UNIVERSITI PUTRA MALAYSIA

KNOWLEDGE, ATTITUDE AND PRACTICE ON SMOKING AMONG ADULT IN FELDA GUGUSAN RAJA ALIAS, NEGERI SEMBILAN 2013

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KNOWLEDGE, ATTITUDE AND PRACTICE ON SMOKING AMONG ADULT : A CROSS SECTIONAL STUDY IN FELDA GUGUSAN RAJA ALIAS 1, NEGERI SEMBILAN 2013

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ABSTRACT

Background: Smoking is the process of inhalation and exhalation of fumes from burning tobacco in cigars, cigarettes and pipes. It is a major cause for many health problems and chronic diseases such as heart attack, lung cancer, stroke and others. It kills nearly 6 million people a year. Approximately 1 person dies every 6 seconds due to tobacco. According to estimation, expected that the number will increase to more than 8 million a year by 2030.

Objectives: A cross sectional study was conducted in Felda Gugusan Raja Alias 1, Negeri Sembilan to determine the level of knowledge, attitude and practice on smoking and their associations with sociodemographic characteristics among adult FELDA settlers in FELDA Gugusan Raja Alias 1, Jempol, Negeri Sembilan in 2013.

Method: Self-administered questionnaire was used to obtain information on socio- demographic factors, level of knowledge, attitude and practice on smoking. All the data were analyzed using SPSS version 21.

Results: Out of 418 respondents who took part in this study, 200 (47.8%) respondents have high knowledge, 202 (48.3%) respondents have positive attitude and 180 (43.1%) respondents practice smoking. There is a significant association between level of knowledge and educational level (p=0.001). However age (p=0.717) and ethnicity (p=1.000) were not statistically significant. There is also no association between level of attitude and age (p=0.636), ethnicity (p=1.000), educational level (p=0.161) and family history of smoking (p=0.283). On the other hand, there is association between practice of smoking and marital status (p=0.034). This study shows age (p=0.629), ethnicity (p=0.431) and educational level (p=0.180) are not associated with practice of smoking.

Conclusion: Level of knowledge on smoking has strong association with educational level.There is significant association between practice of smoking and marital status. However, level of attitude on smoking was not found to be significantly associated with socio-demographic characteristics or family history of smoking.

Keywords: *Knowledge, attitude, practice, smoking, adult, Felda Gugusan Raja Alias 1*

PENGETAHUAN, SIKAP DAN AMALAN MEROKOK DI KALANGAN DEWASA: SATU KAJIAN IRISAN LINTANG DI FELDA GUGUSAN RAJA ALIAS 1, NEGERI SEMBILAN 2013

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ABSTRAK

Pengenalan: Merokok adalah proses penyedutan dan pengeluaran nafas asap dari pembakaran tembakau cerut, rokok dan paip. Ia adalah punca utama bagi banyak masalah kesihatan dan penyakit-penyakit kronik seperti serangan jantung, kanser paru-paru, strok dan lain-lain. Ia membunuh hampir 6 juta orang setahun. Kira-kira 1 orang mati setiap 6 saat kerana tembakau. Menurut anggaran, dijangka bahawa jumlah itu akan meningkat kepada lebih daripada 8 juta setahun menjelang 2030.

Objektif: Satu kajian irisan lintang telah dijalankan di Felda Gugusan Raja Alias 1, Negeri Sembilan untuk menentukan tahap pengetahuan, sikap dan amalan mengenai merokok dan persatuan mereka dengan ciri-ciri sosiodemografi kalangan dewasa FELDA peneroka di FELDA Gugusan Raja Alias 1, Jempol, Negeri Sembilan pada tahun 2013.

Kaedah: Soal selidik yang ditadbir sendiri telah digunakan untuk mendapatkan maklumat mengenai faktor-faktor sosio-demografi, tahap pengetahuan, sikap dan amalan mengenai merokok. Semua data dianalisis dengan menggunakan perisian SPSS versi 21. Untuk pengetahuan dan sikap mengenai merokok, min, sisihan piawai dan median atau perbezaan, minimum dan maksimum, kurtosis dan kepencongan telah digunakan manakala bagi amalan merokok, peratusan telah digunakan. Untuk menguji perkaitan antara pembolehubah bebas dan bersandar, kaedah statistik seperti Ujian Pearson Chi-square dan Ujian Exact Fischer telah digunakan.

