. Where possible, a demerit system for students who smoke should be implemented which will discourage them from smoking.

In summary, smokefree advocacy must be reinforced from all possible angles and intervention for young smokers should be strengthened so that all forms of smoking among Malaysian adolescents can be reduced further to achieve the Endgame of Tobacco for Malaysia.





**QUESTIONNAIRE**

**SCANNABLE ANSWER SHEET**

**CONSENT FORMS**



## PENGENALAN

Kementerian Kesihatan Malaysia dengan kerjasama Kementerian Pelajaran Malaysia sedang menjalankan tinjauan yang berkaitan penggunaan rokok & rokok elektronik di kalangan remaja. 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 survei 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. Tiada siapa akan tahu bagaimana anda menjawab. 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 tobacco & e-cigarette usage among adolescents. 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 adolescent. Therefore, please answer as honestly and accurately as possible. All individual information given will be kept CONFIDENTIAL because NO IDENTIFIERS ARE TAKEN. No one will know how you answer. Answer the questions based on your best of knowledge.




## PANDUAN MENGISI BORANG ( SILA BACA DENGAN TELITI )

- a. JANGAN tulis NAMA ANDA pada kertas soalan mahupun kertas jawapan
- b. Sila BACA PENYATAAN untuk soalan yang memberikan pernyataan atau definisi sebelum menjawab soalan.
- c. Sila HITAMKAN jawapan yang bersamaan jawapan anda pada kertas jawapan yang disediakan. Hanya hitamkan SATU JAWAPAN bagi setiap soalan **kecuali jika ada arahan untuk boleh pilih lebih dari satu jawapan**. Sila gunakan pensel 2B yang disediakan. Sekiranya lengkap, ikut arahan pegawai yang melakukan survei di sekolah/kelas anda.

## GUIDE ON FILLING THE QUESTIONNAIRE ( PLEASE READ CAREFULLY )







- a. DO NOT write YOUR NAME on the questionnaire or the answer sheet.
- b. Please READ STATEMENT for question with a preceding statement or definitions before answering.
- c. Please FILL IN THE CIRCLES on your answer sheet that matches your answer. There can be ONLY ONE ANSWER for each question **unless stated in the questionnaire**. Use only the 2B pencil provided. When you have finished answering, 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 CIRCLES:**  
 ISIKAN BULATAN SEPERTI INI  **BUKAN SEPERTI INI**  **ATAU**   
**FILL IN THE CIRCLES LIKE THIS** **NOT LIKE THIS** **OR**

1. Adakah ikan tinggal dalam air? / **Do fish live in water?**  
 a. Ya/ **Yes**  
 b. Tidak / **No**

Borang jawapan  
**Answer sheet**

1.      

## DEMOGRAFI

### DEMOGRAPHY

1. Berapakah umur anda? / **How old are you?**
  - a. 10 tahun / **10 years old**
  - b. 11 tahun / **11 years old**
  - 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 / **16 years old**
  - h. 17 tahun / **17 years old**
  - i. 18 tahun / **18 years old**
  - j. 19 tahun / **19 years old**
  - k. Lebih dari 19 tahun / **More than 19 years old**
  
2. Apakah jantina anda? / **What is your sex?**
  - a. Lelaki / **Male**
  - b. Perempuan / **Female**
  
3. Anda berada dalam tahun / tingkatan berapa? / **In what standard / form are you?**
  - a. Tahun 4 / **Standard 4**
  - b. Tahun 5 / **Standard 5**
  - c. Tahun 6 / **Standard 6**
  - d. Tingkatan 1 / **Form 1**
  - e. Tingkatan 2 / **Form 2**
  - f. Tingkatan 3 / **Form 3**
  - g. Tingkatan 4 / Vokasional Tahun 1 / **Form 4 / Vokasional Year 1**
  - h. Tingkatan 5 / Vokasional Tahun 2 / **Form 5 / Vokasional Year 2**
  - i. Tingkatan 6 Bawah / Vokasional Tahun 3 / **Form 6 (Lower) / Vokasional Year 3**
  - j. Tingkatan 6 Atas / Vokasional Tahun 4 / **Form 6 (Higher) / Vokasional Year 4**
  
4. Apakah bangsa anda? / **What is your ethnicity?**
  - a. Melayu / **Malay**
  - b. Cina / **Chinese**
  - c. India / **Indian**

- d. Bumiputera Sabah / **Sabah Bumiputera**
  - e. Bumiputera Sarawak / **Sarawak Bumiputera** f. Lain-lain / **Others**
5. Berapakah jumlah wang saku yang anda terima untuk ke sekolah setiap hari? / **How much pocket money do you receive per day?**
- a. Kurang daripada RM 2 sehari / **Less than RM 2 per day**
  - b. RM 2 hingga kurang daripada RM 5 sehari / **RM 2 to less than RM 5 per day**
  - c. RM 5 hingga kurang daripada RM 10 sehari / **RM 5 to less than RM 10 per day**
  - d. RM 10 dan ke atas / **RM 10 and above**

## **MODUL TEMBAKAU**

### **TOBACCO MODULE**

#### **SOALAN BERIKUT ADALAH BERKAITAN DENGAN ANDA DAN ROKOK. THE FOLLOWING QUESTIONS ARE RELATED TO SMOKING**

6. Pernahkah anda merokok atau mencuba merokok walaupun sekali dalam hidup anda? / **Have you ever tried or experimented with cigarette smoking, even one or two puffs?**
- a. Ya / **Yes**
  - b. Tidak / **No**
7. Berapakah umur anda ketika mula-mula menghisap rokok? / **How old were you when you first tried a cigarette?**
- a. Saya tidak pernah merokok / **I have never tried smoking a cigarette**
  - b. 7 tahun dan 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 dan ke atas / **16 years old or older**
8. Dalam tempoh 30 hari (satu bulan) yang lepas, berapa hari anda telah merokok? / **During the past 30 days (one month), on how many days did you smoke cigarettes?**
- a. Saya tidak pernah merokok / **I have never tried smoking a cigarette**
  - b. 0 hari / **0 day**
  - c. 1 hingga 2 hari / **1 or 2 days**
  - d. 3 hingga 5 hari / **3 to 5 days**
  - e. 6 hingga 9 hari / **6 to 9 days**
  - f. 10 hingga 19 hari / **10 to 19 days**
  - g. 20 hingga 29 hari / **20 to 29 days**
  - h. 30 hari / **All 30 days**
9. Dalam tempoh 30 hari (satu bulan) yang lepas, **KEBIASAANNYA** berapa batang rokok anda hisap pada hari-hari anda merokok? / **During the past 30 days (one month), how many cigarettes did you **USUALLY** smoke on the days you smoke?**
- a. Saya tidak merokok sepanjang 30 hari yang lepas / **I did not smoke cigarettes during the past 30 days**
  - b. Kurang daripada 1 batang rokok sehari / **Less than 1 cigarette per day**

- c. 1 batang rokok sehari / **1 cigarette per day**
  - d. 2 hingga 5 batang rokok sehari / **2 to 5 cigarettes per day**
  - e. 6 hingga 10 batang rokok sehari / **6 to 10 cigarettes per day**
  - f. 11 hingga 20 batang rokok sehari / **11 to 20 cigarettes per day**
  - g. 21 hingga 30 batang rokok sehari / **21 to 30 cigarettes per day**
  - h. Lebih dari 30 batang rokok sehari / **More than 30 cigarettes per day**
10. Pada kali terakhir anda membeli rokok dalam **tempoh 30 hari yang lepas**, bagaimanakah anda membeli rokok tersebut? / **The last time you bought cigarettes during the past 30 days, how did you buy them?**
- a. Saya tidak membeli rokok sepanjang 30 hari yang lepas / **I did not buy cigarettes during the past 30 days**
  - b. Saya membeli rokok secara kotak / **I bought them in a pack**
  - c. Saya membeli rokok secara ceraian atau sebatang / **I bought individual sticks (single sticks)**
  - d. Saya membeli rokok daun / **I bought traditional hand-rolled cigarette**
  - e. Saya membeli tembakau dan gulung sendiri dengan kertas rokok / **I bought tobacco and rolled my own with cigarette paper**
11. **Jika anda membeli rokok secara kotak**, berapakah jumlah wang yang anda telah belanja pada kali terakhir anda membeli rokok sebelum ini? / **If you bought cigarettes in pack, how much does it cost you the last time you bought them ?**
- a. Saya tidak membeli rokok / **I did not buy cigarettes**
  - b. Saya tidak membeli rokok secara kotak / **I did not buy cigarettes in pack**
  - c. Kurang dari RM9.00 sekotak / **less than RM9.00 a pack**
  - d. RM9.00 hingga RM11.90 sekotak / **RM9.00 until RM11.90 a pack**
  - e. RM12.00 hingga RM15.40 / **RM12.00 until RM15.40**
  - f. RM15.50 hingga RM16.90 / **RM15.50 until RM16.90**
  - g. RM17.00 dan ke atas / **RM17.00 or more**
12. Pernahkah anda mencuba atau menggunakan mana-mana produk seperti di bawah? / **Have you ever tried or experimented with any of the products listed below?**
- i. Shisha / **Shisha**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  - ii. Rokok Daun / **Traditional hand-rolled cigarette**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  - iii. Rokok gulung sendiri dengan kertas rokok / **'Roll-your-own' with cigarette paper**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  - iv. Cerut / **Cigar**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  - v. Hisap paip / **Pipe smoking**
    - a) Ya / **Yes**
    - b) Tidak / **No**

