



UNIVERSITI PUTRA MALAYSIA

***PREVALENCE OF SMOKING AND ASSOCIATED
FACTORS AMONG ADOLESCENT IN FELDA GUGUSAN
RAJA ALIAS 1 AND FELDA SERTING HILIR 1, JEMPOL,
NEGERI SEMBILAN 2013***

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**PREVALENCE OF SMOKING AND ASSOCIATED FACTORS AMONG
ADOLESCENT IN FELDA GUGUSAN RAJA ALIAS 1 AND FELDA
SERTING HILIR 1, JEMPOL, NEGERI SEMBILAN 2013**

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ABSTRACT

INTRODUCTION: A lot of studies on adolescent smoking have been done in Malaysia. However, there was limited information available regarding smoking habit among drop out school adolescents.

OBJECTIVES: To study the prevalence of smoking among adolescents and factors associated Felda Raja Alias 1 and Felda Serting Hilir 1 in Jempol, Negeri Sembilan.

MATERIALS AND METHODS: A cross sectional study design was used. The sampling method was simple random sampling. The data were collected by distributing the questionnaire from house to house. The data was analyzed using SPSS version 20.

RESULTS: A total of 167 adolescents had answered the questionnaire. The response rate was 72.6%. The smoking prevalence among adolescents was 31.1%. Smoking is significantly associated ($p < 0.05$) with: 1) gender; 2) status of adolescent; 3) have smoking friend; 4) friend offered cigarette; 5) will smoke when friend offered cigarette; 6) involved in school discipline problem; 7) religiosity; 8) feel smoking is dangerous when see adult smoke; 9) feel that smoking can reduce stress ($p < 0.05$). The mean initiation age of smoking is 13.94 years old. Majority of adolescents will smoke at their friend's house (44.2%), buy cigarette on their own (57.7%) and most of them will buy cigarette at grocery stores (59.6%).

CONCLUSION: The authors recommend that anti-smoking campaigns should be instituted on early stage which is among primary school children. A strict punishment also must be taken to owner of grocery stores that sold cigarette to under aged people. School and mass media also should be major source of information as possible regarding dangerous and disadvantages of smoking to adolescents.

Keywords: Prevalence, Smoking, Associated Factors, Adolescents. Gugusan Felda Raja Alias

**PREVALENS MEROKOK DAN FAKTOR BERKAITAN DALAM
KALANGAN REMAJA DI GUGUSAN FELDA RAJA ALIAS 1 AND FELDA
SERTING HILIR 1, JEMPOL, NEGERI SEMBILAN**

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ABSTRAK

PENDAHULUAN: Terdapat pelbagai kajian mengenai remaja merokok telah dijalankan di Malaysia. Namun, masih terdapat kurang maklumat boleh didapati mengenai tabiat merokok dalam kalangan remaja berhenti atau dibuang sekolah.

OBJEKTIF: Menenalpasti jumlah remaja merokok dan factor yang berkaitan di Felda Raja Alias 1 and Felda Serting Hilir 1 di Jempol, Negeri Sembilan.

KAEDAH: Kajian keratan rentas telah dialankan. Data diperoleh dengan megedarkan soalan kaji selidik dari rumah ke rumah. Data yang diperoleh telah dianalisa menggunakan SPSS versi 20.

KEPUTUSAN: Seramai 167 orang remaja telah menjawab borang soal selidik yang diberikan. Kadar respon ialah 72.6%. Kelaziman merokok dalam kalangan remaja di lokasi kajian ini ialah 31.1%. Tabiat merokok ini didapati mempunyai kaitan yang ketara ($p < 0.05$) dengan: 1) jantina; 2) status remaja; 3) mempunyai rakan yang merokok; 4) rakan pernah menawarkan rokok; 5) akan merokok apabila rakan menawarkan rokok; 6) terlibat dengan masalah disiplin sekolah; 7) keimanan; 8) berpendapat bahawa merokok adalah bahaya apabila melihat orang dewasa merokok; 9) berpendapat bahawa merokok boleh meredakan tekanan. Purata umur mula merokok ialah 13.94 tahun. Majoriti remaja akan merokok di rumah rakan (44.2%), membeli sendiri rokok mereka (57.7%), dan kebanyakannya membeli rokok di kedai runcit (59.6%).

KESIMPULAN: Penulis menyarankan agar kempen anti-merokok seharusnya diadakan pada peringkat awal iaitu dalam kalangan pelajar sekolah rendah. Denda yang tegas juga perlu dikenakan kepada pemilik kedai runcit yang menjual rokok kepada orang bawah umur. Pihak sekolah dan media massa juga sepatutnya menjadi bagi maklumat mengenai bahaya dan keburukan merokok kepada remaja.

Kata kunci: Prevalens, Merokok, Faktor Berkaitan, Remaja, Gugusan Felda Raja Alias

ABBREVIATIONS

- 1) WHO = World Health Organization
- 2) GYTS = Global Youth Tobacco Survey
- 3) NHMS = National Health Morbidity and Survey
- 4) SPSS = Statistical Package for Social Science Program



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CHAPTER 1: INTRODUCTION

1.1 Background

A lot of study have been conducted in previous years in order to justify that smoking is one of the cause of many diseases such respiratory disease, cardiovascular disease and so on. Smoking related disease has become the main concern for years in many countries as over 100 million peoples have lost their lives due to smoking (GYTS, 2009). Nevertheless, smoking now has become among the important current public health issues in Malaysia. Ministry of Health in 2003 has reports the increase of the mortality rate by each year among Malaysian and the data that has been collected from hospitals around peninsular Malaysia showed that mortality from Cardiovascular Disease (CVD) increase from 15.6% in 1975 to 18.3% in 1991. In fact, almost half (46.4%) Malaysian adult males are smoker which make our country among the highest in the region (Lim et al., 2010). Apart from concern on the health of the smoker, smoking habit among Malaysian also is responsible for many other disadvantages and side effects. Smoking has been proved to contribute bad influences on many aspects of life such as on the economic status of the smoker, family environment and social relationship. It is estimated that RM 2.9 billion is spent by the governments in treating the major smoking related disease mainly cancer of the lung, ischemic heart disease and chronic obstructive pulmonary disease (COPD) (Ministry of Health Malaysia, 2006).

In relation to the adolescent group, it is an intermediate stage growth between childhood and adulthood in which people said as the most crucial stage of life. This is the stage in which they are searching for personal identity that starts with various experiments with a lot of risky behaviour including smoking (Santrock, 2005). In order to prevent an increase in the rate of smoking related disease, thus it is wise to take an action from the beginning. It has been suggested that the most effective strategy in tobacco control is preventing youths from initiate smoking. Thus, adolescent stage is the most suitable target for various campaigns of smoking cessation. Avoiding people from start smoking is a lot easier compared to tell them to stop smoking. Thus, this can prevent the adolescent from turning up into an adult regular smoker in the future (Lim *et al.*, 2006).

1.2 Problem Statement

High prevalence of smoking among adult in Malaysia had become the main issue which encouraged government to continuously conduct many activities and variety of campaigns in order to stop or prevent people from smoking. The problem must be identified from the lower level, and adolescent stage is the main concern. This is because preventing youths from smoking is the most effective strategy. This can reduce the smoking prevalence and at the same time reduce smoking-related diseases in the population in the future.

To do this we need to know why people start to smoking. From others' research already done, there are many factors that contributed to smoking such as peer influence, sibling that smoke, habit and also from stress. By knowing the reason why people smoke, we can try to approach an alternative to divert them from getting attach to this habit.

1.3 Significant Of Study

Studies that have been conducted previously were mainly focused on the school-going adolescent from urban or rural area. As a result, they missed out the adolescent that stops going to schools and drop-out student. Our study is mainly focused on the adolescent group from the Federal Land Development Authority (**FELDA**) settlement which includes the drop-out and school-going adolescent. Thus, we can obtain more precise result on the prevalence of youth smoking. This will allow us to study which one of these two adolescent groups that are more prone to smoking either the drop-out student or the school's going adolescent. Thus, government and any people in charge will realize that this group of adolescent is also important to approach when conducting health education or any campaign.

1.4 Objectives Of Study

a) General Objective

To study the prevalence and factors related to smoking among adolescent at Felda Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan.

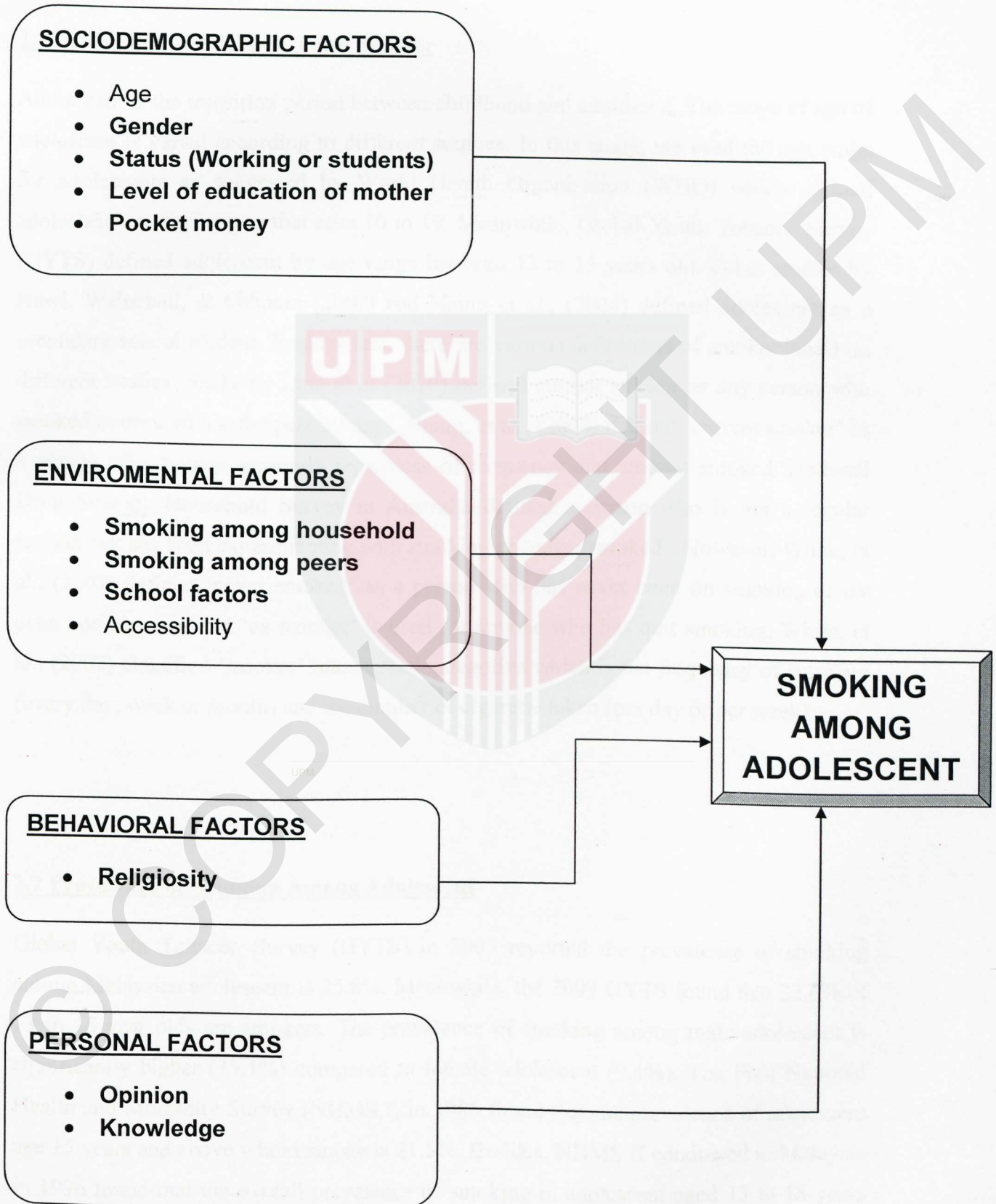
b) Specific Objective

1. To study the prevalence of smoking among adolescent at FELDA Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan
2. To determine the association between sociodemographic factors with adolescent smoking at FELDA Gugusan Raja Alias 1 FELDA Serting Hilir 1, Jempol, Negeri Sembilan
3. To determine the association between environmental factor with adolescent smoking at FELDA Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan
4. To determine the association between behavioural factor with adolescent smoking at FELDA Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan
5. To determine the association between personal factors with adolescent smoking at FELDA Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan
6. To determine characteristics of adolescents smoker based on initiation age and their accessibility to cigarettes

1.5 Hypothesis

1. There is an association between sociodemographic factor with adolescent smoking at FELDA Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan
2. There is an association between environmental factor with adolescent smoking at FELDA Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan
3. There is an association between behavioural factor with adolescent smoking at FELDA Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan
4. There is an association between personal factors with adolescent smoking at FELDA Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan

1.6 Conceptual Framework



CHAPTER 2: LITERATURE REVIEW

2.1 Definitions of Adolescent and Smoker

Adolescent is the transition period between childhood and adulthood. The range of age of adolescent is varied according to different sources. In this study, we used the age range for adolescents as suggested by World Health Organization (WHO) which defined adolescents as any person that ages 10 to 19. Meanwhile, Global Youth Tobacco Survey (GYTS) defined adolescent by age range between 13 to 15 years old. Other studies by Nawi, Weinehall, & Othman (2007) and Naing et al., (2004) defined adolescent as a secondary school student. Besides that, there are various definitions of smoker based on different studies. Study by Lim, et al (2010) defined current smoker as any person who smoked at once within the past 30 days. Naing, et al., (2004) defined 'current smoker' as a person who smokes currently regardless of frequency and amount smoked. National Drug Strategy Household Survey in Australia defined a person who is not a regular smoker but has been experimenting with smoking as 'never smoked'. However, White, et al., (2002) defined 'never smoked' as a person who has never been on smoking or try even one cigarette and 'ex smoker' is used for anyone who has quit smoking. White, et al., (2002) classified 'smoker' into several categories which is the frequency of smoking (every day, week or month) and the number of cigarette taken (per day or per week).