Keputusan: Daripada 418 responden yang mengambil bahagian dalam kajian ini, 200 (47.8%) responden mempunyai pengetahuan yang tinggi, 202 (48.3%) responden mempunyai sikap yang positif dan 180 (43.1%) responden amalan merokok. Terdapat hubungan yang signifikan antara tahap pengetahuan dan tahap pendidikan ($p = 0.001$). Walau bagaimanapun umur ($p = 0.717$) dan etnik ($p = 1.000$) tidak ketara secara statistik. Terdapat juga tiada kaitan antara tahap sikap dan umur ($p = 0,636$), etnik ($p = 1.000$), tahap pendidikan ($p = 0.161$) dan sejarah keluarga yang merokok ($p = 0,283$). Sebaliknya, terdapat kaitan antara amalan merokok dan status perkahwinan ($p = 0.034$). Kajian ini menunjukkan umur ($p = 0,629$), etnik ($p = 0,431$) dan tahap pendidikan ($p = 0,180$) tidak dikaitkan dengan amalan merokok.

Kesimpulan: Tahap pengetahuan mengenai tidak mempunyai persatuan yang kuat dengan level.There pendidikan adalah persatuan yang signifikan antara amalan merokok dan status perkahwinan. Walau bagaimanapun, tahap sikap menghisap rokok tidak didapati ketara yang berkaitan dengan ciri-ciri sosio-demografi atau sejarah keluarga yang merokok.

Kata kunci: *Pengetahuan, sikap, amalan merokok, dewasa, Felda Gugusan Raja Alias 1*

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WHO	World Health Organisation
GATS	Global Adult Tobacco Survey
FELDA	Federal Land Development Authority
DDT	Dichlorodiphenyltrichloroethane
MOHM	Ministry of Health Malaysia

CHAPTER 1

INTRODUCTION

1.1 Introduction

Smoking is the process of inhalation and exhalation of fumes from burning tobacco in cigars, cigarettes and pipes.Tobacco contains a nicotine which is a poisonous alkaloid – and other harmful substances like carbon monoxide, ammonia, acrolein, prussic acid and a number of aldehydes and tars. Smoking is a major cause for many health problems as well as chronic diseases such as heart attack, lung cancer, stroke and others.[1] Smoking does not simply affect the smokers, but also people around them.[2]

The tobacco epidemic is one of the biggest public health problems that faced by the worldwide nowadays. It kills nearly 6 million people a year of whom more than 5 million are users and ex users and more than 600 000 are nonsmokers exposed to secondary smokers. Approximately 1 person dies every 6 seconds due to tobacco and this accounts for 1 in 10 adult deaths.[3] Up to half of current users will eventually die of a tobacco-related disease. The tobacco kills 5.4 million people a year from lung cancer, heart disease and other illnesses. According to estimation, expected that the number will increase to more than 8 million a year by 2030. About 80% of the more than one billion smokers worldwide live in low- and middle-income countries, where the burden of tobacco-related illness and death is heaviest as compared to the high-income countries.[3]

Regarding to World Health Organisation (WHO), less than 6 million people die due to tobacco and exposure to it (passive smokers) which meansthere is one death every six seconds.[4] Based on Global Adult Tobacco Survey (GATS) Malaysia, stated that 43.9% of

men, 1.0% of women, and 23.1% overall (4.7 million adults) currently smoked tobacco. Around 39.9% of men, 0.7% of women, and 20.9% overall (4.3 million adults) currently smoked tobacco on a daily basis. Among those who have ever smoked on a daily basis, only 9.5% have quit smoking.[5] An estimated 10,000 Malaysian deaths are attributed to smoking-related diseases annually.[6]