- vi. Rokok elektronik atau vape / **E- cigarette or vape**
  - a) Ya / **Yes**
  - b) Tidak / **No**
  
- vii. Mengunyah tembakau (Sentil atau Songel) / **Chewing tobacco**
  - a) Ya / **Yes**
  - b) Tidak / **No**
  
- viii. Menghidu tembakau / **Snuff**
  - a) Ya / **Yes**
  - b) Tidak / **No**
  
- 13. Dalam tempoh 30 hari (satu bulan) yang lepas, adakah anda menggunakan mana- mana produk seperti di bawah? / **During the past 30 days (one month), did you use any of the products listed below?**
  - i. Shisha / **Shisha**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  
  - ii. Rokok daun / **Traditional hand-rolled cigarette**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  
  - iii. Rokok gulung sendiri dengan kertas rokok / **'Roll-your-own' with cigarette paper**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  
  - iv. Cerut / **Cigar**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  
  - v. Hisap paip / **Pipe smoking**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  
  - vi. Rokok elektronik atau vape / **E- cigarette or vape**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  
  - vii. Mengunyah tembakau (Sentil atau songel) / **Chewing tobacco**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  
  - viii. Menghidu tembakau / **Snuff**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  
- 14. **Kebiasaanya**, bilakah anda akan menghisap rokok pertama anda selepas anda bangun dari tidur? / **How soon after you wake up do you usually have your first smoke?**

- a. Saya tidak pernah merokok / **I never smoke tobacco**
- b. Dalam masa 5 minit / **Within 5 minutes**
- c. 6 hingga 30 minit / **6 to 30 minutes**
- d. 31 hingga 60 minit / **31 to 60 minutes**
- e. Lebih dari 60 minit / **More than 60 minutes**

**SOALAN BERIKUT ADALAH BERKAITAN DENGAN SIKAP ANDA UNTUK BERHENTI MEROKOK.**

**THE NEXT QUESTIONS ASK ABOUT YOUR ATTITUDES TOWARDS STOPPING SMOKING.**

- 15. Adakah anda ingin berhenti merokok sekarang? / **Do you want to stop smoking now?**
  - a. Saya tidak pernah merokok / **I have never smoked**
  - b. Saya tidak merokok lagi / **I no longer smoke**
  - c. Ya / **Yes**
  - d. Tidak / **No**
  
- 16. Dalam tempoh 12 bulan yang lalu, pernahkah anda cuba untuk berhenti merokok? / **During the past 12 months, did you ever try to stop smoking?**
  - a. Saya tidak pernah merokok / **I have never smoked**
  - b. Saya tidak merokok semenjak 12 bulan lalu / **I did not smoke during the past 12 months**
  - c. Ya / **Yes**
  - d. Tidak / **No**
  
- 17. Pada fikiran anda, adakah anda boleh berhenti merokok sekiranya anda **mahu berhenti?** / **Do you think you would be able to stop smoking if you want to?**
  - a. Saya tidak pernah merokok / **I have never smoked**
  - b. Saya telah berhenti merokok / **I have stopped smoking**
  - c. Ya / **Yes**
  - d. Tidak / **No**
  
- 18. Pernahkah anda **menerima bantuan atau nasihat** untuk berhenti merokok? / **Have you ever received help or advice to stop smoking**
  - a. Saya tidak pernah merokok / **I have never smoked**
  - b. Tidak, saya tidak pernah menerima sebarang bantuan atau nasihat untuk berhenti merokok / **No, I have never received help or advice to stop smoking**
  - c. Ya, daripada program berhenti merokok di sekolah / **Yes, from a quit smoking program at school**
  - d. Ya, daripada perkhidmatan berhenti merokok di klinik / hospital / **Yes, from a quit smoking program at clinic / hospital**
  - e. Ya, daripada rakan-rakan / **Yes, from friends**
  - f. Ya, daripada ahli keluarga / **Yes, from family members**
  - g. Ya, daripada semua sumber di atas / **Yes, from all the above sources**
  - h. Ya, daripada sumber-sumber lain / **Yes, from other sources**

**SOALAN BERIKUT ADALAH BERKAITAN DENGAN PENDEDAHAN ASAP ROKOK ORANG LAIN TERHADAP ANDA.**

**THE FOLLOWING QUESTIONS ARE RELATED TO CIGARETTE SMOKE EXPOSURE FROM OTHERS TO YOU**

19. **Dalam tempoh 7 hari yang lalu**, berapa hari seseorang merokok di dalam rumah anda semasa anda berada di dalam rumah? / **During the past 7 days, on how many days has anyone smoked inside your home, in your presence?**
- 0 hari / **0 day**
  - 1 hingga 2 hari / **1 - 2 days**
  - 3 hingga 4 hari / **3 - 4 days**
  - 5 hingga 6 hari / **5 - 6 days**
  - 7 hari / **7 days**
20. **Dalam tempoh 7 hari yang lalu**, berapa hari anda terdedah kepada asap rokok orang lain di tempat selain daripada rumah anda? / **During the past 7 days, on how many days have you exposed to cigarette smoke from other people in places other than your house?**
- 0 hari / **0 day**
  - 1 hingga 2 hari / **1 - 2 days**
  - 3 hingga 4 hari / **3 - 4 days**
  - 5 hingga 6 hari / **5 - 6 days**
  - 7 hari / **7 days**
21. **Dalam tempoh 7 hari yang lalu**, adakah anda terdedah kepada asap rokok di tempat-tempat yang berikut? / **During the past 7 days, have you been exposed to cigarette smoke in places listed below?**
- Di dalam pusat hiburan seperti wayang, pusat karaoke, tempat permainan video / **Inside entertainment centre such as cinema, karaoke centre, game arcades**
    - Ya / **Yes**
    - Tidak / **No**
  - Di dalam kenderaan awam (cth: bas, teksi, keretapi) / **Inside public transports (eg: bus, taxi, train)**
    - Ya / **Yes**
    - Tidak / **No**
  - Di hentian pengangkutan awam / **In public transport station**
    - Ya / **Yes**
    - Tidak / **No**
  - Di dalam sekolah, kolej atau universiti / **Inside school, college, or university**
    - Ya / **Yes**
    - Tidak / **No**
  - Di dalam bas sekolah / **Inside school bus**
    - Ya / **Yes**
    - Tidak / **No**
  - Di dalam kompleks membeli-belah / **Inside shopping complexes**
    - Ya / **Yes**
    - Tidak / **No**
  - Di dalam stadium sukan, kompleks sukan atau gimnasium / **Inside sports stadium , sports complexes, or gymnasium**
    - Ya / **Yes**
    - Tidak / **No**

- viii. Di dalam kenderaan ibu-bapa, penjaga / **Inside your parent's / guardian's transport**
- Ya / **Yes**
  - Tidak / **No**
- ix. Di kawasan rehat dan rawat (R&R) di lebuh raya / **In R&R area in highway**
- Ya / **Yes**
  - Tidak / **No**
22. Dalam tempoh 30 hari yang lalu, pernahkah anda melihat orang lain merokok di tempat-tempat berikut? / **During the past 30 days, have you ever seen anyone smoked in the following places?**
- Di dalam kawasan sekolah / **Inside school compound**
    - Ya / **Yes**
    - Tidak / **No**  - Kawasan persekitaran di luar sekolah / **Outside school compound**
    - Ya / **Yes**
    - Tidak / **No**
23. Pada fikiran anda, adakah asap rokok orang lain membahayakan kesihatan anda? / **Do you think the smoke from other people's cigarette smoking is harmful to you?**
- Pasti tidak / **Definitely not**
  - Mungkin tidak / **Probably not**
  - Mungkin ya / **Probably yes**
  - Pasti ya / **Definitely yes**
24. Adakah anda bersetuju dengan larangan merokok di tempat awam (contoh: di dalam restoran, bas, teksi, tren, sekolah, gelanggang permainan, gimnasium, pusat sukan dan hiburan)? / **Are you in favour of banning smoking inside enclosed public places (such as shops, restaurants, bus, taxi, train, school, playgrounds, gymnasium, sports centre and shopping malls)?**
- Ya / **Yes**
  - Tidak / **No**