2.2 Prevalence of Smoking Among Adolescent

Global Youth Tobacco Survey (GYTS) in 2003 reported the prevalence of smoking among Malaysian adolescent is 25.8%. Meanwhile, the 2009 GYTS found that 22.6% of 13 to 15 year olds are smokers. The prevalence of smoking among male adolescent is significantly higher (35.1%) compared to female adolescent (9.4%). The First National Health and Morbidity Survey (NHMS I) in 1986 found that the prevalence of adolescent age 15 years and above whom smoke is 21.5%. Besides, NHMS II conducted in Malaysia in 1996 found that the overall prevalence of smoking in adolescent aged 13 to 18 years old is 16.7%. The percentage is 30.7% in males and 4.8% of females in this age group.

Meanwhile, NHMS III reported that the prevalence of smoking among adolescent is 8.7%. The markedly reduced smoking prevalence among adolescent observed in this survey could be due to gross under reporting. Hizlinda, et al., (2011) stated that this decreasing trend is due to the effectiveness of the national campaign 'TAKNAK' which is first held in 2004. There are several small studies conducted in Malaysia to determine prevalence of smoking in certain areas. A study conducted by Lim, et al. (2010) on form four students in Petaling District Selangor showed that 42.9% of boys and 21% of girls are a smoker. Meanwhile, study by Juslina, et al., (2011) shows the prevalence of smoking among secondary school student in Sarawak is 32.8% with a mean age of initiation at 12.8 ± 1.9 years. . Besides that, study by Lee, Paul, Kam, & Jaghmoni (2005) among secondary students in Negeri Sembilan show a higher prevalence of smoking among the male students (26.6%) compared to the female students (3.1%).

2.3 Sociodemographic Factors

2.3.1 Age of smoking initiation

Survey conducted by NHMS III (2006) reports that the mean initiation age (MIA) for smoking among adolescent is 13.6 years. Also, Lim, et al., (2006), found that male students from FELDA areas start earlier at age of 4 compared to other areas. The mean initiation age is 11.28 years old (95%CI 11.12 to 11.45). Besides that, study by Hammond, et al., (2008) states that age of smoking initiation can predict the chance for long-term tobacco use and levels of dependence. The researchers find that youth between the ages of 13 and 17 try their first cigarette at an average age of 14 years. The earliest age to start smoking is as early as 8 years old.

2.3.2 Gender

Many studies found that there are significant association between gender and smoking among adolescent. A study conducted by Lim, et al (2006) found that there is an association between gender and smoking behaviour in which the prevalence among male students (54.1%) are higher compared to female students (4.3%) ($p < 0.001$). GYTS (2003)

in Malaysia reports that the prevalence of smoking among male adolescent is 40.0% and female adolescent show only 11.5%. Meanwhile, GYTS (2009) in Malaysia finds that the prevalence of smoking among boys is 35.1% and the girl is 9.4%. Another survey done by NHMS III (2006) finds that the prevalence of smoking among boys is higher (16.6%) than girls (0.7%). A study conducted Hammond, et al. (2008) found Asian males are significantly at greater risk than females to establish or initiate smoking ($p < 0.05$).

2.3.3 Status of adolescents

Study done by Patricia, et al., (2000) found that there is significant association between educational attainment and cigarette smoking ($p < 0.05$). School dropouts were 6.46 times more likely to smoke than the control students. Substance Abuse and Mental Health Services Administration (SAMHSA) reported that dropout adolescents (56.8%) are more than twice as likely to be smoker compared to adolescent that still continue their education (22.4%). Besides that, Tyas, et al., (1998) found that higher number of smoking adolescent is doing part time job and has their own personal income. National Household Survey on Drug Abuse and the Epidemiologic Catchment Area surveys sponsored by the U.S. government, reported that high school dropouts are much more likely to have started using tobacco and other substances, as compared with their peers who remained in school.

2.3.4 Pocket money

Study done by Fadhli, et al., (2005) in Kota Bharu, Kelantan showed that amount of pocket money has no significant association with adolescent smoking ($p = 0.535$). Besides that, Rezaeetalab, et al., (2012) in Australia also showed that the economic status (based on the amount of pocket money) has little or no effect on the incidence of smoking among high school students (p value: 0.863). In terms of economic status this study showed that 22.4% of smoker students and 20.7% of non-smoker ones had high pocket money. However, study by Ma, et al., (2011) found that adjusted odds ratios for current smoking ranged from 2.0 [95% confidence interval (CI) 1.5–2.7] for adolescents receiving 200–399 Reminbin (RMB)/month as pocket money to 6.5 (95% CI 3.3–12.7) for those receiving ≥ 1000 RMB/month, compared with those receiving < 200 RMB/month. The

crude population-attributable risk percentage (PAR%) due to higher pocket money (≥ 200 RMB/month) for current smoking was 50.4% (95% CI 42.2–57.4), and adjusted PAR% was 43.3% (95% CI 30.7–53.1). Based on ITC National Report Malaysia (2009), adolescents with highest monthly pocket money which is more than RM30 have the highest prevalence of smoking (56.1%). Meanwhile, those adolescent that have less than RM10 of pocket money each month show the least prevalence rate (24.6%). The prevalence of smoking among youths with spending money between RM11 to RM30 show 29.3%. Generally, adolescent with more spending money are more able to purchase tobacco. A study done by Tyas and Pederson (1998) reported young people with more spending money shows higher levels of smoking presumably because money is needed for purchase of cigarettes.

2.3.5 Level education of mother

Erbaydar, et al., (2003) found that mothers' educational level give significant association with adolescent smoking. Adolescents whose mothers had low level of education were more likely to be current smokers (OR 1.73, 95% CI 1.13–2.67; and OR 1.97, 95% CI 1.33–2.93, respectively), compared with those whose mothers have high level of education. Meanwhile, educational level of father was not related to adolescent smoking. The study revealed that mother shows stronger influence because woman usually is responsible for and reflects the social developmental level of the family. Mother with low level of education may represent a more traditional family, where smoking may be an accepted social behaviour for men. In contrast, an educated mother may reflects a so-called 'modern and highly discipline' family, where smoking may be a symbol of dangerous and unacceptable since it has many bad side effects. Hedman et al., (2007) and Leatherdale et al., (2005) also showed that maternal education level was more influential and has association on smoking onset of her children compared to father's level of education. Nevertheless, study done by Proescholdbell, et al.(2000) reported that higher smoking prevalence among high school adolescents was found among parents with high levels of education. That study showed mothers' level education education is not significantly associated with smoking behaviour among adolescent ($p=1.00$, $p>0.05$)

2.4 Environmental Factors

2.4.1 Smoking among households

Based on report by Action on Smoking and Health, they found that adolescents whom live with parents or siblings who smoke are 3 times more likely to become smokers than children with non-smoking households. They estimate that there is at least 23,000 young people in England and Wales initiate smoking at age of 15 years old due to exposure by smoking households. Besides that, study conducted by Royal College Physicians in 2010 found that any household smoking can increase the risk in prevalence of smoking among adolescent by an OR of 1.92 (95% CI 1.70 to 2.16). Khairani, et al., (2007) found that higher prevalence of smoking (71%) is found among adolescents that live with family members who smoke compared to those live with no smoking family members (29%). Previous study done by Wakefield et al., (2000) reported that home smoking restrictions had a significant association to reduce smoking habit among adolescent ($p < 0.05$). Afiah et al., (2010) found that there is significant association between never discussed the danger of smoking with parents and adolescent smoking status.

2.4.2 Smoking among peers

Naing, et al., (2004) classified peer pressure into two types. First, having close friend who smoke. Second, is having close friend that encourages the adolescent to smoke. The results shows the main reason (24%) for his respondents to initiate smoking is because they want to follow their friends. Another study by Gilpin Elizabeth, White, & Karen (2007) also found that peer influence is significantly associated with smoking adolescent with $p < 0.05$. Another study by Lim, et al. (2010) founds that 80% of adolescent starts smoking with friends. This is because adolescent runs a similar social and learning environment with their peers. They also have an opinion that they should find identities among their peer groups and away from parents. Besides that, Khairani, et al., (2007) found that 51.2% of adolescents state that peer pressure is the reason for them to initiate smoking. Afiah, et al., (2010) found that having friends whom smoke is significantly associated with smoking among adolescent (OR=8.55, 95%CI 5.81-12.59). The most significant reason for adolescent to initiate smoking is due to friends offered cigarette to them. The results show that adolescents is 12 times more likely to smoke after being offered cigarette by friends (OR=11.87; 95%CI 8.68-16.22). Other studies by Lim, et al.

(2006) and Nawi, Weinehall, & Othman (2007) found that adolescent starts to smoke in order to be accepted in their clique and making friends.

2.4.3 School factors

Khairani, et al., (2007) found that school factors can actually be further subdivided into several aspects that can become the causes of stress and results to occurrence of adolescent smoking. The causes of stress include the high demands from schoolwork such as homework and assignment (47.2%), couples in school (30.7%) and parental high expectation towards them (26.0%). Higher prevalence of smoking also is found among students who have seen a teacher smoke around school compound with 26.0%. Afiah et al., (2010) found that seeing teacher smoke at school (OR=1.82; 95% CI 1.40-2.36), involved in more than one hour per week of co curricular activities in school (OR=1.54; 95% CI 1.17-2.04) and involved in school discipline problem (OR=2.64; 95% CI 1.925-3.638) were significantly associated with adolescent smoking status. Besides that, Lim, et al., (2006) found that teenage students who score well in their academic aspects show a less tendency to smoke (OR = 0.54, 95%CI 0.40-0.73).

2.4.4 Accessibility of tobacco

Study conducted by Lim, et al., (2010) found that almost 70% of male adolescent and 60% of female adolescent purchasing tobacco from retail premises. This statistic shows that the law is taken lightly by many people. Besides that, Nawi, Weinehall, & Othman (2007) found that some shops or *warungs* owner allows debt and thus encourage adolescent to purchase cigarette even they have no money. Another study by Hammond, et al., (2008) found that 52.8% of adolescent said they buy their own cigarettes, 29.6% get them from friends, 7% has someone to buy the cigarette for them, 5.4% said they get cigarette from home, and 5.3% get them another way. Generally, 68.7% claimed that they can get cigarette easily. A survey conducted in the Kelantan by Zulkifli, et al., (1999) found that 95% of owner stores sold cigarettes to minors without even asking for age verification. Thus, adolescent become brave and dare to buy a cigarette from many shops.

2.5 Behavioural Factors

2.5.1 Religiosity

Afiah, et al., (2012) found that there is a significant association between the smoking among adolescent and religiosity. The respondents are divided into smoker (cases) and non smoker (control). The result shows that those smokers whom committed to religion has lower prevalence of smoking (38.0%) compared to the non-committed cases with prevalence of 62.0% (OR=0.636, 95%CI 0.490-0.826). They state that religious personality is one of the related factors that associated with smoking status. Rural adolescent can be protected from smoking by committed to religion regardless of the type of religion. Initiation of regular smoking among previously non-smoking adolescents and the initiation of experimental smoking were found to be reduced by attending religious activity frequently or involving in any religious youth group.

2.6 Personal Factors

2.6.1 Opinion

The perception of the health hazards of smoking is a very important associating factor too as the number of non-smokers that agree on the harmfulness of smoking to health is higher compared to that of smokers (Naing , et al., 2004). Despite adolescent knowing that smoking can bring a lot of adverse effect especially on body health, the prevalence of smoking among adolescent never decreases but remains (Ozawa , Washio, & Chikako, 2002). Furthermore, some of the school teens when asked why do they smoke, they said that somehow they feel more mature and look more like a cool adult (Khairani , Norazua, & Zaiton, 2007). In addition, some of the adolescents admitted that they feel enjoyed when they smoke (Naing , et al., 2004). In Malaysia, smoking habits is frequently considered as a normal behaviour (Lim , Sumarni, Kee, Norhamimah, Wan Rozita, & Amal , 2010) which is actually a very bad perception and attitude towards smoking. Study by Naing, et al., (2004) also shows that some adolescents smoke during their free time because they think that smoking is a way of relaxation of the body and mind. In fact, the findings of the study done by Naing et al., (2004) shows that 11.7% of the respondents state that smoking is a normal behaviour; 13.5% of them said they do smoke for relaxation at the free time; 17.1% of them state enjoy the feeling of smoking.

2.6.2 Knowledge on health effects of smoking

Adolescents with higher levels of academic education are several times more likely do not smoke compared to that of those with lower levels of academic education (Ozawa, et al., 2002). It was found that when adolescents do not have the knowledge or do not aware about the devastating disadvantages of tobacco use, they are more likely to start smoking (Naing, et al., 2004). In fact, in the study done by Naing, et al., (2004), the p-value is less than 0.001 and it shows that there is a significant association between personal health knowledge and adolescents smoking where adolescent who is more educated on the health effects of smoking are less likely to smoke.

CHAPTER 3: MATERIALS AND METHODS

3.1 Study Location And Duration

The study is conducted at FELDA Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, Negeri Sembilan. The study will be conducted from March to September 2013.

3.2 Study Design

This is a cross-sectional study.