There are short- term effects and long- term effects of smoking. For short- term effects, smoking makes brain cannot function very well due to carbon monoxides in the cigarette and less oxygen in the body. The blood flow is low and eyesight can be affected as well. Smokers also will have smelly breath, feeling uneasy on their mouth as well as shortness of breath. Long- term effects are cancers such as lung cancer, oral cancer and mouth cancer. Besides, smokers may have high chances to get heart disease, stroke, lung diseases such as bronchitis, gum disease, and even infertility.[2]More severe, it can lead to erectile dysfunction.[1] These effects are for smokers, but non- smokers that are exposed to the cigarette smoke can be affected as well. In addition, side stream smoke that are inhaled by people around the smokers are more harmful than the main stream smoke that are inhaled by the smokers themselves.[7] These passive smokers are having higher chances to develop smoking- related diseases plus some other conditions such as eye irritation, headache and cough.[2] In general, tobacco use is responsible for the death about one in 10 adults worldwide.[8]

Since tobacco has many side effects and increased prevalence, therefore study in knowledge, attitude and practice on smoking needs to be done in order to increase awareness on the danger of smoking and finally, it will reduce prevalence of smokers in our country.

1.2 Problem Statement

Smoking can cause cardiovascular diseases, respiratory diseases cancer and other health effects. It accounts for an estimated 443,000 deaths, or approximately one of every five deaths, each year in the United States. Smoking causes about 90% of all lung cancer deaths in men and 80% of all lung cancer deaths in women.[9]

Even though there are many health consequences that can be caused by smoking but yet the prevalence of smoking among adults is still high. According to World Health Organization (WHO), tobacco smoking kills nearly five million people a year worldwide and, according to estimates, will probably kill eight million people per year between now and 2030 and one billion over the course of the 21st century.[10]Malaysian National Health and Morbidity Survey found that smoking prevalence among adults 18 years old and older has dropped from 24.8% in 1996 to 21.5% in 2006. However, smoking prevalence is still extremely high, particularly in men population.[11]

The harmful effects of tobacco smoking on health have been known since at least the 1950s.Now, many large multinational cigarette companies who previously denied the problem of cigarette smoking, have admitted that tobacco smoking has adverse consequences.[12]

Thus, this research is to study deeper about the level of knowledge, attitude and practice on smoking among adults. Besides, it is also aimed to study the association between socio-demograhic (age, ethnicity, educational level, marital status and family) and the level of knowledge, attitude and practice on smoking.

1.3 Study Objectives

1.3.1 General Objective

1.3.1.1 To study the level of knowledge, attitude and practice on smoking among adult FELDA settlers in FELDA Gugusan Raja Alias 1, Jempol, Negeri Sembilan in 2013.

1.3.2 Specific Objectives

1.3.2.1 To determine the sociodemographic characteristics among the respondents.

1.3.2.2 To determine the level of knowledge, attitude and practice on smoking among the respondents.

1.3.2.3 To determine the association between level of knowledge, attitude and practice of smoking with sociodemograhic characteristics.

1.4 Study Hypothesis

There is significant association between level of knowledge, attitude and practice of smoking and sociodemographic characteristics.

CHAPTER 2

LITERATURE REVIEW

2.1 Tobacco

The tobacco epidemic has become one of the biggest public health threats in the world that has ever faced.[3] Cigarette smoke contains over 4,000 chemicals that are harmful to our health. It includes 43 known cancer-causing (carcinogenic) compounds and 400 other toxins. These cigarette ingredients consist nicotine, tar, and carbon monoxide, formaldehyde, ammonia, hydrogen cyanide, arsenic, and DDT. [13]

Nicotine is very dangerous as it is highly addictive. Smoke which contains nicotine is inhaled into the lungs, and the nicotine can reach the brain in just six seconds. In small doses, nicotine can stimulate the brain. On the other hand, in large doses, it's a depressant, inhibiting the transmission of signals between nerve cells. In even larger doses, it's a fatal poison, influencing the heart, blood vessels, and hormones. Nicotine in the bloodstream causes smokers to feel calm.[13]

When a cigarette is smoked, the amount of tar inhaled into the lungs rises, and the last puff contains more than twice as much tar as the first puff. Carbon monoxide reduces the ability of erythrocytes to carry oxygen throughout the body. Tar is a mixture of substances that can eventually form a sticky mass in the lungs.[13]

World Health Organisation (WHO) has make an estimation that tobacco kills about six million people per year of whom more than 5 million are users and ex users and more than 600 000 are passive smokers. Besides, around one person dies every six seconds due to

tobacco and this accounts for one in 10 adult deaths. Up to half of current users will eventually die due to tobacco-related diseases. Unless immediate action is taken, the annual death could increase to more than eight million by 2030. [13]