**SOALAN BERIKUT ADALAH BERKAITAN DENGAN MENDAPATKAN ROKOK.  
THE FOLLOWING QUESTIONS ARE ABOUT GETTING CIGARETTES**

25. Dalam tempoh 30 hari (satu bulan) yang lepas, bagaimanakah biasanya anda mendapatkan bekalan rokok? (**BOLEH PILIH LEBIH DARIPADA SATU JAWAPAN**) / **The last time you smoked cigarettes during the past 30 days (one month), how did you get them? (SELECT ONE OR MORE RESPONSE)**
- Saya tidak merokok sepanjang 30 hari yang lepas / **I did not smoke any cigarettes during the past 30 days**
  - Saya membeli rokok di pasaraya, kedai runcit atau gerai di tepi jalan / **I bought them in a supermarket, grocery store or roadside stall**
  - Saya berkongsi membeli rokok dengan rakan-rakan / **I shared the cost of cigarettes with my friends**
  - Saya memberikan wang kepada orang lain untuk membelikannya / **I paid someone else to buy them**
  - Saya pinjam rokok orang lain / **I borrow them from someone else**
  - Saya curi rokok tersebut / **I stole them**

- g. Saya memperoleh rokok daripada ahli keluarga / **I got them from my family**
  - h. Saya memperoleh rokok daripada orang lain / **I got them from someone else**
  - i. Saya memperoleh rokok dengan cara lain / **I got them some other way**
26. Dalam tempoh 30 hari (satu bulan) yang lepas, adakah sesiapa yang enggan menjual rokok kepada anda kerana anda bawah umur 18 tahun? / **During the past 30 days (one month), did anyone refuse to sell you cigarettes because you are under 18 years old?**
- a. Tidak berkenaan.Saya telah berumur genap 18 tahun dan ke atas / **Not applicable. I am 18 years old and above**
  - b. Saya tidak cuba membeli rokok sepanjang tempoh 30 hari (satu bulan) yang lepas / **I did not try to buy cigarettes during the past 30 days (one month)**
  - c. Ya, ada peniaga yang enggan menjual rokok kepada saya kerana saya bawah umur 18 tahun / **Yes, someone refused to sell me cigarettes because i am below 18 years old**
  - d. Tidak, umur saya bukan penghalang untuk saya membeli rokok / **No, my age did not keep me from buying cigarettes**

**SOALAN BERIKUT ADALAH BERKAITAN DENGAN KEMPEN ANTI-MEROKOK (TIDAK MEROKOK), PERATURAN LARANGAN MEROKOK DAN AMARAN BERGAMBAR DI KOTAK ROKOK.**

**THE NEXT QUESTIONS ARE RELATED TO THE ANTI-TOBACCO CAMPAIGN, REGULATION ON PROHIBITION OF TOBACCO SMOKING AND HEALTH WARNINGS ON CIGARETTE PACKAGES.**

27. **Dalam tempoh 12 bulan yang lalu**, pernahkah anda melihat iklan anti-merokok di: / **During the past 12 months, have you ever seen any anti-tobacco advertisement on:**
- i. Televisyen / **Television**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  - ii. Pawagam / **Cinema**
    - a) Ya / **Yes**
    - b) Tidak / **No**
  - iii. Internet dan media sosial / **Internet and social media**
    - a) Ya / **Yes**
    - b) Tidak / **No**
28. **Dalam tempoh 30 hari yang lepas**, adakah anda melihat mesej anti-merokok di tempat pertandingan sukan, konsert, aktiviti masyarakat, atau perjumpaan sosial? / **During the past 30 days, did you see any anti-tobacco messages at sports events, fairs, concerts, community events, or social gatherings**
- a. Saya tidak pernah menghadiri pertandingan sukan, konsert, aktiviti masyarakat, ataupun perjumpaan sosial dalam tempoh 30 hari yang lepas. / **I never went to sports events, concerts, community events, or social gatherings in the past 30 days**
  - b. Ya / **Yes**
  - c. Tidak / **No**
29. Berikut merupakan **pernyataan mengenai undang-undang rokok di bawah umur:-** / **The followings are statements of the law on cigarette for the under age:-**
- i. “Merokok di bawah umur 18 tahun merupakan satu kesalahan di bawah undang-undang”. / **“Smoking under age of 18 is an offence under the law”.**



- a) Ya / **Yes**
  - b) Tidak / **No**
  - c) Tidak Tahu / **Don't know**
- ii. “Membeli rokok di bawah umur 18 tahun **BUKAN** merupakan satu kesalahan di bawah undang-undang”. / **“Buying cigarettes under the age of 18 is NOT an offence under the law”**.
- a) Ya / **Yes**
  - b) Tidak / **No**
  - c) Tidak Tahu / **Don't know**
- iii. “Memiliki rokok di bawah umur 18 tahun merupakan satu kesalahan di bawah undang-undang”. / **“Having cigarettes under the age of 18 is an offence under the law”**
- a) Ya / **Yes**
  - b) Tidak / **No**
  - c) Tidak Tahu / **Don't know**
30. **Dalam tempoh 30 hari yang lepas**, adakah anda melihat amaran kesihatan bergambar pada kotak rokok? / **During the past 30 days**, did you see any health warning messages and pictures on cigarette packages?
- a. Ya, tetapi saya tidak pedulikan / **Yes, but I didn't think much of them**
  - b. Ya, dan ia membuat saya terfikir untuk berhenti merokok atau tidak mula merokok / **Yes, and they led me to think about quitting smoking or not starting smoking**
  - c. Tidak, saya tidak melihat amaran kesihatan bergambar pada kotak rokok / **No, I did not see any health warning messages and pictures on cigarette packages.**
  - d. Tidak, saya tidak pernah melihat kotak rokok / **No, I have never seen any cigarette package.**

**SOALAN BERIKUT ADALAH BERKAITAN DENGAN APA YANG TELAH ANDA PELAJARI MENGENAI ROKOK DI SEKOLAH.**

**THE NEXT QUESTIONS ARE RELATED TO THE KNOWLEDGE ON TOBACCO LEARNED AT SCHOOL.**

31. **Semasa sesi persekolahan tahun lalu**, pernahkah anda diajar mengenai bahaya merokok? / **During the last school year**, have you been taught on the danger of tobacco smoking?
- a. Ya / **Yes**
  - b. Tidak / **No**
  - c. Tidak pasti / **Not sure**

**SOALAN BERIKUT ADALAH BERKAITAN DENGAN PENGETAHUAN ANDA TERHADAP MESEJ IKLAN ROKOK.**

**THE NEXT QUESTIONS ASK ABOUT YOUR KNOWLEDGE ON MESSAGES OF TOBACCO ADVERTISEMENT**

32. **Dalam tempoh 30 hari yang lepas**, adakah anda melihat adegan / aksi / babak orang merokok di dalam rancangan televisyen / video / filem? / **During the past 30 days**, did you see any scene / action of people smoking in the TV shows / videos / movies?
- a. Ya / **Yes**
  - b. Tidak / **No**
  - c. Saya tidak pernah menonton televisyen, video ataupun filem dalam tempoh 30 hari yang lepas / **I never watched TV, videos, or movies in the past 30 days**