3.3 Sampling

3.3.1 Study Population

Study population is adolescents in FELDA schemes in Negeri Sembilan

3.3.2 Study Sample

- a) Smoker : Adolescents aged 10 to 19 years old who smoked (regardless number of puff or cigarette) in the past 30 days
- b) Non smoker : Adolescents aged 10 to 19 years old who never smoked or do not smoke in the past 30 days
- c) Inclusion criteria : All adolescent aged from 10 to 19 years old at Felda Gugusan Raja Alias 1 and FELDA Serting Hilir 1, Jempol, N.Sembilan.
- d) Exclusion criteria:
 - 1) Adolescent aged above than 19 years old
 - 2) Adolescent aged below than 10 years old
 - 3) Adolescent that is not a permanent resident at study locations
 - 4) Retarded adolescent
 - 5) Non Malaysian citizen

3.3.3 Sampling Frame

Sampling frame is house at Felda Gugusan Raja Alias 1 and Felda Serting Hilir 1

3.3.4 Sampling Unit

Sampling unit is an adolescent at the FELDA Gugusan Raja Alias 1 and Felda Serting Hilir 1

3.3.5 Sampling Method

Simple random sampling method is chosen. The sampling frame consist lists of Feldas' in Felda Gugusan Raja Alias. Then, we randomly selected any two Felda and we managed to get Felda Gugusan Raja Alias 1 and Felda Serting Hilir 1. We also randomly went from house to house in the study location.

3.3.6 Sample Size

Sample size is calculated using formula by Lwanga and Lemeshaw (1991)

$$n = \frac{\{z_{1-\alpha/2}\sqrt{2P(1-P)} + z_{1-\beta}\sqrt{P_1(1-P_1) + P_2(1-P_2)}\}^2}{(P_1 - P_2)^2}$$

$$= \frac{\{1.96\sqrt{2(0.384)(0.616)} + 0.842\sqrt{(0.519)(0.481) + (0.249)(0.751)}\}^2}{(0.196)^2}$$

$$= 49.7 \gg 50 \text{ adolescents}$$

$$= 50 \times 2 = 100 \text{ adolescents}$$

(*multiply by 2 because we are using two sample populations which are smoker and non smoker)

$$= 100 \times 2 = 200 \text{ adolescents}$$

(*multiply by 2 to avoid cluster design effect)

$$= 200 / 2 \text{ (*assumed that each house has 2 adolescents)}$$

$$= 100 \text{ houses}$$

n = sample size

$z_{1-\alpha/2}$ = the number of standard error away from the mean = 1.96

$z_{1-\beta}$ = 0.842

$P = (P_1 + P_2) / 2$

P_1 = prevalence of smoking among adolescent associated with smoking brother (Lim et al., 2010)

P_2 = prevalence of smoking among adolescent associated non smoking brother (Lim et al., 2010)

We assumed that there will be 15% non response (empty house or have no adolescent). Thus, an additional of 30 subjects will be included and give a total of 230 adolescents and 115 houses that will be involved in this study.

3.4 Instruments and Data Collection

3.4.1 Instruments

Self-administered questionnaire that is adapted based on the National Youth Tobacco Survey (NYTS) 2011. Other studies regarding smoking among adolescent in Malaysia had also referred to this survey. It has been translated into Bahasa Malaysia (back to back translation). The questionnaires include the sociodemographic factor, environmental factor, behavioural and also personal factor. Minor improvement being made by an additional question about religiosity based on questionnaire by Afiah, et al., (2012) on study about religious personality and smoking habit.

3.4.2 Data collection methods

We went from one house to another house and distributed the questionnaire to any household that has adolescents. We will leave the questionnaire there and come back on the next day to collect our questionnaire.

3.4.3 Quality Control

The questionnaire was adapted from NYTS 2011 and study by Afiah, et al., (2012). Thus it was already being validated by experts and supervisor in charged to avoid any grammatical and sentences error. Pre test or pilot test was conducted among 30 adolescents from Sri Serdang. The purpose is to test the reliability of the questionnaire. The result of Cronbach's Alpha for both adapted questionnaires after being compiled was 0.905.

3.5 Statistical Analysis

The data collected is analysed using the SPSS version 20. Chi square and Fisher Exact test performed to determine the association between individual categorical variables and the smoking status (outcome) of adolescents. The variable is significant when (p -value=0.05). Knowledge level of adolescents is determined by calculating the score based on 8 questions prepared in our questionnaire distributed to them. Each correct answer will be given one mark. We categorized them into two classes which are knowledgeable (score more than 4) and non knowledgeable (0 to 4 marks). The association is determined by chi square test. The questionnaire on religious personality has 23 statements in which are each statement is measured by Likert scale from 1 to 5. Likert scale 1 is referred as frequent and 5 as never. The normality test for each statement is not normally distributed and shows significant association based on Kolmogorov-Smirnov^atest. The religious personality is categorized into committed and non-committed according to the total median score. Median score less than 53 is defined as committed to religion. Then, chi square test is carried out to determine association between religious personality and smoking status.

3.6 Ethics Of The Study

Approval for ethical review will be submitted to Universiti Putra Malaysia Ethical Committee.

3.8 Variables

Dependent Variables: Adolescents who smoke (regardless of the number of puff) in the past 30 days

Independents Variables: Sociodemographic factors, environmental factors, behavioural factors and personal factors.

3.8 Definition of Terms

Terms	Definition
Prevalence (GYTS)	Proportion of population who currently smoke. This indicator is also known as 'Current smoker (%)'
Adolescent (WHO)	Person aged from 10 to 19 years old
Current smoker (WHO)	Person who had smoked at least once during the previous 30 days.
Non smoker (WHO)	Person who never have tried smoking
Ex-smoker (WHO)	Person who was formerly a daily smoker but currently does not smoke at all
Tobacco products (Federal law (section 5702(c) of Title 26 of the United States Code)	Any product made or derived from tobacco that is intended for human consumption, including any component, part, or accessory of a tobacco product. This includes : i) Cigarette = Any roll of tobacco wrapped in paper or in any substance
Cigarette smoking	The practice of burning and inhaling cigarette

CHAPTER 4: RESULT

4.1 Respond Rate

A total number of 167 respondents had participated in this study out of 230 sample size that we are targeting. The respond rate is 72.6%.

$$\frac{167}{230} \times 100 = 72.6\%$$

4.2 Descriptive Analysis

4.2.1 Sociodemographic Characteristics of Respondent

a) Gender

According to the result shown in Table I, 48.5% (n=81) were female respondents and 51.5% (n=86) were male respondents.

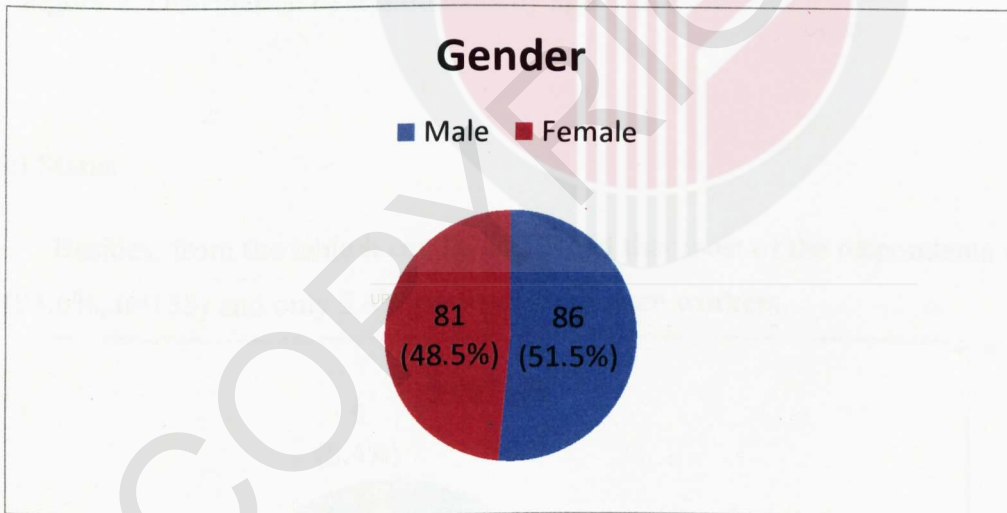


Figure 1. Distribution of respondents by gender

b) Age

Majority of the respondents were 16 years old (18.6%, n=31) and the least was 10 years old (1.8%, n=3).

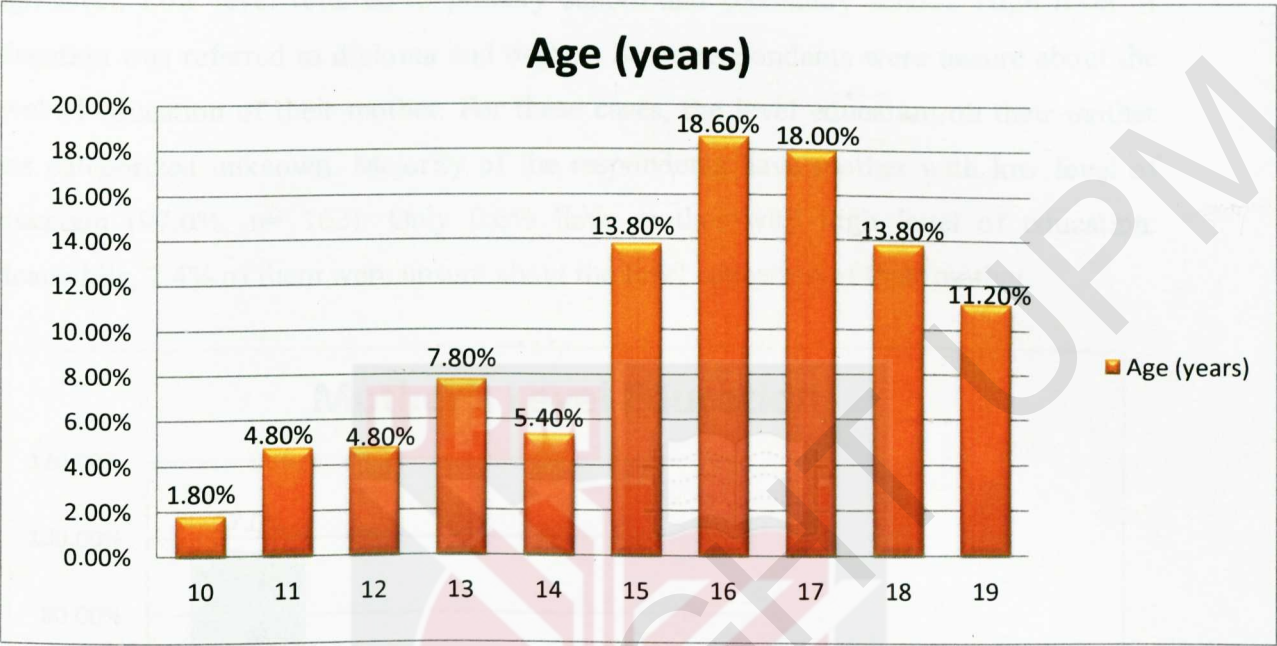


Figure 2. Distribution of respondents by age

c) Status

Besides, from the table it can be concluded that most of the respondents were students (94.6%, n=158) and only 5.4% (n=9) of them were workers.

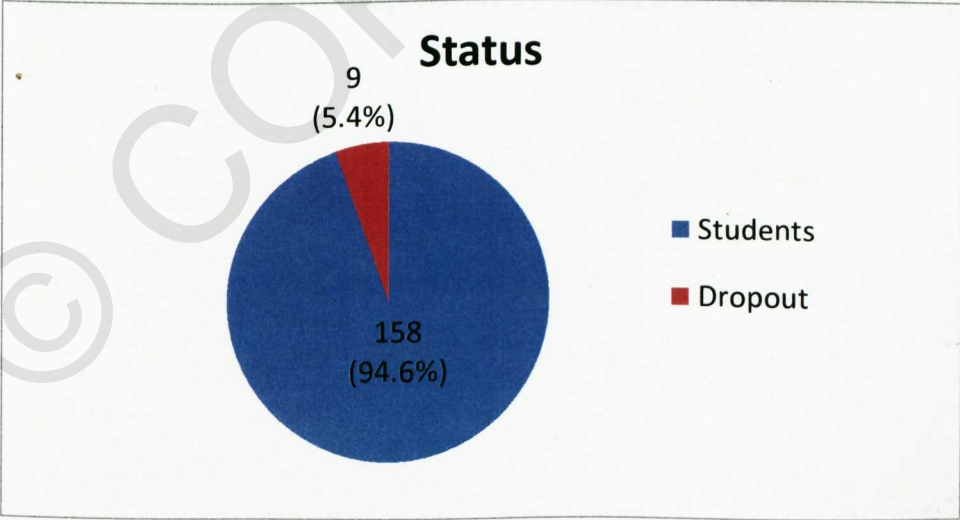


Figure 3. Distribution of respondents by status

d) Level education of mother

Education levels of the respondents' mother were also investigated. For ease of analysis, the levels of education were categorized into three – unknown, low level and high level. Low level referred to primary school and secondary school. High level of education was referred to diploma and degree. Some respondents were unsure about the level of education of their mother. For these cases, the level education of their mother was categorized unknown. Majority of the respondents have mother with low level of education (97.0%, $n= 162$). Only 0.6% have mother with high level of education. Meanwhile, 2.4% of them were unsure about the level education of their mother.