2.2 Prevalence of smoking

2.2.1 Worldwide

Smoking is the single most important preventable cause of premature morbidity and mortality in the world. WHO has estimated that there are around 1100 million smokers globally; this represents about one-third of the global population aged over 15 years.[14] Nearly 73% of these smokers (700 million males and 100 million females) are in developing countries whereas in industrialized countries there are 200 million male smokers and 100 million female smokers. In the over 15-year-old population of developing countries, it is estimated there are about 48% of males and 7% of females are smokers. For industrialized countries, there are 42% for males and 24% for females.[14] Recently, the prevalence of smoking has been declining in many industrialized countries but in developing countries, there has been a large increase in the number of young adults starting to smoke. It has been estimated that, unless immediate steps are taken to reduce smoking rates, the number of deaths due to tobacco use will rise to 10 million per year over the next 30–40 years, and 70% of these deaths will occur in developing countries.[14]

2.2.2 Asia

According to Australian research, number of people dying from smoking-related lung cancer in Asia over the next 20 years will be double. A study conducted by George Institute of Global Health found that a third of the world's smokers live in the Asia-Pacific region. According to the research, smoking rates are particularly high in overcrowded countries such as China, South Korea and Bangladesh.[15] In South Asia, about 1.2 million people die every year from tobacco consumption. According to the World Health Organization (WHO), as high as 67% of the male population in China and Korea smoke.[16]

2.2.3 Malaysia

The prevalence of ever smokers in Malaysia was 30.6% and current smokers are 24.8%.[17] Among the ever smokers, the number of cigarettes smoked per person each day was 13.3 (Ministry of Health Malaysia [MOHM], 1996).[17] In Malaysia, almost half (46.4%) of all men smoke, while only few (1.6%) women do. Patterns of smoking among Malaysian youth reflect adult trends. For instance, cigarette prevalence among adolescent males is significantly higher (30.9%) than among adolescent females (5.3%). Nevertheless, the 5.3% is much higher than the 1.6% rate among adult women, which increases the ominous possibility that smoking rates among women will increase significantly in the future.[18] According to GATS, the study indicated that more than 40% of Malaysian men smoke, or a total of 4.7 million adult smokers. Almost no women—less than 1%--smoke in Malaysia.[19]

2.2.4 Negeri Sembilan

Pathmanathan (1974) has conducted a study on tobacco smoking patterns in a rural community in Negeri Sembilan. The result showed that 34.2% of them were currently cigarette smokers– the large majority of them smoking commercially available brands of cigarettes. Besides, Malays, males and the older age group (45 years and above) had higher smoking rates although the Chinese who smoked were heavier smokers.[20]

2.3 Level of knowledge on smoking

Yue et al. (2012) conducted a study on tobacco knowledge among adults in Zheijing Province, China.Face-to-face interviews were conducted with 2112 adults in Zhejiang. The study showed thatonly 31.87% of Zhejiang adult residents knew that smoking could cause all three diseases (stroke, heart disease, and lung cancer), 86.09% were aware that smoking causes lung cancer, 46.43% and 42.40% were aware that smoking causes stroke and heart attack, respectively.[21]

A cross-sectional study among students from two medical colleges in Riyadh, Saudi Arabia was carried out by Ali I. Al-Haqwiet. al. (2010). A total of 215 students participated in this study.About 94% of the study sample indicated that smoking could cause serious illnesses. The students also indicated that smoking is related to major chronic diseases, especially lung cancer and heart diseases, but to a lesser extent, to sexual dysfunction, as approximately a third of the students did not know if smoking could cause any sexual dysfunctions.[22]

A study was conducted by Minh et. al. (2012)among Vietnamese adults. The study showed that only 51.5% of interviewees answered correctly to all three specific health consequences (stroke, heartattack, and lung cancer). The most common healthconsequence was lung cancer (95.8%), while strokes and heart attacks were found to be much lower (67.6 and 60.9%, respectively).[22]