33. **Dalam tempoh 30 hari yang lepas**, pernahkah anda melihat iklan, promosi atau paparan produk rokok di kaunter jualan? / **During the past 30 days**, did you see any advertisements or promotions for tobacco products at points of sale?
- Saya tidak pernah pergi ke kaunter jualan rokok dalam tempoh 30 hari yang lepas / **I did not visit any points of sale of tobacco products in the past 30 days**
  - Ya, tetapi ia tidak menarik perhatian saya terhadap rokok / **Yes, but it does not attract my attention towards cigarettes**
  - Ya, dan ia menarik perhatian saya terhadap rokok / **Yes, and it attracts my attention towards cigarettes**
  - Tidak, saya tidak perasan apa-apa iklan, promosi, atau paparan produk rokok di kaunter jualan / **No, I did not notice any advertisements or promotion for tobacco at point of sale.**
34. Adakah anda memiliki barangan (kemeja T, pen ataupun beg gelas dan lain-lain) yang mempunyai logo jenama rokok? / **Do you have something (for example, t-shirt, pen, backpack and others) with a tobacco product brand logo on it?**
- Ya / **Yes**
  - Tidak / **No**
35. Pernahkah wakil jualan syarikat rokok menawarkan rokok percuma kepada anda? / **Has a person working for a tobacco company ever offered you a free tobacco product?**
- Ya / **Yes**
  - Tidak / **No**

**SOALAN BERIKUT ADALAH BERKAITAN DENGAN PENGETAHUAN DAN SIKAP ANDA TERHADAP ROKOK & MEROKOK.**

**NEXT QUESTIONS ASK ABOUT YOUR KNOWLEDGE AND YOUR ATTITUDES TOWARDS CIGARETTE SMOKING**

36. Jika salah seorang kawan karib anda menawarkan anda apa-apa jenis rokok atau produk tembakau (contohnya shisha, rokok gulung, tembakau kunyah), adakah anda akan menggunakannya? / **If one of your best friends offered you any type of cigarette or tobacco products (eg: shisha, hand-rolled cigarette, chewing tobacco), would you use it?**
- Pasti tidak / **Definitely not**
  - Mungkin tidak / **Probably not**
  - Mungkin ya / **Probably yes**
  - Pasti ya / **Definitely yes**
37. **Dalam masa 12 bulan akan datang** adakah anda terfikir akan menggunakan apa-apa jenis rokok atau produk tembakau (cth: shisha, rokok daun, tembakau kunyah)? / **At any time during the next 12 months** do you think you will use any type of cigarette or tobacco products (e.g. shisha, hand-rolled cigarette, chewing tobacco)?
- Pasti tidak / **Definitely not**
  - Mungkin tidak / **Probably not**
  - Mungkin ya / **Probably yes**
  - Pasti ya / **Definitely yes**
38. Pada fikiran anda, sekiranya seseorang telah mula merokok, adakah sukar untuk berhenti? / **Once someone has started smoking tobacco, do you think it would be difficult for them to quit?**

- a. Pasti tidak / **Definitely not**
  - b. Mungkin tidak / **Probably not**
  - c. Mungkin ya / **Probably yes**
  - d. Pasti ya / **Definitely yes**
39. Pada fikiran anda, adakah merokok membantu individu merasa lebih selesa atau kurang selesa semasa berada di majlis sambutan, keramaian atau perjumpaan sosial lain? / **Do you think smoking tobacco helps people feel more comfortable or less comfortable at celebrations, parties, or in other social gatherings?**
- a. Lebih selesa / **More comfortable**
  - b. Kurang selesa / **Less comfortable**
  - c. Tiada beza sama ada merokok atau tidak / **No difference whether smoking or not**
40. Adakah anda **SETUJU** atau **TIDAK** dengan kenyataan berikut: “Saya rasa saya mungkin seronok menghisap rokok” / **Do you agree or disagree with the following: “I think I might enjoy smoking a cigarette.”**
- a. Sangat setuju / **Strongly agree**
  - b. Setuju / **Agree**
  - c. Tidak setuju / **Disagree**
  - d. Sangat tidak setuju / **Strongly disagree**

#### **MODUL ROKOK ELEKTRONIK / VAPE ECIGARETTE / VAPE MODULE**

41. Adakah anda pernah mendengar tentang rokok elektronik / vape? / **Have you ever heard of e-cigarettes / vape?**
- a. Ya / **Yes**
  - b. Tidak / **No**
42. Adakah anda pernah menggunakan rokok elektronik / vape? / **Have you ever tried using e-cigarettes / vape?**
- a. Saya tidak pernah gunakan rokok elektronik / vape / **I have never tried using e- cigarettes / vape**
  - b. Saya pernah gunakan rokok elektronik / vape / **I have tried using e-cigarettes /vape**
43. Berapakah umur anda ketika mula-mula menggunakan rokok elektronik / vape? / **How old were you when you first tried using e-cigarette / vape?**
- a. Saya tidak pernah gunakan rokok elektronik / **I have never tried using e- cigarette / vape**
  - b. 7 tahun dan 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 dan ke atas / **16 years old or older**
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- cigarette / vape?**
- a. 0 hari / **0 day**
  - b. 1 hingga 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. 30 hari / **All 30 days**
45. Dalam tempoh 30 hari yang lepas, pada hari anda menggunakan rokok elektronik, **KEBIASAANNYA** berapa kali anda telah menggunakan rokok elektronik / vape **SEHARI?** / **During the past 30 days, on the typical day of using e-cigarette, how many times did you USUALLY use e-cigarette / vape PER DAY?**
- a. Saya tidak gunakan rokok elektronik / vape sepanjang 30 hari yang lepas / **I did not use e-cigarette / vape during the past 30 days**
- b. 1 kali sehari / **Once per day**
- c. 2 hingga 5 kali sehari / **2 to 5 times per day**
- d. 6 hingga 10 kali sehari / **6 to 10 times per day**
- e. 11 hingga 20 kali sehari / **11 to 20 times per day**
- f. Lebih daripada 20 kali sehari / **More than 20 times per day**
46. Kali terakhir anda menggunakan rokok elektronik / vape dalam tempoh 30 hari yang lepas, bagaimanakah anda mendapatkan bekalan tersebut? / **The last time you used e-cigarette / vape during the past 30 days, how did you get it?**
- a. Saya tidak gunakan rokok elektronik / vape sepanjang 30 hari yang lepas / **I did not use e-cigarette / vape during the past 30 days**
- b. Saya beli rokok elektronik / vape dari kedai / kios / kompleks membeli-belah / **I bought e-cigarette / vape from shop / kiosk / shopping mall**
- c. Saya membeli rokok elektronik / vapedari gerai jalanan / pasar malam / 'downtown' / 'uptown' / **I bought e-cigarette / vape from roadside stall / night market / 'downtown' / 'uptown'**
- d. Saya membeli rokok elektronik / vape melalui internet / **I bought e-cigarette /vape online**
- e. Saya mendapatkan rokok elektronik / vape daripada orang lain / **I got e- cigarette / vape from someone else**
- f. Saya mendapatkan rokok elektronik / vape daripada kawan / **I got e-cigarette /vape from friends**
- g. Saya mendapatkan rokok elektronik / vape daripada ahli keluarga saya / **I got e-cigarette / vape from my family**
- h. Saya membeli rokok elektronik / vape dari farmasi / **I bought e-cigarette / vape from Pharmacy**
47. Apakah jenis rokok elektronik / vape yang **kali terakhir anda hisap?** / **What type of e- cigarette / vape did you last use?**

**RUJUK GAMBAR DI APENDIKS 1 UNTUK PANDUAN REFER TO PICTURE IN APPENDIX 1 FOR GUIDANCE**

- a. Saya tidak pernah gunakan rokok elektronik / vape / **I never use e-Cigarette /vape**
- b. Rokok elektronik pakai buang (tidak boleh di caj). Cth: 'shisha-stick' /**Disposable e-cigarette (not rechargeable). e.g: 'shisha-stick'**
- c. Kit rokok elektronik yang boleh di caj dengan pra-kartrij gantian. / **E-cigarette kit that can be charged with a pre-cartridge replacement**
- d. Kit rokok elektronik yang boleh di caj dan mempunyai takungan yang perlu saya isi dengan cecair / **E-cigarette kit that can be charged with a container which I need to fill with the liquid**
- e. Sistem modulasi / 'Vape-MODS' (saya menggunakan kombinasi alat yang berasingan: bateri, penggabus dan sebagainya yang perlu saya isi dengan cecair) / **Modular system / 'Vape-MODS' (I use a combination of discrete devices: battery, atomizer etc. which I need to fill with the liquid)**