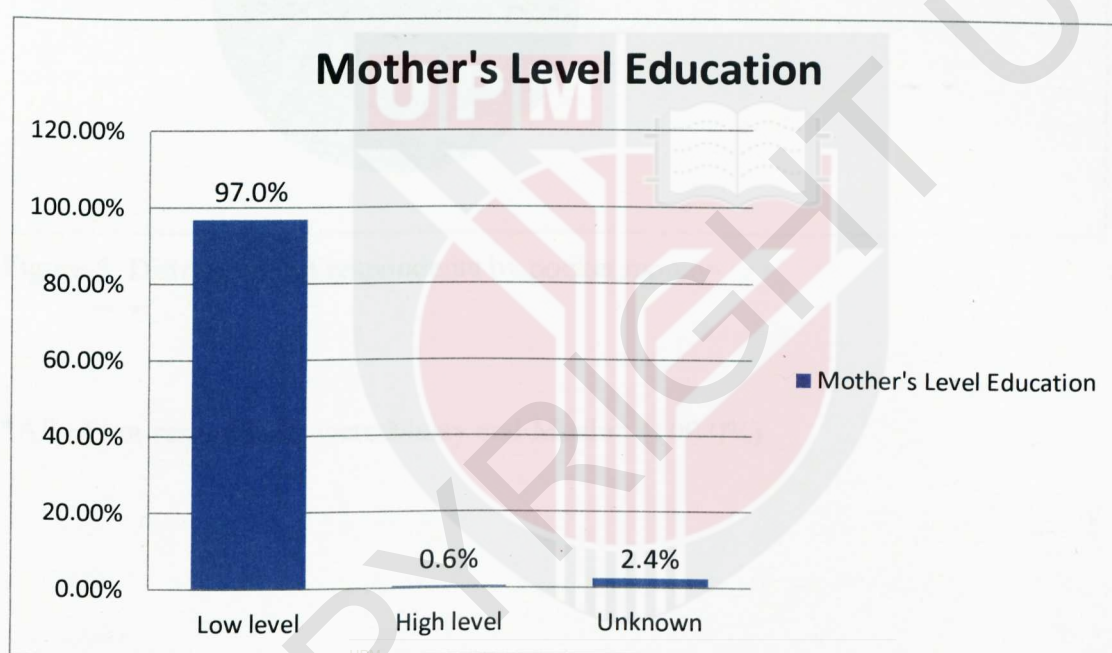


Figure 4. Distribution of respondents by mother's level of education

e) Pocket money

Apart from that, according to the weekly pocket money, more than half of the respondents own between RM0.00 to RM49.00 per week (86.8%).

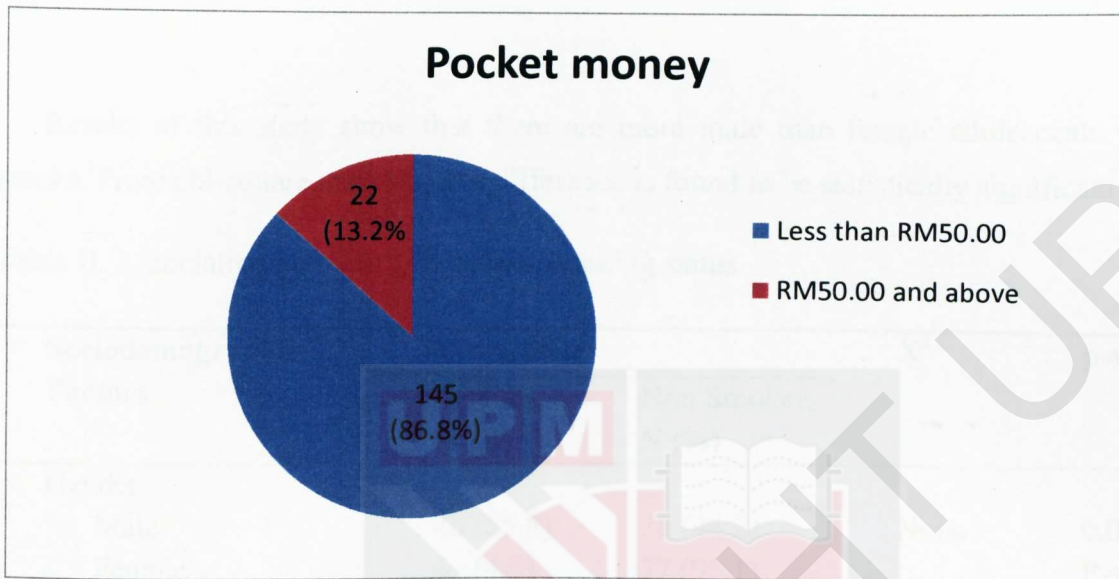


Figure 5. Distribution of respondents by pocket money

****All of our respondents were Malay and Muslim (100.0%)**

4.2.3 Prevalence of Smoking among Adolescent at FELDA Gugusan Raja Alias 1 and FELDA SeritingHilir 1, N.Sembilan

Out of 167 respondents involved in this study, 31.1% (n=52) were identified as smoker. Meanwhile, the prevalence of non smoker was 68.9% (n=115).

Table I. Prevalence of smoking

Smoking Status	Frequency	Percent (%)
Smoker	52	31.1
Non Smoker	115	68.9

4.3 Qualitative Analysis

4.3.1 Association between Sociodemographic Factors With Adolescent Smoking at FELDA Gugusan Raja Alias 1 and FELDA SertingHilir 1, N.Sembilan

Results of this study show that there are more male than female adolescents who smoke. From chi-square analysis, this difference is found to be statistically significant.

Table II. Association between gender and smoking status

Sociodemographic Factors	Categories		X^2	p-value
	Smoker; N (%)	Non Smoker; N (%)		
Gender				
Male	48 (55.8)	38 (44.2)	None	0.001 P < 0.05*
Female	4 (4.9)	77 (95.1)		

*Analysis by Fisher's exact test;

Significant at p < 0.05

It was also found that majority of smoker is among adolescents who are workers compared to students. Fisher's exact test shows that this difference is statistically significant.

Table III. Association between status of adolescents and smoking status

Sociodemographic Factors	Categories		X^2	p-value
	Smoker; N (%)	Non Smoker; N (%)		
Status				
Student	45 (28.5)	113 (71.5)	None	0.004 P < 0.05*
Worker	7 (77.8)	2 (22.2)		

*Analysis by Fisher's exact test;

Significant at p < 0.05

Results also show that amongst the smokers, majority of them have mothers who have low level of education compared to high level of education. However, chi-square analysis shows that the difference of level of mother's education level and the status of smoking is not statistically significant.

Table IV. Association between mother's level of education and smoking status

Sociodemographic Factors	Categories		X ²	p-value
	Smoker; N (%)	Non Smoker; N (%)		
Mother's level of education				
Low Education	50 (30.9)	112 (69.1)	1.122	0.571 P > 0.05
High Education	0 (0.0)	1 (100.0)		
Under Low	2 (50.0)	2 (50.0)		

Significant at $p < 0.05$

It was found that amongst the smokers, majority of them have pocket money RM50.00 and above per week (36.4%) compared to those who have less than RM50.00 (30.3%). However, chi-square analysis shows that the difference of level of pocket money and the status of smoking is not statistically significant

Table V. Association between pocket money with smoking status

Sociodemographic Factors	Categories		X ²	p-value
	Smoker; N (%)	Non Smoker; N (%)		
Pocket money				
Less than RM50.00	44 (30.3)	101 (89.7)	0.323	0.570
RM50.00 and above	8 (36.4)	14 (63.6)		
			P > 0.05	

*Analysis by Fisher's exact test;

Significant at $p < 0.05$

4.3.2 Association between Environmental Factors with Adolescent Smoking at FELDA Gugusan Raja Alias 1 and FELDA SertingHilir 1, N.Sembilan

1) Association between smoking among households and adolescents smoking status

The prevalence of adolescent smokers was higher in number among those who have more than one family who are smokers ($n=50.9\%$) as compared to those of which have one or less than one family smoker (21.4%). Chi square analysis revealed that there was a significant association between number of family smoker and adolescents smoking status ($p=0.001$, $p>0.05$)

Table VI. Association between numbers of family member smoking with adolescent smoking status

Variables	Total	Smoking Status		X ²	P-Value
		Smoker; N (%)	Non Smoker; N (%)		
Number of family member smoking					
< 1 or one	112	24 (21.4)	88 (78.6)	14.951	0.0001 (p<0.05)
More than one	55	28 (50.9)	27 (49.1)		
Significant at p < 0.05					

The prevalence of adolescent smokers that were given permission to smoke (i.e. allowed to smoke at anytime and anywhere were higher (51.6%) as compared to those that were allowed at certain place and time (26.8%) and those who had restricted permission (i.e. not allowed) (14.1%). Based on the result chi-square test, it was found that there was a significant association between home smoking policy and adolescent smoking status ($p=0.0001$, $p<0.05$).

Table VII. Association between numbers of family member smoking with adolescent smoking status

Variables	Total	Smoking Status		X^2	P-Value
		Smoker; N (%)	Non Smoker; N (%)		
Home smoking policy					
Allowed at anytime and anywhere	62	32 (51.6)	30 (48.4)	21.180	0.0001 ($p<0.05$)
Allowed an certain time and place	41	11 (26.8)	30 (73.2)		
Not allowed	64	9 (14.1)	55 (85.9)		

Significant at $p < 0.05$

Among those who discuss with parents about smoking there were more smokers (34%) than those who do not discuss about smoking (28%). However, chi square analysis shows that there was no significant association between discussion about smoking with parents and adolescent smoking status ($p=0.409$, $p>0.05$).

Table VIII. Association between discussion on smoking with parent and smoking status

Variables	Total	Smoking Status		X ²	P-Value
		Smoker; N (%)	Non Smoker; N (%)		
Discussed about smoking with parents					
Yes	85	29 (34.1)	56 (65.9)	0.717	0.409 (p>0.05)
No	82	23 (28.0)	59 (72.0)		
Significant at p < 0.05					

Among the adolescents whose parents have interest in discussing about smoking, there are more smokers (38%), compared to those whose parents do not show interest in discussing about smoking (25.5%). However, chi square analysis shows that there was no significant relationship between parents' interest to discuss about smoking and adolescents smoking status ($p=0.307$, $p>0.05$)

Table IX. Association between parents' interest to discuss about smoking and smoking status

Variables	Total	Smoking Status		X^2	P-Value
		Smoker; N (%)	Non Smoker; N (%)		
Parents have interest to discuss about smoking					
Yes	63	24 (38.1)	39 (61.9)	2.361	$P=0.307$ $p>0.05$
No	47	12 (25.5)	35 (74.5)		
Not sure	57	16 (28.0)	41 (71.9)		

Significant at $p < 0.052$)

Association between peer influences and adolescents smoking status

Based on the result obtained from our analysis, it was found that among those who have more than 15 friends who smoke, there are more smokers (70.6%) than those who have less than 15 friends who smoke (26.7%). There was a significant relationship between number of smoker friend and adolescent smoking status ($P < 0.001$, $p < 0.05$)

Table X. Association between number of friend who smoke and smoking status

Variables	Total	Smoking status		X^2	P value
		Smoker; N (%)	Non Smoker; N (%)		
Number of friends smoke					
Less than 15	150	40 (26.7)	110 (73.3)	13.738	0.001
15 and above	17	12 (70.6)	5 (29.4)		$P < 0.001$

Significant at $p < 0.05$

Also, the result shows that among those who have been offered cigarettes by friends, there are more smokers (60.5%), compared with those who have not been offered cigarettes by friends (21.0%). Chi square analysis shows there was a significant relationship between whether friend offering them cigarette and adolescent smoking status ($p < 0.001$, $p < 0.05$).

Table XI. Association between friends ever offered cigarette and smoking status

Variables	Total	Smoking status		X^2	P value
		Smoker; N (%)	Non Smoker; N (%)		
Have your friend ever offered cigarette					
Yes	43	26 (60.5)	17 (39.5)	23.230	0.001
No	124	26 (21.0)	98 (79.0)		$P < 0.05$

Significant at $p < 0.05$

Among those who will smoke if they have been offered cigarettes by friends, there are more smokers who will smoke (100%), than those will not smoke (24.5%) or those who are not sure (55.6%). Also, it was proved that there was a significant relationship between whether adolescent smoke if offered cigarette by best friend and adolescent smoking status ($p < 0.001$, $p < 0.05$).

Table XII. Association between will smoke if friend offered cigarette and smoking status

Variables	Total	Smoking status		X^2	P value
		Smoker; N (%)	Non Smoker; N (%)		
Will you smoke when friends offered cigarette					
Yes	11	11 (100.0)	0 (0.0)	29.859	0.001
No	147	36 (24.5)	111 (75.5)		$P < 0.05$
Not sure	9	5 (55.6)	4 (44.4)		

Significant at $p < 0.05$

On the other hand, among those who were forced to smoke, there were more smokers (55.6%) compared to those who were not forced to smoke (29.7%). However, chi square analysis proves that there was no significant relationship between whether adolescents' friend force them to smoke and adolescent smoking status ($p = 0.139$, $p > 0.05$).

Table XIII. Association between friend ever force to smoke and smoking status

Variables	Total	Smoking status		X^2	P value
		Smoker; N (%)	Non Smoker; N (%)		
Friend force you to smoke					
Yes	9	5 (55.6)	4 (44.4)	None	0.139*
No	158	47 (29.7)	111 (70.3)		$P > 0.05$

* Analysis by Fisher's Exact test;

Significant at $p < 0.05$

3) Association between school factors and adolescent smoking status

Among those who have seen see teacher smoke around school compound, there are more smokers (34.6%), compared with those who have never see teacher smoke around school compound (27.9%). Chi square analysis shows there was no significant relationship between teacher smoking and adolescent smoking status ($p=0.405$, $p>0.05$).

Table XIV. Association between ever see teacher smoked and smoking status

Variables	Total	Smoking Status		X^2	P value
		Smoker; N (%)	Non Smoker; N (%)		
Ever see teacher smoking	81	28 (34.6)	53 (65.4)	0.863	0.353
Yes	86	24 (27.9)	62 (72.1)		$p>0.05$
No					

Significant at $p < 0.05$

Among those who learn about the dangerous of smoking in school, there are more smokers (61.7%), compared with those who have do not learn about the dangerous of smoking in school (31.7%). Chi square analysis shows there was no significant relationship ($p=0.667$, $p>0.05$) between learning about dangerous of smoking in school and adolescent smoking status.

Table XV. Association between learned dangerous of smoking and smoking status

Variables	Total	Smoking Status		X^2	P value
		Smoker; N (%)	Non Smoker; N (%)		
Learn about dangerous of smoking in school					
Yes	161	51 (31.7)	110 (68.3)	None	0.667*
No	6	1 (61.7)	5 (83.3)		$p>0.05$

* Analysis by Fisher's Exact test; Significant at $p < 0.05$

Moreover, among those who ever see ‘no smoking’ sign in school, there are more smokers (60.5%), compared with those who have not seen ‘No Smoking’ sign in school compound (0.0%).Chi square analysis shows that there was no significant relationship (p=1.000, p>0.05) between ever see ‘No Smoking’ sign in school and adolescent smoking status.

Table XVI. Association between ever see ‘No Smoking’ sign in school of smoking and smoking status

Variables	Total	Smoking Status		X ²	P value
		Smoker; N (%)	Non Smoker; N (%)		
Ever see ‘No Smoking’ sign in school					
Yes	165	52 (31.5)	113 (68.5)	None	1.000* p>0.05
No	2	0 (0.0)	2 (100.0)		

* Analysis by Fisher’s Exact test; Significant at p < 0.05

Among those who spent more than 2 hours for curricular activities, there are more smokers (35.5%), compared with those who spent only 2 hours or below (27.5%). Chi square analysis shows that there was no significant relationship between time spent for curricular activities and adolescent smoking status (p=0.263, p>0.05).

Table XVII. Association between involved in curricular activity and smoking status

Variables	Total	Smoking Status		X ²	P value
		Smoker; N (%)	Non Smoker; N (%)		
Involved in curricular activities					
0-2 hours	91	25 (27.5)	66 (72.5)	1.253	0.263 p>0.05
> 2 hours	76	27 (35.5)	49 (64.5)		

Significant at p < 0.05

Result shows that among those who always get low marks in every test, there are more smokers (36.1%), compared with those perform better in every test (29.8%). Chi square analysis shows there was no significant relationship between academic performance in school and adolescent smoking status ($p=0.467$, $p>0.05$).

Table XVIII. Association between academic performane and smoking status

Variables	Total	Smoking Status		X ²	P value
		Smoker; N (%)	Non Smoker; N (%)		
Do you always get low marks in exam					
Yes	36	13 (36.1)	23 (63.9)	0.529	0.467
No	136	39 (29.8)	92 (70.2)		

Significant at $p < 0.05$

Besides that, among those who have been involved in school discipline problem, there are more smokers (43.2%), compared with those who have not been offered cigarettes by friends (26.8%). Chi square analysis shows there was a significant relationship ($p=0.044$, $p<0.05$) between involvement of discipline problem in school and adolescent smoking status.

Table XIX. Association between attitude in school and smoking status

Variables	Total	Smoking Status		X ²	P value
		Smoker; N (%)	Non Smoker; N (%)		
Do you always involved in school discipline problem					
Yes	44	19 (43.2)	25 (56.8)	4.042	0.044
No	123	33 (26.8)	90(73.2)		

Significant at $p < 0.05$

**4.3.3 Association Between Behavioural Factors With Adolescent Smoking at FELDA
Gugusan Raja Alias 1 and FELDA Serting Hilir 1, N.Sembilan**

1) Religious Personality

Based on the result among those who was committed to religion, there are less smokers (13.5%), compared with those who was not committed to religion (51.3%). Chi square analysis shows there was significant association between religiosity and smoking behaviour ($p<0.05$).

Table XX. Association between religiosity and smoking status

Variables	Total	Smoking status		X ²	P value
		Smoker; N (%)	Non smoker; N (%)		
Committed	89	12 (13.5)	77 (86.5)	27.699	0.0001 P < 0.05
Non Committed	78	40 (51.3)	38 (48.7)		
Significant at p < 0.05					

**4.3.4 Association Between Personal Factors With Adolescent Smoking at FELDA
Gugusan Raja Alias 1 and FELDA SertingHilir 1, N.Sembilan**

1) Knowledge

Among those who are knowledgeable, there are more smokers (42.9%), compared with those who are not knowledgeable (30.1%). However, chi square analysis shows there was no significant relationship between knowledge of adolescent about smoking and their smoking status ($p=0.254$, $p>0.05$).

Table XXI. Association between knowledge levels on smoking with smoking status

Variables	Total	Smoking Status		X ²	P- Value
		Smoker N (%)	Non Smoker; N (%)		
Knowledge level					
Knowledgeable	7	3 (42.9)	4 (57.1)	None	0.254
Not knowledge	167	49 (30.1)	111 (69.4)		

Significant at $p < 0.05$

2) Opinion

Among those who think that smoking is a norm, there are more smokers (50.8%) compared with those who do not that smoking is a norm (19.7%). Chi square analysis shows that there was a significant relationship between perception of smoking was a norm and adolescent smoking status ($p=0.001$ $p<0.05$).

Table XXII. Association between perception smoking is a normal behaviour and smoking status

Variables	Total	Smoking Status		X^2	P value
		Smoker; N (%)	Non Smoker; N (%)		
Smoking is a norm					
Yes	65	33 (50.8)	32(49.2)	19.258	0.0001
No	71	14 (19.7)	57 (80.3)		P<0.05
Not sure	31	5 (16.1)	26 (83.9)		

Significant at $p < 0.05$

Besides that, among those who feel that smoking is dangerous when they see adult smoke, there are more smokers who are not sure (38.7%), than those who disagree (30.1%) or those who agree (27.3%). However, chi square analysis shows there was a significant relationship between opinion of adolescent toward adult smoking and adolescent smoking status ($p=0.574$, $p>0.05$).

Table XXIII. Association between perception on adult smoking and smoking status

Variables	Total	Smoking Status		X^2	P value
		Smoker; N (%)	Non Smoker; N (%)		
Feel smoking is dangerous when see adult smoke					
Yes	33	9 (27.3)	24 (72.7)	1.111	0.574
No	103	31 (30.1)	72 (69.9)		P>0.05
Not sure	31	12 (38.7)	19 (61.3)		

Significant at $p < 0.05$

Among those who feel that smoking is a cool behaviour, there are more smokers who agree (69.2%), compared to those who disagree (25.8%) or those who disagree (40.9%). Chi square analysis shows there was a significant relationship between opinion that smoking was cool and adolescent smoking status ($p=0.003$, $p<0.05$).

Table XXIV. Association between perception that smoking looks cool and smoking status

Variables	Total	Smoking Status		X ²	P value
		Smoker; N (%)	Non Smoker; N (%)		
Smoking is cool					
Yes	13	9 (69.2)	4 (30.8)	11.559	0.003 P<0.05
No	132	34 (25.8)	98(74.2)		
Not sure	22	9 (40.9)	13(59.1)		

Significant at $p < 0.05$

Among those who thinks that smoking makes people become thinner, there are more smokers who are not sure (40.0%), compared to those who disagree (30.2%) or those who agree (27.8%) with the statement. Chi square analysis shows there was no significant relationship between the opinion that smoking makes u thinner and adolescent smoking status ($p=0.563$, $p>0.05$).

Table XXV. Association between perception that smoking can reduce weight with smoking status

Variables	Total	Smoking Status		X ²	P value
		Smoker; N (%)	Non Smoker; N (%)		
Smoking makes you thinner					
Yes	36	10(27.8)	26(72.2)	1.150	0.563 P > 0.05
No	106	32(30.2)	74(69.8)		
Not sure	25	10(40.0)	15(60.0)		

Significant at $p < 0.05$

On the other hand, among those who thinks that smoking can reduce stress, there are more smokers who agree (48.6) compared to those who disagree (26.7%) or those who are not sure (25.9%) with the statement. Chi square analysis shows there was a significant relationship between the opinion that smoking can reduce stress and adolescent smoking status ($p=0.043$, $p<0.05$)

Table XXVI. Association between opinion that smoking can reduce stress with smoking status

Variables	Total	Smoking Status		X ²	P value
		Smoker; N (%)	Non Smoker; N (%)		
Smoking can reduce stress					
Yes	35	17 (58.6)	18 (51.4)	6.282	0.043 p<0.05
No	105	28 (26.7)	77 (73.3)		
Not sure	27	7 (25.9)	20 (74.1)		

Significant at $p < 0.05$

4.4 Characteristics of Adolescents Smoker At FELDA Raja Alias 1 and FELDA SertingHilir 1, Jempol, N.Sembilan

4.4.1 Age of initiation of smoking of adolescent smokers

The results obtained as shown in the table below shows the age initiation for determined smokers. Majority of the adolescent smokers (28.8%) initiated smoking at the age of 14, while only 1.9% of them started smoking at the age of 12. The mean for initiation age to start smoking is 13.94 years old.

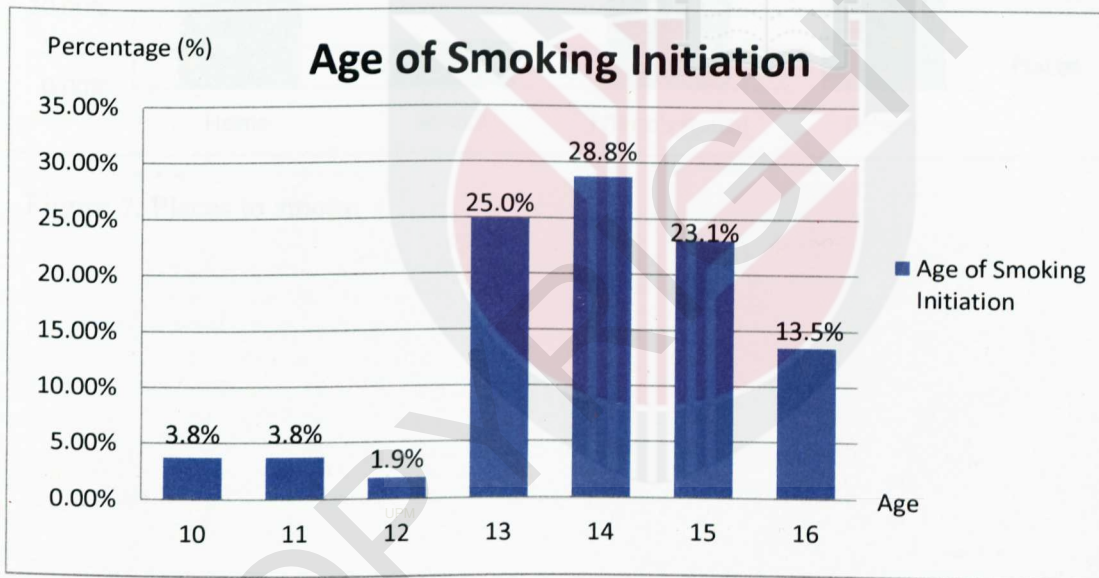


Figure 6. Age of smoking initiation

4.4.2 Adolescent preferred smoke places

Based on the result below, it shows that most of the adolescent smoker smoke at their friend's house (44.2%) while least of them smoke at school (5.8%).

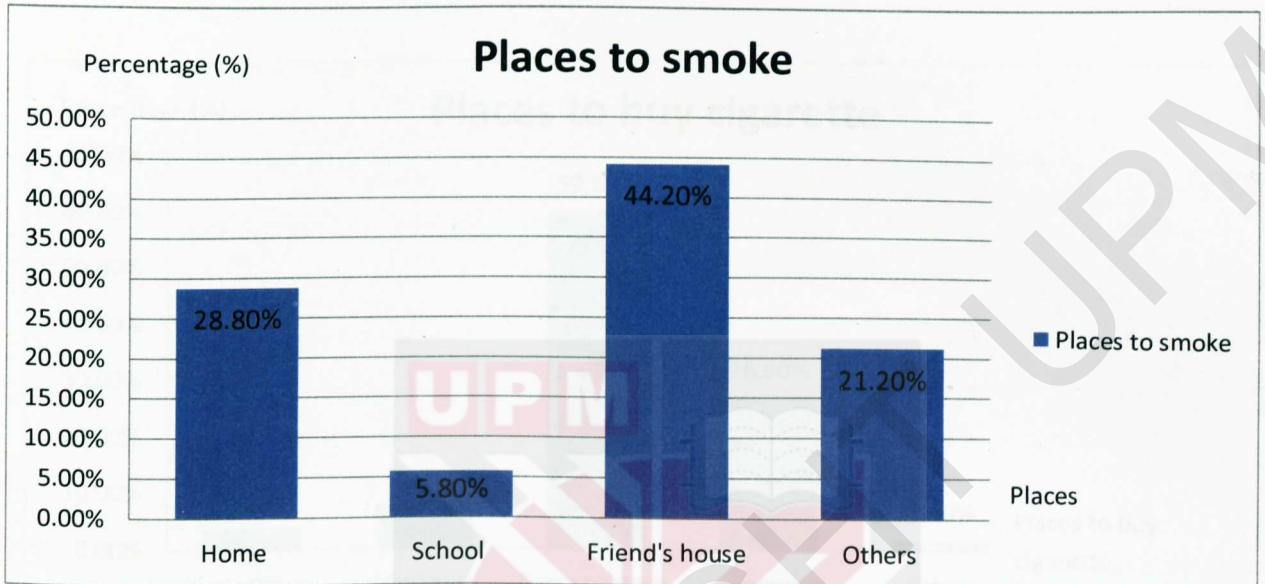


Figure 7. Places to smoke

4.4.3 Sources of cigarette

The table below shows that adolescents are more likely to buy their cigarette at the grocery store (59.6%) followed by friends (26.9%) as compared to the other places.