48. Adakah rokok elektronik / vape yang anda gunakan **mengandungi nikotin?** / **Does the e-cigarette / vape including vape that you use contain nicotine?**
- Saya tidak pernah gunakan rokok elektronik / vape / **I do not smoke e-cigarette / vape**
  - Ya / **Yes**
  - Tidak / **No**
  - Tidak pasti / **Not sure**
49. **Dalam tempoh 30 hari yang lalu**, berapakah jumlah perbelanjaan yang dibelanjakan untuk menghisap rokok elektronik / vape anda? / **In the past 30 days, how much did you spend to smoke your e-cigarette / vape?**
- Saya tidak pernah membeli rokok elektronik/ vape / **I never buy e-Cigarette / vape**
  - Kurang dari RM50 / **Less than RM50**
  - RM50 – RM100 / **RM50 – RM100**
  - RM101 – RM300 / **RM101 – RM300**
  - RM301 – RM500 / **RM301 – RM500**
  - Lebih dari RM500 / **More than RM500**
  - Saya tidak tahu/tidak ingat / **I don't know / I don't remember**
50. Antara pilihan berikut, yang manakah merupakan penyebab anda mula menggunakan rokok elektronik / vape? / **From the followings, which are the main reasons for you to start smoking e-cigarette / vape?**
- Saya merasakan rokok elektronik / vape lebih selamat dari rokok biasa / **I feel that e-cigarette / vape is safer than tobacco cigarette**
    - Yes / **Ya**
    - Tidak / **No**
    - Saya tidak menggunakan rokok elektronik / vape / **I do not smoke e-cigarette/ vape**
  - Rokok elektronik / vape mempunyai perisa & bau yang saya suka / **I like the taste and smell of the e-cigarette / vape**
    - Ya / **Yes**
    - Tidak / **No**
    - Saya tidak menggunakan rokok elektronik/ vape / **I do not smoke e-cigarette /vape**
  - Saya ingin mencuba rokok elektronik / vape / **I want to experiment with the e-cigarette / vape**
    - Ya / **Yes**
    - Tidak / **No**
    - Saya tidak menggunakan rokok elektronik/ vape / **I do not smoke e-cigarette /vape**
  - Ajakan rakan-rakan atau ahli keluarga / **Offered by friends or family members**
    - Ya / **Yes**
    - Tidak / **No**
    - Saya tidak menggunakan rokok elektronik / vape / **I do not smoke e-cigarette/ vape**
  - Saya merasakan rokok elektronik / vape sangat popular / **I feel that e-cigarette /vape is popular**
    - Ya / **Yes**
    - Tidak / **No**
    - Saya tidak menggunakan rokok elektronik/ vape / **I do not smoke e-cigarette /vape**

- vi. Saya mengikut trend selebriti / idola / **I follow celebrity / idol trend**
- Ya / **Yes**
  - Tidak / **No**
  - Saya tidak menggunakan rokok elektronik / vape / **I do not smoke e-cigarette/ vape**
- vii. Saya merasakan rokok elektronik / vape boleh membantu saya berhenti merokok / **I feel that e-cigarette / vape can help me to quit smoking**
- Ya / **Yes**
  - Tidak / **No**
  - Saya tidak menggunakan rokok elektronik / vape / **I do not smoke e-cigarette/ vape**
- viii. Saya merasakan menggunakan rokok elektronik / vape sama seperti menghisap rokok biasa / **I feel that smoking e-cigarette / vape is the same as smoking tobacco cigarette**
- Ya / **Yes**
  - Tidak / **No**
  - Saya tidak menggunakan rokok elektronik / vape / **I do not smoke e-cigarette/ vape**
- ix. Rokok elektronik / vape mampu dimiliki / **E-cigarette / vape is affordable**
- Ya / **Yes**
  - Tidak / **No**
  - Saya tidak menggunakan rokok elektronik/ vape / **I do not smoke e-cigarette /vape**
- x. Rokok elektronik / vape lebih jimat dari rokok / **E-cigarette / vape is more economical than cigarette**
- Ya / **Yes**
  - Tidak / **No**
  - Saya tidak menggunakan rokok elektronik / vape / **I do not smoke e-cigarette / vape**
51. Adakah anda **SETUJU atau TIDAK** dengan kenyataan berikut: “Saya rasa saya mungkin seronok menggunakan rokok elektronik / vape” / **Do you agree or disagree with the following: “I think I might enjoy using e-cigarette / vape.”**
- Sangat setuju / **Strongly agree**
  - Setuju / **Agree**
  - Tidak setuju / **Disagree**
  - Sangat tidak setuju / **Strongly disagree**
52. **Dalam tempoh 12 bulan yang lepas**, pernahkah anda membaca risalah atau poster berkaitan dengan bahaya penggunaan rokok elektronik / vape? / **During the past 12 months, have you ever read any pamphlets or posters on dangers of e-cigarette / vape use?**
- Ya / **Yes**
  - Tidak / **No**
53. Apabila seseorang mula menggunakan rokok elektronik / vape, pada fikiran anda, adakah susah bagi mereka untuk berhenti? / **Once someone has started using e- cigarette / vape, do you think it would be difficult for them to quit?**
- Sudah tentu tidak / **Definitely not**
  - Mungkin tidak / **Probably not**
  - Mungkin ya / **Probably yes**
  - Sudah tentu ya / **Definitely yes**

54. Pada fikiran anda, adakah anda mampu untuk berhenti menggunakan rokok elektronik / vape jika anda mahu? / **Do you think you would be able to stop using e-cigarette / vape if you want to?**
- Saya tidak pernah menggunakan rokok elektronik / vape / **I have never used e-cigarette / vape**
  - Saya tidak lagi menggunakan rokok elektronik / vape sekarang / **I don't use e-cigarette / vape now**
  - Ya / **Yes**
  - Tidak / **No**
55. Adakah anda mahu berhenti menggunakan rokok elektronik / vape sekarang? / **Do you want to stop using e-cigarette / vape now?**
- Saya tidak pernah menggunakan rokok elektronik / vape / **I have never used e-cigarette / vape**
  - Saya tidak lagi menggunakan rokok elektronik / vape sekarang / **I don't use e-cigarette / vape now**
  - Ya / **Yes**
  - Tidak / **No**
56. **Dalam tempoh 12 bulan lepas**, adakah anda cuba untuk berhenti menggunakan rokok elektronik / vape? / **During the past 12 months, did you ever try to stop using e-cigarette / vape?**
- Saya tidak pernah menggunakan rokok elektronik / vape / **I have never used e-cigarette / vape**
  - Saya tidak menggunakan rokok elektronik / vape dalam tempoh 12 bulan lepas / **I don't use e-cigarette / vape in the past 12 month**
  - Ya / **Yes**
  - Tidak / **No**
57. Adakah anda pernah menerima **pertolongan atau nasihat** untuk berhenti menggunakan rokok elektronik / vape? / **Have you ever received help or advice to help you stop using e-cigarette / vape?**
- Saya tidak pernah menggunakan rokok elektronik / vape / **I have never used e-cigarette / vape**
  - Tidak, saya tidak pernah terima sebarang bantuan atau nasihat untuk berhenti menggunakan rokok elektronik / vape / **No, I have never received any help or advice to stop smoking e-cigarette / vape**
  - Ya, daripada program berhenti merokok di sekolah / **Yes, from anti-smoking program at school**
  - Ya, daripada perkhidmatan berhenti merokok di klinik / hospital / **Yes, from clinic / hospital quit smoking service**
  - Ya, daripada rakan-rakan / **Yes, from my friends**
  - Ya, daripada ahli keluarga / **Yes, from my family members**
  - Ya, daripada semua sumber di atas / **Yes, from all sources stated above**
  - Ya, dari lain-lain sumber / **Yes, from other source**
58. **Dalam tempoh 30 hari lepas**, pernahkan sesiapa enggan untuk menjual rokok elektronik / vape kepada anda disebabkan oleh umur anda? / **During the past 30 days, did anyone refuse to sell you e-cigarette / vape because of your age?**
- Saya tidak pernah cuba untuk mendapatkan rokok elektronik / vape yang dijual dalam tempoh 30 hari lepas / **I did not try to buy e-cigarette / vape during the past 30 days**
  - Ya, ada seseorang enggan menjual rokok elektronik / vape kepada saya kerana umur saya / **Yes, someone refused to sell me e-cigarette / vape because of my age**
  - Tidak, umur saya tidak menghalang saya untuk menjadi pembeli rokok elektronik / vape / **No, my age did not keep me from buying e-cigarette / vape**