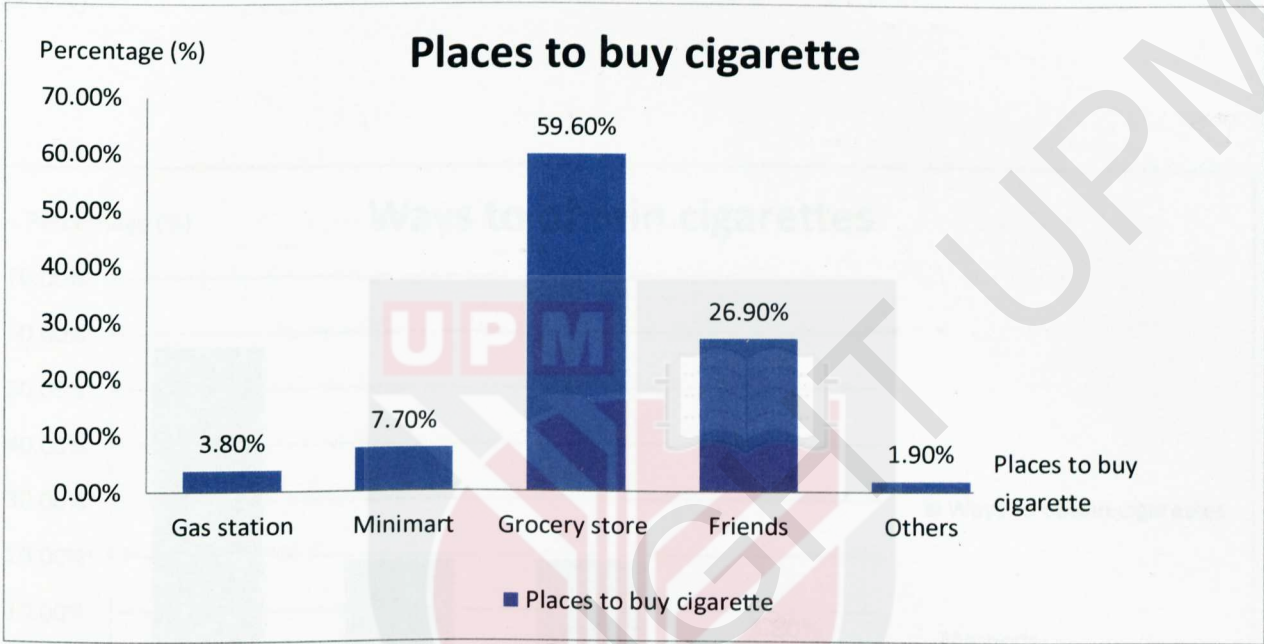


Figure 8. Places to buy cigarette

4.4.4 Ways to obtain cigarette

The following result shows that more than half of the population of the adolescent smokers actually buy cigarettes by themselves (57.7%) as compared to those who borrowed from others (19.2%) , offered by others (19.2%) and those that steal from others (3.8%).

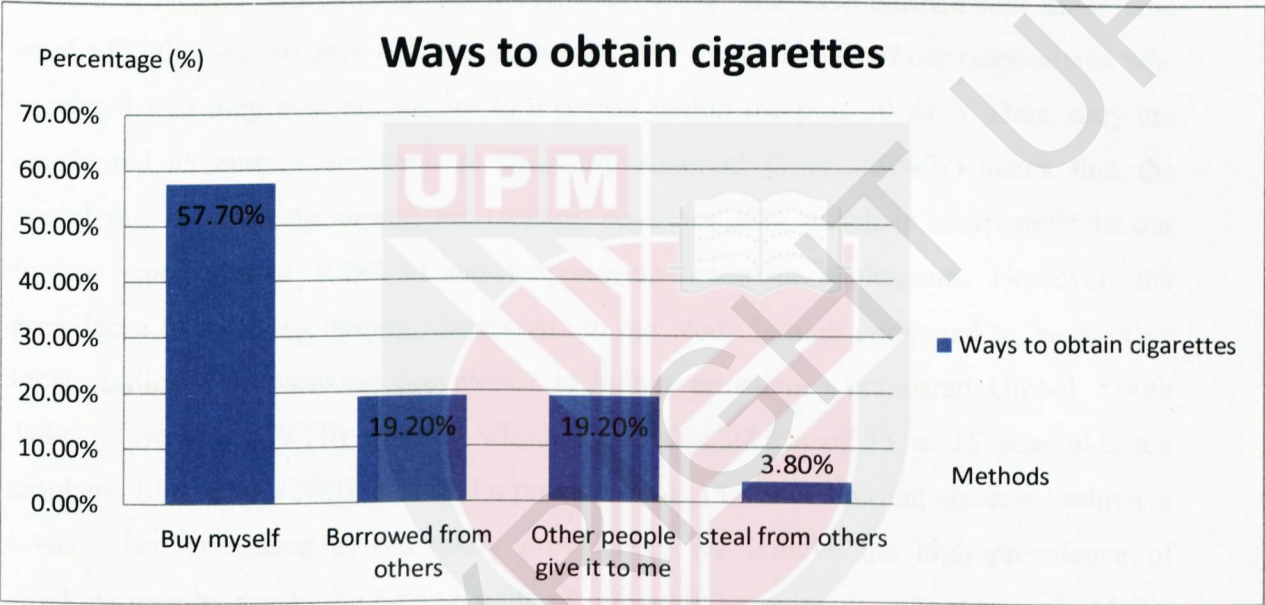


Figure 9. Methods to obtain cigarette

CHAPTER 5: DISCUSSION

The response rate for this study is 72.6%. The possible reasons for non-response in this study were refusal to participate, attending outdoor events, or not present at home.

Prevalence

The overall smoking prevalence among adolescents in Felda Raja Alias 1 and Serting Hilir 1 in Negeri Sembilan in this study was 31.1%. We have defined that those who smoked in the past 30 days as current smokers. We found that all of our respondents who answered that they ever smoke are in a period within the past 30 days. Thus, they are considered as current smokers. A study by Khairani O et al.(2007) states that the prevalence of smoking among the teenage boys are 37% which is comparable to our finding since almost 100% of our respondents are male adolescents. However, the prevalence of smoking among adolescents in our study is high compared to some other local studies. Our smoking prevalence is higher prevalence compared Global Youth Tobacco Survey (GYTS) in 2009 which found that 22.6% of 13 to 15 year olds are smokers. Lim, et al. (2010) reported a prevalence of 14.3% of 'current smokers' which is lower when compared to our study prevalence. We believe the high prevalence of smoking may be due to the homogeneity of our study participants, who were only Malay ethnic group which was in fact one of the races that had the highest smoking prevalence in our multi-ethnic country, as indicated by the National Health Morbidity survey 1996.

Sociodemographic factors

1) Age

Based on our findings, age for initiating smoking ranged between 10 to 16 years old. Majority of our respondents who smoked initiated smoking at aged 14 compared to the others age group that range from age 10 to 16. The mean initiation age among our adolescent smoker is 13.94 years old. Similarly, study done by Lim et al. (2010) found that most boys started smoking from age 12 to 14, peaking at 14. NHMS III (2006) reported that the mean initiation age (MIA) for smoking among adolescent is 13.6 years. Study by Lim, et al., (2006) found that male students start smoking at age of 4 and the mean initiation age was 11.28 years old. A study done by Tyas and Pederson (1998) observed that adolescents who began smoking at a younger age were more likely to become regular smokers and less likely to quit smoking

2) Gender

In this study, we found that there is significant association between gender and smoking among adolescents. This finding is supported by a study conducted by Lim, et al (2006) who also found that there is an association between gender and smoking behaviour in which the prevalence of smoking are higher among male students. Furthermore, study by Lim, et al. (2010) on form four students in Petaling District Selangor found that smoking status is significantly associated with gender which showed that the smoking prevalence among boys was four fold higher as compared to girls. Our study also found that female adolescent show only low prevalence of smoking. Due to the cultural setting chosen, which is a place where smoking is considered primarily a problem of males, our respondents are mainly males. Therefore our study actually focused on smoking behaviour on male adolescents.

3) Status

Study done by Patricia, et al., (2000) showed that educational attainment (school dropout and students) has significant association with cigarette smoking. School dropout adolescents whom are working are 6.46 times more likely to smoke than control students.

This is similar to our study which shows significant association between status of adolescent with smoking status. We found that dropout adolescents show a higher prevalence of smoking behaviour compared to those who are still in school. This finding was also supported by another study done by Blackford, et al., (2004) and Tyas, et al., (1998) that found higher number of smoking adolescent is doing part time job and has their own personal income.

Besides that, evidence from a variety of sources, including the National Household Survey on Drug Abuse and the Epidemiologic Catchment Area surveys sponsored by the U.S. government, revealed that high school dropouts are much more likely to have started using tobacco and other substances, compared to their peers who remained in school. In addition, when students drop out before graduating from high school and started to work, they usually will often begin spending more time with older youths and adults, some of whom serve as role models for substance use and who may give the dropouts cigarettes or offer them opportunities to try alcohol or other drugs for the first time. As a result, not only is there the possibility that substance use may lead to dropping out, but it is also possible that dropping out may lead to substance use. The report also stated that the broad range of unfortunate effects of dropping out of school makes it important to sustain and increase the vigor of stay-in-school programs as well as outreach programs for youths who are chronically absent from school or who actually have dropped out before graduation.

These programs may help the individual youths, their families, and society in many ways; they may not only confer benefits in relation to schooling and better preparation for adult life, but also reduce the amount of substance use in the teenage years, prevent the occurrence of alcohol and drug problems in adulthood, and possibly prevent other psychiatric disorders such as depression. While it is difficult to draw cause and effect conclusions based on this report (i.e. whether cigarette use contributed to dropout rates or dropping out contributed to higher cigarette use among dropouts), it is clear that dropout rates have huge public health implications and that our youth need better interventions to prevent substance abuse and dropouts.

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4) Mother's level education

Erbaydar, et al., (2003) found that mothers' educational level give significant association with adolescent smoking. Adolescents whose mothers had low level of education were more likely to be current smokers (OR 1.73, 95% CI 1.13–2.67; and OR 1.97, 95% CI 1.33–2.93, respectively), compared with those whose mothers have high level of education. Meanwhile, educational level of father was not related to adolescent smoking. This shows that the education level of mothers give more influence on adolescents smoking compared to level education of father. The study revealed that mother shows stronger influence because woman usually responsible for and reflect the social developmental level of the family. These are the reason why we focused on the mother's level of education. We want to find out how powerful is the mothers level education influence towards adolescents.

The study also stated that mother with low level of education may represent a more traditional family, where smoking may be an accepted social behaviour for men and a symbol of adulthood for the boy. These perceptions bring more risk of smoking for boys. In contrast, an educated mother may reflects a so-called 'modern and highly discipline' family, where smoking may be a symbol of dangerous and unacceptable since it has many bad side effects. In fact, there were several studies showed that maternal education level was more influential on smoking onset of her children than paternal smoking (Hedman et al., 2007; Leatherdale et al., 2005).

However, our result found that mother's level of education is not a significantly associated with adolescents smoking status. We believed that our result is different from other studies due to lack of sample size and existence of reporting bias. Nevertheless, this non significant result is similar to study done by Proescholdbell, et al.(2000), that reported higher smoking prevalence among high school adolescents was found among parents with high levels of education. That study found that mothers' level education education is not significantly associated with smoking behaviour among adolescent.

5) Pocket money

Based on our result, amount of pocket money has no association with adolescent smoking. However, those respondents who owned the highest amount of pocket money, which is RM100 and above, showed the highest prevalence (40%) of smoking. This non significant result is similar to study done by Fadhli, et al., (2005) and Rezaeetalab, et al., (2012) which show no significant relationship with p values are 0.535 and 0.863 respectively.

However, Ma, et al., (2002) in China found that there is an association between pocket money and smoking status. In fact, a study done by Tyas and Pederson (1998) also reported that young people with more spending money shows higher levels of smoking presumably because money is needed to purchase cigarettes. The reason for this difference results could be due to the sample size in our study is small compared to theirs. There also might be reporting bias from the respondents since we used self administered questionnaire. We suspect that the result should be significant and next study should focus on issue how much pocket money spends on their cigarette. Based on ITC National Report Malaysia (2009), adolescents with highest monthly pocket money which is more than RM30 have the highest prevalence of smoking (56.1%). Meanwhile, those adolescent that have less than RM10 of pocket money each month show the least prevalence rate (24.6%).

Environmental factors

1) Smoking among household

Our study result showed that number of family members who smoke has significant association with adolescents smoking status. Previous studies have shown that an adolescent is more likely to smoke when surrounded by parental smoking (Ozawa et al., 2002; Afiah, et al., 2010). Report by Action on Smoking and Health found that adolescents who live with their parents or siblings smokers are 3 times more likely to become smokers than children with non-smoking households. Besides that, study conducted by Royal College Physicians in 2010 found that any household smoking can increase the risk in prevalence of smoking among adolescent by an OR of 1.92 (95% CI 1.70 to 2.16). This phenomenon can be explained by the Social Learning Theory which states that adolescent is learning through observation (Bandura, 1977) where it is proven when adolescents imitate the people surround them, for example smoking.

Based on the data collected, we found that home smoking policy is a significant factor in determining adolescents smoking status. Higher prevalence of non smoker is found among those homes that do not allow smoking. Conversely, houses that allowed smoking at anytime and anywhere had higher prevalence of smoker. Previous study done by Wakefield et al., (2000) reported that home smoking restrictions had a much greater effect to reduce smoking habit among adolescent compared to bans of smoking programmes which were held in public places. Besides that, their study stated that banning smoking in the, even when parents smoke, can give a strict message to adolescents about the unacceptability of smoking. Children who are always exposed to parents who smoked inside the house may increase the tendency of adolescents to initiate smoking.

Other than that, we also found that parental discussion about smoking with their children and parents' interest to discuss on smoking does not show any significant relationship with adolescents smoking behaviour. This finding is similar with previous study by Afiah et al. (2010) which show no significant association between these two variables. This may be due to discussion about smoking between parents and adolescent will give message to adolescent that smoking is not acceptable. Adolescents also will

understand their parents are worried if they get involve with that behaviour. These two variables could be among the protective method to decrease adolescent's tendency to smoke.