59. Pernahkah anda ditawarkan untuk mencuba rokok elektronik / vape secara percuma oleh mana-mana penjual? / **Has any e- cigarette / vape vendor ever offered you a free trial session of e-cigarette / vape?**
- Ya / **Yes**
  - Tidak / **No**
60. Pernahkah anda ditawarkan cecair rokok elektronik / vape (e-liquid) secara percuma oleh mana-mana penjual? / **Has any e-cigarette / vape vendor ever offered you a free e-cigarette / vape liquid (e-liquid)?**
- Ya / **Yes**
  - Tidak / **No**
61. Jika rakan baik anda menawarkan rokok elektronik / vape, adakah anda akan mencubanya? / **If one of your best friends offered you e-cigarette / vape, would you use it?**
- Sudah tentu tidak / **Definitely not \**
  - Mungkin tidak / **Probably not**
  - Mungkin ya / **Probably yes**
  - Sudah tentu ya / **Definitely yes**
62. Adakah anda merasa rokok elektronik / vape kurang berbahaya, sama bahaya atau lebih bahaya dari merokok? / **Do you feel that e-cigarette / vape is less harmful, equally harmful or more harmful than cigarette smoking ?**
- Kurang berbahaya dari merokok / **Less harmful than cigarette smoking**
  - Sama bahaya dengan merokok / **Equally harmful than cigarette smoking**
  - Lebih bahaya dari merokok / **More harmful than cigarette smoking**
63. Dalam masa 12 bulan akan datang, adakah anda terfikir akan menggunakan rokok elektronik / vape? / **At any time during the next 12 months, do you think you will use e- cigarette / vape?**
- Sudah tentu tidak / **Definitely not**
  - Mungkin tidak / **Probably not**
  - Mungkin ya / **Probably yes**
  - Sudah tentu ya / **Definitely yes**

### **MODUL SHISHA SHISHA MODULE**

64. Pernahkan anda mencuba menghisap shisha, walaupun hanya satu atau dua sedutan? / **Have you ever tried/experimented with shisha smoking, even one or two puffs?**
- Ya / **Yes**
  - Tidak / **No**
65. Berapakah umur anda ketika mula-mula menghisap shisha? / **How old were you when you first tried smoking shisha?**
- Saya tidak pernah menghisap shisha / **I have never tried smoking shisha**
  - 7 tahun atau kurang / **7 years old or younger**
  - 8 atau 9 tahun / **8 or 9 years old**
  - 10 atau 11 tahun / **10 or 11 years old**
  - 12 atau 13 tahun / **12 or 13 years old**
  - 14 atau 15 tahun / **14 or 15 years old**
  - 16 tahun dan ke atas / **16 years old or older**



66. Dalam tempoh 30 hari yang lepas, berapa harikah anda menghisap shisha? / **During the past 30 days, how many days do you smoke shisha?**
- Saya tidak menghisap shisha dalam masa 30 hari yang lepas / **I did not smoke shisha in the past 30 days**
  - 1-2 hari / **1-2 days**
  - 3-5 hari / **3-5 days**
  - 6-10 hari / **6-10 days**
  - Lebih dari 10 hari / **More than 10 days**
67. Pada kali terakhir anda menghisap shisha, di manakah anda menghisap shisha? / **The last time you smoked shisha, where did you smoke?**
- Saya tidak pernah menghisap shisha / **I have never smoked shisha**
  - Di rumah / **At home**
  - Di kedai makan / **At restaurant**
  - Di restoran 'Mamak' / **At 'Mamak' restaurant**
  - Di restoran 'Arab' / **At Arabic restaurant**
  - Di bar atau kelab malam / **At bar or night club**
  - Di kiosk shisha / **At shisha's kiosk**
  - Lain-lain / **Others**
68. Pernahkan sesiapa enggan untuk menjual perkhidmatan shisha kepada anda disebabkan oleh **umur anda?** / **Did anyone refuse to serve you shisha because of your age?**
- Saya tidak pernah cuba untuk mendapatkan shisha yang dijual / **I did not try to get shisha served to me**
  - Ya, ada seseorang enggan menjual shisha kepada saya kerana umur saya / **Yes, someone refused to serve me shisha because of my age**
  - Tidak, umur saya tidak menghalang saya untuk menjadi pembeli shisha / **No, my age did not keep me from being served shisha**
69. Adakah anda mahu berhenti menghisap shisha sekarang? / **Do you want to stop smoking shisha now?**
- Saya tidak pernah menghisap shisha / **I have never smoked shisha**
  - Saya tidak lagi menghisap shisha sekarang / **I don't smoke shisha now**
  - Ya / **Yes**
  - Tidak / **No**

APENDIKS 1 / APPENDIX 1

- a. Rokok elektronik pakai buang (tidak boleh di caj). Cth: 'Shisha-stick' / Disposable e-cigarette (not rechargeable). e.g.: 'shisha-stick



- b. Kit rokok elektronik yang boleh di caj dengan pra-kartrij gantian. / E-cigarette kit that can be charged with a pre-cartridge replacement



- c. Kit rokok elektronik yang boleh di caj dan mempunyai takungan yang perlu saya isi dengan cecair / E-cigarette kit that can be charged with a container which I need to fill with the liquid



- d. Sistem modulasi / 'Vape-MODS' (saya menggunakan kombinasi alat yang berasingan: bateri, penggabus dan sebagainya yang perlu saya isi dengan cecair) / Modular system / 'Vape-MODS' (I use a combination of discrete devices: battery, atomizer etc. which I need to fill with the liquid)



**TOBACCO AND E-CIGARETTE SURVEY AMONG MALAYSIAN ADOLESCENT 2016**

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## RISALAH MAKLUMAT IBU BAPA/ PENJAGA (RESPONDEN BAWAH 18 TAHUN)

**1. Tajuk:**

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Tinjauan Penggunaan Tembakau Dan Rokok Elektronik Di Kalangan Remaja Malaysia 2016

**2. Nama Penyelidik Utama dan Institusi:**

---

Dr Abdul Aiman Abd Ghani, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia

**3. Nama Penaja:**

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Kementerian Kesihatan Malaysia

**4. Pengenalan:**

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Kementerian Kesihatan Malaysia sedang menjalankan Tinjauan Penggunaan Tembakau Dan Rokok Elektronik Di Kalangan Remaja Malaysia 2016 pada tahun ini. Maklumat di bawah akan menjelaskan hal- hal berkenaan tinjauan tersebut untuk anda membenarkan anak anda menyertai tinjauan ini.

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

Setelah anda memahami maklumat tinjauan ini dan memberi keizinan untuk anak anda mengambil bahagian, anda perlu menandatangani Borang Persetujuan Ibu Bapa/ Penjaga (**Salinan Ibu- Bapa/ Penjaga & Salinan Penyelidik**) yang disertakan pada risalah ini. Penyertaan anak anda dalam tinjauan ini adalah secara sukarela dan anak anda boleh menarik diri pada bila-bila masa. Anak anda boleh tidak menjawab mana-mana soalan atau menarik diri sekiranya tidak mahu. Keengganan anak anda untuk mengambil bahagian atau menarik diri tidak akan menjejaskan sebarang manfaat perubatan atau kesihatan yang sememangnya hak anak anda.

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

**5. Apakah tujuan tinjauan ini dilakukan?**

---

Tujuan tinjauan ini dijalankan adalah untuk memperolehi maklumat berkaitan dengan status penggunaan tembakau dan rokok elektronik di kalangan remaja di Malaysia. Maklumat yang diperolehi ini akan dikaji dan dinilai bagi membantu perancangan polisi penggunaan tembakau dan rokok elektronik. Tinjauan ini akan meliputi 13500 pelajar-pelajar sekolah seluruh Malaysia yang terpilih secara rawak.

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

---

Anak anda perlu menjawab soalan kaji selidik yang disediakan.

**7. Apakah tanggungjawab anak saya sewaktu menyertai tinjauan ini?**

---

Adalah penting untuk anak anda menjawab kesemua soalan yang disediakan dengan lengkap. Menyertai tinjauan ini tidak memerlukan anda atau anak anda mengeluarkan sebarang perbelanjaan.

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

---

Tiada risiko terhadap anak anda sekiranya menyertai tinjauan ini.

**9. Apakah manfaatnya anak saya menyertai tinjauan ini?**

---

Tinjauan ini tidak mempunyai sebarang manfaat Kesihatan dan kewangan secara langsung apabila anak anda menyertai tinjauan ini. Walaubagaimanapun, segala maklumat yang diperolehi daripada tinjauan ini akan dapat membantu Kementerian Kesihatan dalam merancang polisi penggunaan tembakau dan rokok elektronik di Malaysia.

**10. Adakah maklumat perubatan anak saya akan dirahsiakan?**

---

Segala maklumat anak anda yang diperolehi dalam tinjauan ini akan disimpan dan dikendalikan secara sulit, bersesuaian dengan peraturan-peraturan dan/ atau undang-undang yang berkenaan. Sekiranya hasil tinjauan ini diterbitkan atau dibentangkan kepada orang ramai, identiti anak anda tidak akan didedahkan tanpa kebenaran anda terlebih dahulu.

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

---

Sekiranya anda mempunyai sebarang soalan mengenai tinjauan ini atau memerlukan keterangan lanjut, Tuan/ Puan boleh hubungi Ketua Penyelidik, Dr Abdul Aiman Abd Ghani, di Institut Kesihatan Umum, Jalan Bangsar, Kuala Lumpur di talian 03-22979400.

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

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

**Tajuk kajian :** Tinjauan Penggunaan Tembakau Dan Rokok Elektronik Di Kalangan Remaja Malaysia 2016

Dengan menandatangani di bawah, saya mengesahkan bahawa:

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

Saya, \_\_\_\_\_ **memberi/tidak memberi keizinan\*** untuk anak/jagaan saya bernama \_\_\_\_\_ dari kelas \_\_\_\_\_ mengambil bahagian di dalam Tinjauan Penggunaan Tembakau dan Rokok Elektronik di Kalangan Remaja Malaysia 2016 seperti mana yang telah dimaklumkan. (*\*Potong yang tidak berkenaan*)

\_\_\_\_\_  
(Tandatangan)

Nama Iubapa/Penjaga\* :

Nombor K/P :

Tarikh

## BORANG PERSETUJUAN IBU BAPA/ PENJAGA BAWAH 18 TAHUN (*Salinan Penyelidik*)

**Tajuk kajian** : Tinjauan Penggunaan Tembakau Dan Rokok Elektronik Di Kalangan Remaja Malaysia 2016

Dengan menandatangani di bawah, saya mengesahkan bahawa:

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

saya bernama \_\_\_\_\_ dari kelas \_\_\_\_\_ mengambil bahagian di dalam Tinjauan Penggunaan Tembakau dan Rokok Elektronik di Kalangan Remaja Malaysia 2016 seperti mana yang telah dimaklumkan. (*\*Potong yang tidak berkenaan*)

\_\_\_\_\_  
(Tandatangan)

Nama Iubapa/Penjaga\* :

NomborK/P :

Tarikh w:

## PARENT/ GUARDIAN INFORMATION SHEET (RESPONDENTS BELOW 18 YEARS OLD)

**1. Title:**

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Tobacco And Electronic Cigarette Survey Among Malaysian Adolescent 2016

**2. Name of investigator and institution:**

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Dr. Abdul Aiman Abd Ghani, Institute for Public Health, Ministry of Health

**3. Name of sponsor:**

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Ministry of Health

**4. Introduction:**

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Ministry of Health is conducting the Tobacco And Electronic Cigarette Survey Among Malaysian Adolescent this year. This brochure is to request for your consent to allow your child to participate in this survey.

It is important that you understand why the survey is being done and what your child will involve. Please take your time to read through and consider this information carefully before consenting for your child to participate in this survey. Should you have any questions or requires more information, you may ask any team member of this survey.

Once you understood the survey information and consented your child to participate, you must sign the Parents / Guardian Consent Form (**both: Copy for Parents/Guardian & Copy for Data Collector**) which are included in this information sheet. Your child participation in this survey is voluntary and your child may withdraw at any time. Your child has option not to answer any questions or withdraw from examination if he/she chose to do so. Your child's refusal to participate or withdrawal will not affect any medical or health benefit that is certainly your child's right.

This survey is fully sponsored by the Ministry of Health Malaysia and has been approved by the Medical Research and Ethics Committee, Ministry of Health Malaysia.

**5. What is the purpose of the survey?**

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The purpose of this study is to obtain the information on the current tobacco and electronic cigarette usage among youth in Malaysia. This information will be reviewed and evaluated to assist the formulation of smoking policies.



**6. What will happen if your child decides to take part?**

---

Your child will have to answer the survey questions.

**7. What are your child responsibilities when taking part in this survey?**

---

It is important that your child answers all the questions in the questionnaire completely. This survey will not incur any cost to you or your children.

**8. What are the potential risks and side effects of being in this survey?**

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None

**9. What are the benefits of being in this survey?**

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This survey does not have any immediate health or financial benefits when your child agreed to join this survey. However, the information obtained from this survey may be helpful for the Ministry of Health in formulation of smoking & e-cigarette usage policies in our country.

**10. Will my child medical information be kept private?**

---

All your child information obtained in this study will be kept and handled in a confidential manner, in accordance with applicable laws and/or regulations. When publishing or presenting the study results, your child identity will not be revealed without your consent.

**11. Who should I call if I have questions?**

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If you have any enquiries about this survey or if you require further information, you may contact the Principal Investigator, Dr Abdul Aiman Abd Ghani, at the Institute for Public Health, Jalan Bangsar, Kuala Lumpur, telephone number 03-22979573.

Should you have any questions regarding your child's rights as a respondent in this survey kindly contact: Secretary of the Medical Research and Ethics Committee, Ministry of Health Malaysia, by telephone 03-22874032.

**PARENTS/ GUARDIAN CONSENT FORM (Copy for Parents/Guardian)**

**Title of research:** Tobacco And Electronic Cigarette Survey among Malaysian Adolescent 2016

By signing below, I certify that:

	Please tick <input type="checkbox"/> each box
1. I have been given information about the research, and I have read and understand the information provided in this brochure.	
2. I have had sufficient time to consider my child's participation in this research and was given the opportunity to ask questions and all my questions have been answered satisfactorily.	
3. I understand that my child's participation is voluntary and may withdraw from this study at any time without giving any reason.	
4. I understand the possible risks and benefit from this research and I give my consent to allow my child to participate in this study participate under condition stated. I understand that my child must follow the researcher's instructions associated with my child participation in this research.	
5. I will receive a copy of the parent/ guardian information/informed consent form that was signed and dated.	

I, \_\_\_\_\_ hereby **give/do not give my consent\*** for my child/the child under my care \_\_\_\_\_ from class \_ to participate in the Tobacco and Electronic Cigarette Survey among Malaysian Adolescent 2016. (**\*Strike if it's not applicable**)

(Signature) Parent/Guardians\* Name:

IC No. :

Date :

**PARENTS/ GUARDIAN CONSENT FORM (Copy for Data Collector)**

**Title of research:** Tobacco And Electronic Cigarette Survey among Malaysian Adolescent 2016

By signing below, I certify that:

	Please tick <input type="checkbox"/> each box
1. I have been given information about the research, and I have read and understand the information provided in this brochure.	
2. I have had sufficient time to consider my child's participation in this research and was given the opportunity to ask questions and all my questions have been answered satisfactorily.	
3. I understand that my child's participation is voluntary and may withdraw from this study at any time without giving any reason.	
4. I understand the possible risks and benefit from this research and I give my consent to allow my child to participate in this study participate under condition stated. I understand that my child must follow the researcher's instructions associated with my child participation in this research.	
5. I will receive a copy of the parent/ guardian information/informed consent form that was signed and dated.	

I, \_\_\_\_\_ hereby **give/do not give my consent\*** for my child/the child under my care \_\_from class \_\_ to participate in the Tobacco and Electronic Cigarette Survey among Malaysian Adolescent 2016. (**\*Strike if it's not applicable**)

(Signature) Parent/Guardians\*Name:

IC No. :

Date :

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## RISALAH MAKLUMAT RESPONDEN

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**1. Tajuk:**

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Tinjauan Penggunaan Tembakau Dan Rokok Elektronik Di Kalangan Remaja Malaysia 2016

**2. Nama Penyelidik Utama dan Institusi:**

---

Dr Abdul Aiman bin Abd Ghani, Institut Kesihatan Umum, Kementerian Kesihatan Malaysia

**3. NamaPenaja:**

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Kementerian Kesihatan Malaysia

**4. Pengenalan:**

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Kementerian Kesihatan Malaysia sedang menjalankan Tinjauan Penggunaan Tembakau Dan Rokok Elektronik Di Kalangan Remaja Malaysia pada tahun ini. Maklumat di bawah akan menjelaskan hal-hal berkenaan tinjauan tersebut dengan lebih mendalam.

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

Setelah anda memahami maklumat tinjauan ini dan berhasrat untuk mengambil bahagian, anda perlu menandatangani Borang Persetujuan Responden (**Salinan Responden & Salinan Penyelidik**) yang disertakan pada risalah ini. Penyertaan anda dalam tinjauan ini adalah secara sukarela dan anda boleh menarik diri pada bila-bila masa. Tuan/Puan boleh tidak menjawab mana-mana soalan atau menarik diri sekiranya tidak mahu. Keengganan anda untuk mengambil bahagian, atau penarikan diri anda tidak akan menjejaskan sebarang manfaat perubatan atau kesihatan yang sememangnya hak anda.