2) Peer influences

Our study found that friend was the major influence for adolescents to initiate smoking and continue smoking. For instance, our study shows that the percentage of best friend smoking was significantly associated with adolescents smoking. Another study by Lim, et al. (2010) found that percentage of best friend smoking is associated with smoking status among adolescents and 80% of them admit that they starts smoking with friends. Also, similar results were found in reports on junior and senior high school students in China, Japan, and Spain which have shown that smoking rates of school students are strongly related with having friends who smoke (Kawabata et al., 1991; Auba et al., 1993). In fact, Afiah, et al., (2010) found that having friends whom smoke is significantly associated with smoking among adolescent (OR=8.55, 95%CI 5.81-12.59). Naing, et al., (2004) classified peer pressure into two types. First, having close friend who smoke. Second, is having close friend that encourages the adolescent to smoke. Their study shows the main reason (24%) for adolescents to initiate smoking is because they want to follow their friends. Friends surely give strong influences because adolescent runs a similar social and learning environment with their peers. Teenagers nowadays also have an opinion that they should find identities among their peer groups and away from parents. This suggests that youths should be advised on how to avoid accepting smokers as friends, as the effects are not limited to the odour of tobacco and hazards of passive smoking, but may include pressure to take up this habit. In addition, we found that it can be explained when we get most of the answer from the respondents that they usually smoke at their friend's house followed by home and school as friends play a major role in influencing adolescents smoking behaviour.

In this study, we found that friends ever offered cigarettes and will smoke if cigarette is offered by friend are significantly associated with smoking among adolescent. These findings are consistent with previous studies (Wang et al., 1995; Lim et al., 2006). In fact, having a friend who smokes may influence them to take up the challenge to smoke due to the existing peer pressure and encouragements and also in order to be accepted in a

clique. This signifies the importance of this peer factor in adolescent smoking initiation. Afiah, et al., (2010) found that the most significant reason for adolescent to initiate smoking is due to friends offered cigarette to them. Their results also show that adolescents is 12 times more likely to smoke after being offered cigarette by friends (OR=11.87; 95%CI 8.68-16.22).

3) School factors

Our study showed that seeing teacher smoke do not associated with adolescents smoking status. However, study done by Afiah, et al., (2010) shows opposite result from our finding. Our result concluded that seeing teacher smoking around school compound brings no harm to adolescent. The reason for this phenomenon could be due to perception among adolescent that smoking is just a normal behaviour among adult in this modern era. Thus, adolescent may not be influence too much when see teacher smoke. Also, the good deed that their teacher have done such as by teaching them, always offered help and support can may cause adolescents to just ignore their teacher's smoking habit.

Our study found that learning about dangerous of smoking or seeing 'No Smoking' sign in school are not significantly associated with adolescents smoking status. This finding is similar with study done by Afiah et al., (2010). Being given knowledge about smoking in school has no association with adolescent smoking status.

In this study, it was found that involved in curricular activities do not associated with adolescents smoking status. On the contrary, other study reported that students who did not join any club activities had the highest percentage of current-smokers of 13.1% (Ozawa et al., 2001). Participating in curricular activities has beneficial effects on adolescents in which it relaxes the mind and body and hence reduced the risk of smoking. Also, it was found that those who involved in curricular activities tend to lead a healthier lifestyle because of training for their respective discipline (Hedman et al., 2007). Based on our finding, this variable does not become one of the risk factor because the time that is providing for curricular activities are not enough. Curricular activities were restricted

only during school days and usually available for only once a week. However, on weekends, adolescents will have plenty free time with no programmes or activities in plan. Thus, this can caused them to spend their leisure time with non beneficial activities including smoking.

Based on the result, it was found that adolescents' academic performance was not significantly associated with their smoking behaviour. This was quite disappointing as it was not consistent with most of the studies done by others. Lim, et al., (2006); Lim, et al., (2011) and Naing, et al., (2004) found that poor academic performance is significantly associated with smoking among adolescent. We believed that this inconsistent result might be due to different criteria being applied by respondents to categorize their academic achievement. However, after reviewing previous studies, we learn that providing adolescents with adequate information on the hazardous effects of smoking is still a very crucial step to determine the smoking status of adolescents. Therefore, this factor is a very important determinant and we will re-examine it in the future if time allows us to do so.

In this study, we found that involved in school discipline problem is a significant associated factor with adolescents smoking status. Similar finding was shown in a study by Afiah et al., (2010) who found that adolescents that involved with school management problems are more likely to smoke. Also, in the Third National Health and Nutrition Examination Survey, 1988-1994 (NHANES III) reported that students with problematic behaviours such as repeated low grades, given suspension or not attending school are five times more likely to be a smoker.

4) Accessibility

Based on our study, we found that more than half of the adolescents bought cigarette on their own and mostly at the grocery stores. This statistic shows that despite legislations that prohibit sales to minors, they are still able to acquire cigarettes and other tobacco

products through direct purchase themselves. This also will show the lack implementation of law among our community. Apart from buying cigarette on their own, adolescent also able to obtain it from friends and family members or by stealing from parents and other adults who smoke. Similar finding was also found by another study by Hammond, et al., (2008) that showed 52.8% of adolescent buy their own cigarettes. However, study conducted by Lim, et al., (2010) in Kota Tinggi district found that majority of the adolescent obtain cigarette from friend followed by bought from retail premises. The reason that his result is differ from our study could be due to the closeness among community in Felda settlement. The owner of grocery store usually will forget about law and are willingly to sell cigarette to adolescents since they are close and know each other.

Behavioural factors

1) Religiosity

In this study, we found religiosity actually is significantly associated with adolescents smoking status. This showed consistent result with many previous studies. For example, study done by Naing et al., 2004 found that religion was the strongest protecting factors for the non-smokers adolescent for not smoking. Afiah, et al., (2012) found that there is a significant association between the smoking among adolescent and religiosity. The result showed that those adolescents whom committed to religion have lower prevalence of smoking (38.0%) compared to those non-committed with prevalence of 62.0%. That study also revealed that initiation of regular smoking among previously non-smoking adolescents were found to be reduced by attending religious activity frequently or involving in any religious youth group.

Personal factors

1) Knowledge level

Our study found that adolescents' knowledge level about smoking actually do not associated with their smoking status. Unfortunately, study done by Naing, et al., (2004) found that there is a significant association between personal health knowledge about the disadvantages of tobacco use and adolescents smoking where adolescent who is more educated on the health effects of smoking are less likely to smoke ($p < 0.001$). However, our result was supported by a study done in Indonesia by Mackay et al., (1999) stated that information about health hazards is usually insufficient for change and confirmed the observation that knowledge of health risks does not prevent children from smoking.

2) Opinion

In this study, we found that there is an association between the perception of adolescent that 'smoking is a norm' with adolescent smoking status. This finding is supported by other study conducted which finds that adolescent considered smoking as a part of the culture and is common everywhere among men (Nawi, Weinehall, & Othman, 2007). Adolescent also claimed that cigarettes have been used widely as a gift or present in traditional ceremonies especially for 'volunteers'. Study done by Naing et al., (2004) found that 11.7% of the respondents state that smoking is a normal behaviour.

Furthermore, we found that the belief that smoking is dangerous has no statistically association with adolescents smoking status. This finding was similar to that of a study done by Afiah et al., (2010).

Based on our study, the perception that smoking is cool is significantly associated with adolescents smoking status. Similarly, other study found that majority adolescents said that smoking make them feel more mature and cool likes adult (Khairani, Norazua, & Zaiton, 2007).

Although smoking indeed can maintain a person's body weight, it is absolutely not good to control weight. In fact, previous studies had reported that adolescents who are weight conscious had increased likelihood to smoke. However, our finding shows that the attitude that believing smoking can make a person thinner is not statistically associated with adolescents smoking status. We believe that our negative result may be due to the fact that our respondents are mainly male and the fact that male indeed may care much about their physical appearance as compared to females.

Our result found that the perception that smoking can reduce stress is a significant associating factor for smoking among adolescent. This is supported by a study from Afiah, et al., (2010) which found that smoking status definitely has significant association with belief that smoking is relaxing and can reduce stress. Lim, et al., (2006) stated that school environment such as high demands from schoolwork and parental high expectation is one of the major contributions that caused of stress among adolescents. Thus, this stress then influences adolescents to initiate smoking in order to obtain relaxing mind. Another study done in New Zealand by Kwai et al., (2003) reported similar finding.

In all, adolescents' perception towards smoking behaviour is very important as many studies done by others had proved that more positive attitudes toward smoking and smokers tend to be related to an increased likelihood of smoking. However, McNeill et al. (1988), found that beliefs and opinions about smoking did not predict smoking uptake in the presence of sociodemographic, environmental, and behavioural factors.

CHAPTER 6

6.1 Conclusion

In summary, there are several variables that show significant association to our desired dependent variable, adolescents smoking status. However, there are some that show no association and hence we have to reject its alternative hypothesis. Generally, there are existing minor aspects of variable that show association between each of the independent variables of sociodemographic, environment, behavioural, and personal factors. Among sociodemographic factors, only gender and status of adolescent (student or worker) showed significant association. Thus, null hypothesis for these variable are rejected. Meanwhile, other variables in the sociodemographic factor (i.e. mother's level education and pocket money) show no association. Hence, their alternative hypotheses were rejected.

For the environmental factor, peer influence has more variables that shows significant association with adolescent smoking (i.e. high number of smoking friends, friends have offered cigarette and will smoke if friends offered cigarette). Meanwhile, only some variables in the smoking among household (i.e number of family members smoking and home smoking policy) and in the school environment (i.e. involved in school discipline problem) showed significant relationship. The null hypotheses for those variables were rejected.

Next, for behavioural factor, which we only studied about the commitment of an adolescent to their religion, showed a significant association with the dependent variable hence rejected the null hypothesis.

For personal factor, we found that there is an association between opinion of adolescents and smoking status (i.e. feels that smoking is normal, smoking is cool, and smoking can reduce stress). Thus, their null hypotheses were rejected. However, knowledge level shows no association resulting to rejection of its alternative hypothesis.

Last but not least, we think that there are several factors that can make adolescent become more susceptible towards smoking behaviour. These factors should be investigate deeply in order to carry out the most effective intervention programmes to avoid smoking among adolescents. For instance, the government should curb this social problem from the root by implementing some intervention programmes that involve the modification of adolescents' behaviour. Indeed, the family unit, school, peers and law enforcers should play their roles more actively to prevent smoking among youths at the 'micro' level.

In short, holistic prevention programs which involve the participation of all the stakeholders must be mobilised in order to realize the vision of the Ministry of Health of reducing the number of smokers to half of the present figure and ensure that smoking-related diseases are no longer a public health problem by the year 2020.

6.2 Limitations

1. The response rate for this study was only 72.6%, and this resulted in a small sample which did not contribute well to the power of this study.
2. Ours study design is a cross sectional study. Thus, we have limited attributions about the directions of causality between the variables hence it limits the establishment of causal relationships between risk factors and smoking
3. Limited time to find enough respondents at the study location.
4. Amount of adolescents that live permanently at the Felda settlement is inadequate
5. Recall bias
 - The respondents may not be able to remember the exact number of tobacco smoking and whether or not they smoked in the past 30 days prior to the study.
6. Non-response bias
 - Some of the respondent refused to answer questionnaire because they may want to keep their smoking habit as their own private matter. In order to avoid non-response bias, we will increase the response rate by visiting the household more than once.
7. Reporting bias
 - Since the smoking status was not confirmed by using biomarkers such as nicotine levels in saliva or exhaled carbon monoxide, the result may not be accurate. This is because the subjects may under report or over report some information regarding their smoking habits in the questionnaire. In order to overcome this, respondents will be informed that the information that they give will be strictly confidential.

6.3 Recommendation

Further studies should be carried out using quantitative methods such as measurement of biochemical markers and studying other established factors which may be relevant, for example, psychological factors such as stress, depression, family relations, self-esteem, socialisation, and risk-taking behaviours. Other issue which should be addressed in future studies include intention to quit smoking, success rate of quit-smoking attempts, willingness to pay for cigarette among adolescents and the disease burden of adolescent smoking.

The results showed there are several risk factors that are linked to smoking. Internal and external modifiable factors and intervention should be taken into action immediately and intensively in order to solve this problem in a long term period. Among the action that needs to be measured is by implementing the intervention programmes very early, which is in primary school children since they are still young and can be shaped easily. Besides that, intervention programme also need to include the family members especially parents so that they will realized their role is important in order to reduce smoking habit among adolescents. Parents and other adult family members must show good example and be strict on anything about smoking in order to make adolescents realized that smoking is a bad habit and should be avoided. Practicing discussion about the dangerous of smoking could be one of the good intervention plans to reduce the tendency of youths to smoke.

Others measures that can be instituted is by providing counseling and talk on how to refuse any offer of cigarette by other people especially among best friends. Prevention programmes using peer approach should be emphasized as peers can give strong influence to adolescents and may guide them to avoid all the bad habits including smoking.