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

**5. Apakah tujuan tinjauan ini dilakukan?**

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Tujuan tinjauan ini dijalankan adalah untuk memperolehi maklumat berkaitan dengan status penggunaan tembakau dan rokok elektronik di kalangan remaja di Malaysia. Maklumat yang diperolehi ini akan dikaji dan dinilai bagi membantu dalam merancang polisi penggunaan tembakau dan rokok elektronik. Tinjauan ini akan meliputi 13500 pelajar-pelajar sekolah seluruh Malaysia yang terpilih secara rawak.

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

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Menjawab soalan kaji selidik yang disediakan.

**7. Apakah tanggungjawab saya sewaktu menyertai tinjauan ini?**

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Adalah penting untuk anda menjawab kesemua soalan yang disediakan dengan lengkap. Menyertai tinjauan ini tidak memerlukan anda mengeluarkan sebarang perbelanjaan.

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

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Tiada risiko terhadap anda sekiranya menyertai tinjauan ini.

**9. Apakah manfaatnya saya menyertai tinjauan ini?**

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Tinjauan ini tidak mempunyai sebarang manfaat kesihatan dan kewangan secara langsung apabila anda menyertainya. Walaubagaimanapun, segala maklumat yang diperolehi daripada tinjauan ini akan dapat membantu Kementerian Kesihatan dalam merancang polisi penggunaan tembakau dan rokok elektronik di Malaysia.

**10. Adakah maklumat saya akan dirahsiakan?**

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Segala maklumat anda yang diperolehi dalam tinjauan ini akan disimpan dan dikendalikan secara sulit, bersesuaian dengan peraturan-peraturan dan/ atau undang-undang yang berkenaan. Sekiranya hasil tinjauan ini diterbitkan atau dibentangkan kepada orang ramai, identiti anda tidak akan didedahkan tanpa kebenaran anda terlebih dahulu.

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

---

Sekiranya anda mempunyai sebarang soalan mengenai tinjauan ini atau memerlukan keterangan lanjut, Tuan/ Puan boleh hubungi Ketua Penyelidik, Dr Abdul Aiman bin Abd Ghani, di Institut Kesihatan Umum, Jalan Bangsar, Kuala Lumpur di talian 03-22979400.

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

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**BORANG PERSETUJUAN RESPONDEN (Untuk Salinan Responden)**

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**Tajuk kajian :** Tinjauan Penggunaan Tembakau Dan Rokok Elektronik Di Kalangan Remaja Malaysia 2016

Dengan menandatangani di bawah, saya mengesahkan bahawa:

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

**Responden:**

Tandatangan :.....

Nama :.....

Nombor K/P:.....

Tarikh:.....

**Penyelidik:**

Tandatangan:.....

Nama :.....

Nombor K/P::.....

Tarikh:.....

**BORANG PERSETUJUAN RESPONDEN (Untuk Salinan Penyelidik)**

**Tajuk kajian :** Tinjauan Penggunaan Tembakau Dan Rokok Elektronik Di Kalangan Remaja Malaysia 2016

Dengan menandatangani di bawah, saya mengesahkan bahawa:

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

**Responden** :..... **Penyelidik** :.....

Tandatangan :..... Tandatangan :.....

Nama :..... Nama :.....

Nombor K/P :..... Nombor K/P :.....

Tarikh :..... Tarikh :.....

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**RESPONDENT INFORMATION SHEET**

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**1. Title:**

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Tobacco And Electronic Cigarette Survey Among Malaysian Adolescent 2016

**2. Name of principal investigator and institution:**

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Dr. Abdul Aiman bin Abd Ghani, Institute for Public Health, Ministry of Health Malaysia

**3. Name of sponsor:**

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Ministry of Health Malaysia

**4. Introduction:**

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Ministry of Health is conducting the Tobacco And Electronic Cigarette Survey Among Malaysian Adolescent this year. This brochure will explain the details of this survey.

It is important for you to understand why the survey is being done and what it will involve. Please take your time to read through and consider this information carefully before you decide to participate. If you have any questions or requires more information, you may ask any team members of this survey.

Once you understood the survey information and you wish to participate, you must sign the Consent Form (**both: Copy for Respondent & Copy for Researcher**) which are included in this information sheet. Your participation is voluntary and you may withdraw at any time. You have option not to answer any of the questions or withdraw from the examination if you choose to do so. Your refusal to participate or withdrawal will not affect any medical or health benefit that is certainly your right.

This survey is fully sponsored by Ministry of Health and has been approved by the Medical Research and Ethics Committee, Ministry of Health Malaysia.

**5. What is the purpose of the survey?**

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The purpose of this study is to obtain the information on the current tobacco and electronic cigarette usage among youth in Malaysia. This information will be reviewed and evaluated to assist the formulation of smoking policies. This survey will involve 13500 randomly selected students selected all over Malaysia.



**6. What will happen if I decide to take part?**

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Respond to the survey questions that have to be answered by you.

**7. What are my responsibilities when taking part in this survey?**

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It is important that you answer all the questions in the questionnaire as complete as possible. Participation in this survey will not incur any cost to you.

**8. What are the potential risks and side effects of being in this survey?**

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None.

**9. What are the benefits of being in this survey?**

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This survey does not have any health and financial benefits when you agreed to join this survey. However, the information obtained from this survey may be helpful for the Ministry of Health in formulation of smoking e-cigarette usage policies in our country.

**10. Will my medical information be kept private?**

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All your information obtained in this survey will be kept and handled in a confidential manner, in accordance with applicable laws and/or regulations. When publishing or presenting the survey results, your identity will not be revealed without your consent.

**11. Who should I call if I have questions?**

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If you have any enquiries about this survey or if you require further information, you may contact the Principal Investigator, Dr. Abdul Aiman bin Abd Ghani, at the Institute for Public Health, Jalan Bangsar, Kuala Lumpur, telephone number 03-22979573.

Should you have any questions regarding your rights as a respondent in this survey please contact: Secretary of the Medical Research and Ethic Committee, Ministry of Health Malaysia, by telephone number 03-22874032.

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**CONSENT FORM (Copy for Respondent)**

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**Title of survey:** Tobacco And Electronic Cigarette Survey Among Malaysian Adolescent 2016

By signing below, I certify that:

	Please tick $\checkmark$ each box
1. I have been given information about the survey, and I have read and understand the information provided in this brochure.	
2. I have had sufficient time to consider my participation in this survey and was given the opportunity to ask questions and all my questions have been answered satisfactorily.	
3. I understand that my participation is voluntary and may withdraw from this survey at any time without giving any reason.	
4. I understand the possible risks and benefit of this survey and I freely give my informed consent to participate. I understand that I must follow the researcher's instructions associated with my participation in this survey.	
5. I understand that the researcher, qualified observers, auditors and the relevant authorities have direct access to my data to make sure the survey is properly and correctly recorded. All personal information and data will be ensured confidential.	
6. I will receive a copy of the subject information/informed consent form that was signed and dated.	

**Subject:**

Signature : .....

Name : .....

I/C no. : .....

Date : .....

**Subject:**

Signature : .....

Name : .....

I/C no. : .....

Date : .....

**CONSENT FORM (Copy for Researcher)**

**Title of survey:** Tobacco And Electronic Cigarette Survey Among Malaysian Adolescent 2016

By signing below, I certify that:

	Please tick <input type="checkbox"/> each box
1. I have been given information about the survey on oral and written, and I have read and understand the information provided in this brochure.	
2. I have had sufficient time to consider my participation in this survey and was given the opportunity to ask questions and all my questions have been answered satisfactorily.	
3. I understand that my participation is voluntary and may withdraw from this survey at any time without giving any reason.	
4. I understand the possible risks and benefit of this survey and I freely give my informed consent to participate. I understand that I must follow the surveyors instructions associated with my participation in this survey.	
5. I understand that the researcher, qualified observers, auditors and the relevant authorities have direct access to my data to make sure the survey is properly and correctly recorded. All personal information and data will be ensured confidential.	
6. I will receive a copy of the subject information/informed consent form that was signed and dated.	

**Subject:**

Signature : .....

Name : .....

I/C no. : .....

Date : .....

**Subject:**

Signature : .....

Name : .....

I/C no. : .....

Date : .....



Kementerian Kesihatan Malaysia

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