This study shows that there is an association between involved in school discipline problem with smoking status. Here, school must play an important role to approach those

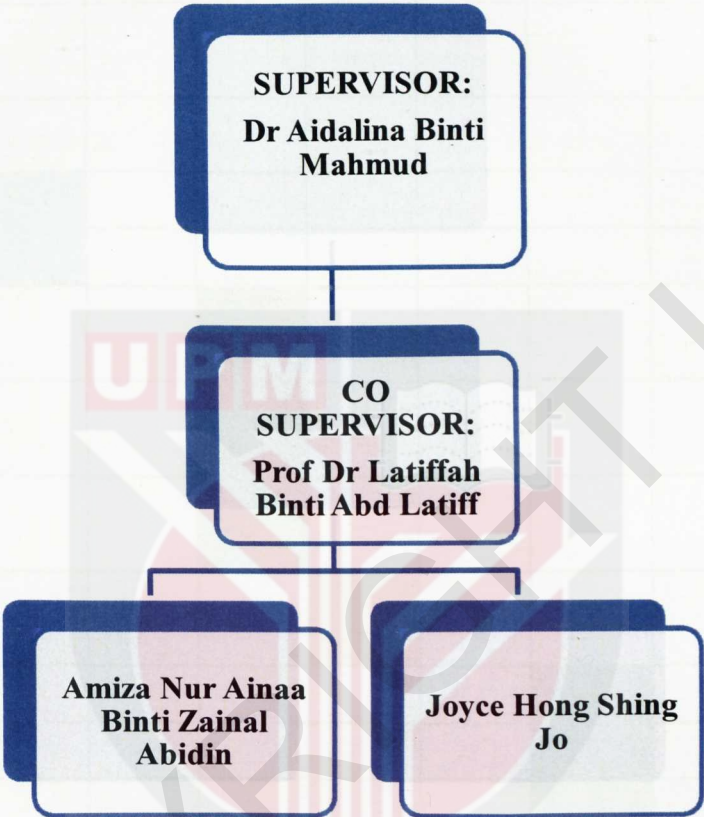
kids that always involved with attitude problem and provide good counseling to them. Apart from punishment to expel those students who smoke, school can also include quit smoking session for students that has attempt to quit smoking. This can be one of the alternative cessation methods of smoking and allowed adolescent to quit smoking before they become severely addicted to it. Besides that, this study showed that more than 50% of the smoker who are all under aged individual bought their own cigarette. Thus, strict enforcement of law should be implemented to any owner of grocery store that sold cigarette to under aged person.



ITEM	QUANTITY	PRICE
Photocopying charges	500 pages	RM 50.00
Printing proposal, form and articles or binding		RM 20.00
Stationeries	200 pages	RM 100.00
Thumbnails 9 CM		RM 25.00
TOTAL		RM 315.00

APPENDIX

1) RESEARCH TEAM



2) BUDGET PLANNING

ITEMS	QUANTITY	PRICE
Photocopy questionnaire	800 pages	RM 80.00
Printing (proposal, final report hardcover binding 3 x RM50)		RM 250.00
Stationeries	200 pens	RM 160.00
Thumbdrive 8GB	1	RM25.00
TOTAL		RM 515.00

3) GHANT CHART

	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6-16	WEEK 17-19	WEEK 20	WEEK 21 – 22	WEEK 22 - 23	WEEK 23 – 24
	25/3	¼	8/4	15/4	22/4		15/7	5/8	12/8	19/8	26/8
Start of module											
Proposal draft preparation and submission											
Proposal preparation and submission											
Preparation for proposal presentation											
Proposal presentation											
Correction of proposal											
Preparation of letters											
Submission of letter											
Data collection and data analysis											
Submission of analysed data report											
Preparation of report of analysed data											
Presentation of analysed data											
Correction of data analysis											
Report writing											
Submission of project report and scientific article											
Preparation of final presentation											
Rehearsal for final presentation											
Final Presentation											
Correction to final report and scientific article											
Submission of logbook and final report											
Result											

4) BORANG KAJI SELIDIK

PREVALEN DAN FAKTOR-FAKTOR PENENTU MEROKOK DI KALANGAN REMAJA

Sila jawab soalan-soalan yang diberikan mengikut arahan.

Pilih hanya satu jawapan melainkan jika arahan membenarkan anda memilih lebih daripada satu jawapan.

Sila tandakan (✓) pada jawapan pilihan anda di dalam kotak yang disediakan.

Isikan tempat kosong bagi soalan yang berkenaan.

A	Soalan berikut adalah mengenai latar belakang anda:	
No.	Soalan	Tandakan(✓) di petak yang betul
1	Sila nyatakan tarikh lahir anda : __ / __ / ____ (tarikh/bulan/tahun) Contoh: 03/04/1998	
	Jantina	
	1. Lelaki	
	2. Perempuan	
2	Bangsa	
	1. Melayu	
	2. Cina	
	3. India	
	4. Lain-lain	
3	Agama	
	1. Islam	
	2. Buddha	
	3. Hindu	
	4. Lain-lain	
4	Apakah status anda sekarang?	
	1. Pelajar	
	2. Bekerja	

B	Soalan-soalan seterusnya adalah mengenai keluarga anda:	
5	Apakah status perkahwinan ibu bapa anda?	
	1. Berkahwin	
	2. Berpisah/bercerai/ibu atau bapa sudah meninggal dunia	
6	Siapakah penjaga yang tinggal bersama anda di rumah?	
	1. Ibu & bapa	
	2. Ibu sahaja	
	3. Bapa sahaja	
	4. Datuk dan/atau nenek	
	5. Selain pilihan A-D (sila nyatakan siapa).....	
7	Apakah tahap pendidikan pendidikan ibu anda?	
	1. Sekolah rendah	
	2. Sekolah menengah	
	3. Diploma	
	4. Ijazah	
	5. Tidak pasti	
8	Bilangan adik-beradik anda (termasuk anda): (sila nyatakan)	
9	Sepanjang 30 hari yang lalu, berapakah anggaran wang yang anda miliki dalam satu minggu? (sila nyatakan) RM.....Sen.....	
C	Soalan-soalan seterusnya adalah mengenai penggunaan rokok di rumah anda:	
10	Senaraikan ahli keluarga yang merokok yang tinggal bersama anda. Jika tiada, nyatakan tiada.	
11	Di rumah anda, merokok adalah	
	1. Dibenarkan pada bila-bila waktu atau di mana-mana	
	2. Dibenarkan pada waktu atau tempat tertentu sahaja	
	3. Tidak dibenarkan	
12	Pernahkah anda berbincang dengan ibubapa mengenai merokok?	
	1. Pernah	
	2. Tidak pernah	
13	Pada pendapat anda, adakah ibubapa/penjaga anda berminat untuk berbincang dengan anda sebarang perkara mengenai rokok?	

	1. Ya	
	2. Tidak	
	3. Tidak pasti	
D	Soalan berikut adalah mengenai rakan anda:	
14	Berapa ramai dalam kalangan rakan anda adalah perokok?orang (sila nyatakan bilangan)	
15	Pernahkah rakan anda menghulurkan atau menawarkan rokok kepada anda?	
	1. Ya	
	2. Tidak	
16	Jika salah seorang rakan baik anda menawarkan rokok, adakah anda akan merokok?	
	1. Ya	
	2. Tidak	
	3. Tidak pasti	
17	Pernahkah rakan anda memaksa anda untuk merokok?	
	1. Ya	
	2. Tidak	
E	Soalan berikut adalah mengenai rokok dan sekolah:	
18	Pernahkah anda melihat guru di sekolah anda merokok di dalam kawasan sekolah?	
	1. Ya	
	2. Tidak	
19	Semasa anda di sekolah, pernahkah anda diberi nasihat atau tunjukajar mengenai bahaya merokok?	
	1. Ya	
	2. Tidak	
20	Semasa di sekolah, pernahkah anda melihat papan tanda yang melarang perbuatan merokok di sekolah?	
	1. Ya	
	2. Tidak	
21	Semasa di sekolah, berapa jamkah anda menjalani aktiviti ko-kurikulum dalam seminggu? (jam)	
22	Semasa di sekolah, adakah anda selalu mendapat markah rendah dalam setiap ujian?	
	1. Ya	

	2. Tidak	
23	Pernahkah anda terlibat dalam masalah disiplin di sekolah anda?	
	1. Ya	
	2. Tidak	
F	Soalan berikut adalah pendapat anda mengenai tabiat merokok	
24	Adakah anda berpendapat bahawa merokok itu perkara yang biasa?	
	1. Ya	
	2. Tidak	
	3. Tidak pasti	
25	Apabila anda melihat orang dewasa seperti guru atau doktor merokok, adakah ia membuatkan anda rasa merokok itu tidak membahayakan?	
	1. Ya	
	2. Tidak	
	3. Tidak pasti	
26	Adakah anda berpendapat bahawa merokok itu perkara yang boleh membuatkan anda kelihatan hebat atau "cool"?	
	1. Ya	
	2. Tidak	
	3. Tidak pasti	
27	Adakah anda berpendapat bahawa merokok boleh menguruskan badan?	
	1. Ya	
	2. Tidak	
	3. Tidak pasti	
28	Adakah anda berpendapat bahawa merokok boleh menghilangkan stres/tekanan?	
	1. Ya	
	2. Tidak	
	3. Tidak pasti	
G	Soalan berikut adalah pengetahuan anda mengenai tabiat merokok	
29	Rokok tidak boleh dijual kepada remaja berumur kurang daripada 18 tahun.	
	1. Betul	
	2. Salah	
30	Merokok di kalangan remaja adalah satu kesalahan dan boleh dikenakan denda.	

	1. Betul	
	2. Salah	
31	Pelajar boleh dibuang sekolah jika didapati merokok di sekolah	
	1. Betul	
	2. Salah	
32	Merokok boleh menyebabkan kanser paru-paru	
	1. Betul	
	2. Salah	
33	Merokok boleh menyebabkan penyakit jantung	
	1. Betul	
	2. Salah	
34	Asap rokok hanya merbahaya kepada perokok sahaja	
	1. Betul	
	2. Salah	
35	Majlis Fatwa Kebangsaan telah memfatwakan merokok sebagai haram	
	1. Betul	
	2. Salah	
36	Klinik Kesihatan Kerajaan ada sediakan Klinik Berhenti Merokok secara percuma	
	1. Betul	
	2. Salah	
H	Soalan- soalan seterusnya adalah mengenai isu-isu yang berkaitan dengan rokok dan anda.	
37	Adakah anda pernah merokok, walau satu atau dua sedutan?	
	1. Ya	
	2. Tidak	
	Jika jawapan anda bagi soalan 42 adalah “Ya”, sila ke soalan yang seterusnya sehingga soalan 77 Jika jawapan anda bagi soalan di atas adalah “Tidak”,sila ke soalan sehingga soalan 55 hingga 77.	—
38	Berapakah umur anda sewaktu pertama kali mencuba untuk merokok? tahun (sila nyatakan)	
39	Bilakah kali terakhir anda merokok? (sila nyatakan)	
40	Di manakah anda merokok? (boleh tanda lebih daripada satu jawapan)	

	1. Di rumah	
	2. Di sekolah	
	3. Di rumah kawan	
	4. Di tempat lain (sila nyatakan)	
41	Apabila anda mahukan rokok, bagaimanakah anda mendapatkan rokok anda? (Boleh tandakan lebih daripada satu jawapan)	
	1. Saya membelinya sendiri	
	2. Saya beri duit kepada seseorang untuk membeli rokok untuk saya	
	3. Saya pinjam rokok daripada orang lain	
	4. Orang lain yang memberikan kepada saya.	
	5. Saya mencurinya daripada orang lain	
	6. Cara-cara lain (sila nyatakan)	
42	Apabila anda membeli rokok, di manakah anda mendapatkannya? (Boleh tandakan lebih daripada satu jawapan)	
	1. Stesen minyak	
	2. Kedai serbaneka	
	3. Kedai runcit	
	4. Kawan	
	5. Lain-lain (sila nyatakan)	

I Soalan- soalan seterusnya adalah mengenai isu-isu yang berkaitan amalan anda. Sila tandakan ✓ pada SATU jawapan yang betul.						
Bil	Pernyataan	Selalu (1)	Kerap (2)	Kadang-kadang (3)	Jarang-jarang (4)	Tidak pernah (5)
43.	Saya merujuk kepada Al Quran/kitab suci/ayat suci untuk mendapat ketenangan.					
44.	Saya akan memastikan diri saya memahami tuntutan agama saya.					
45.	Saya memperuntukkan masa untuk membaca Al Quran/kitab suci/ayat suci walaupun sibuk.					
46.	Saya berusaha untuk					

	mendalami hukum/peraturan/ajaran agama saya.					
47.	Saya menunaikan solat/sembahyang seperti yang dalam agama saya.					
48.	Saya berusaha akan memahami ajaran dalam kitab suci saya.					
49.	Saya mengajak orang lain menunaikan sembahyang/upacara agama.					
50.	Saya menggunakan pengajaran dalam Al Quran/kitab suci saya semasa berbual.					
51.	Saya memohon pertolongan Tuhan dahulu kemudian orang lain apabila berhadapan dengan masalah.					
52.	Saya berusaha menambahkan kekerapan dalam melakukan amalan agama.					
53.	Saya memastikan semua ahli keluarga mengamalkan ajaran agama secara menyeluruh.					
54.	Saya akan merujuk kepada yang mengetahui apabila ragu-ragu terhadap hukum/ajaran agama.					
55.	Saya membuat kerja dengan penuh bersemangat kerana agama (Tuhan).					

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56.	Saya suka mencari peluang untuk mendalami agama bersama keluarga.					
57.	Saya berusaha untuk mengamalkan tingkahlaku yang baik dalam agama saya di dalam kehidupan harian.					
58.	Saya terlibat dengan aktiviti agama.					
59.	Saya berusaha untuk selalu mengingati mati dan kehidupan selepas mati.					
60.	Saya meninggalkan amalan yang diragui kebenarannya dari segi agama saya.					
61.	Saya selalu berkongsi nilai-nilai agama bersama teman-teman saya.					
62.	Saya berusaha untuk mematuhi peraturan/nasihat agama saya di dalam kehidupan harian.					
63.	Saya menyayangi adik-beradik lelaki dan perempuan yang seagama sebagaimana saya menyayangi diri saya sendiri.					
64.	Saya memperuntukkan sejumlah wang setiap tahun untuk keperluan agama.					
65.	Saya mencari peluang untuk melakukan amal kebajikan.					
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