2.4 Factors influence level of knowledge on smoking

2.4.1 Age

A study was conducted by Minh et. al. (2012) regarding knowledge of the health consequences of tobacco smoking. It was a cross- sectional survey done among Vietnamese adults in 2012. This study showed that those respondents from the age of 45- 54 years knew that smoking can causes serious illness more than any other age groups (95.6%). Those respondents of the age group 65 years and above was the group that knew the least about smoking can causes serious illness (87.1%).[22]

However, in Malaysia, Global Adult Tobacco Survey in 2011 showed that 90.0% of Malaysian adults in the age of 25 to 44 years old knew that smoking is the major cause of health effects like heart attack and lung disease. For those in the age of 65 years and above, only 70.1% of them knew about the same matter. [5]

2.4.2 Ethnicity

Lim et al. (2009) conducted a study on tobacco use, knowledge, attitude among Malaysians age 18 and above. Out of 11000 respondents, majority are Malays, followed by Chinese, Indians and others. The study showed that Indian get the highest score (4.91) in terms of knowledge of smoking followed by Malay (4.88) and Chinese (4.32) ($p< 0.001$, $F = 52.72$). [23]

2.4.3 Educational level

Yue et al. (2012) conducted a study on tobacco knowledge among adults in Zheijing Province, China. The study was conducted to 2112 respondents. 13.21% of them had completed college level and above while 36.13% had just completed primary school and less than it. It was found that among those who had completed their college level and above, 149 or 63.41% knew that smoking can cause health diseases such as heart attack, lung cancer and stroke ($p<0.001$). Moreover, 22.54% of those who had just completed primary school level and less knew that smoking can cause those effects (Ad. OR = 0.32, $p< 0.001$) [21]

2.5 Level of attitude on smoking

Several studies have been carried out on the level of attitude of smoking among adults. A research was conducted by Lim et.al. from January to March 2002 in Selangor. A total of 10,545 respondents age 18 years and above in Malaysia were interviewed. As a result, females were found to have more negative attitudes towards smoking compared to males ($p<0.001$).[23]

In 1996, a cross-sectional survey was carried out among Kuwaiti adults. In this study, a sample of 4000 people was drawn from the target population comprised Kuwaitis employed in all government ministries except Foreign Affairs and Defence. The samples were selected using a three-stage stratified cluster sampling design. Initially, a total of 4000 people were selected to join in the study; of these, 3859 (1798 males, 2061 females) returned completed questionnaires, getting a response rate of 96.5%. The most common reasons for smoking among both men and women were to relieve boredom and to relax. When data were examined separately for each sex, 40% men felt that smoking can help them concentrate at work and 64% women thought that smoking helps them to relieve anger and frustration. About 73% of all respondents believed that smoking had not affected their health.[24]

During the month of June 2009, a cross-sectional study was carried out. It involved students from two medical colleges in Riyadh, the capital of Saudi Arabia. A total number of 215 out of 330 students took part in this study, which makes a response rate of 65%. The mean age of the respondents was 21 years (s.d. = 3). Male students comprised 77%.Approximately, 94% of the respondents felt that smoking could cause serious illnesses.

Forty-four students (20% of respondents) thought that smoking brings some benefit, especially as a coping strategy for stress alleviation.[39]

Besides, a cross sectional study was carried out in Jordan during 2012. Around 2793 students was selected as sample to complete a self-administered questionnaire about knowledge, attitude and practice of smoking at three universities in Irbid, Jordan. Most of the smoking students (75.2%) knew the tremendous effects of smoking. Rates of non-smoking students who knew the adverse effects of smoking were significantly higher in comparing to that of students who smoke. Majority of the students showed a negative attitude towards the assumption that smoking females would have more friends (89.6%), have stronger personality (93.4%), and be more attractive (90.6%) than non-smoking females. Similar higher rates of opposing attitude were also observed among the smoking male. Half of the smokers have a misguided belief that smoking can help them concentrate while studying and 37.7% believe that smoking helps in preventing obesity. Some people may think smoking can help them fit in a group of friends. The result shows majority of the smokers (19%) most likely have this kind of idea if compared with non-smokers (10.1).($p<0.05$).[25]

A two-stage, stratified cluster study using door-to-door interviews was conducted at Minhang District, China (near Shanghai), with a population of 506,000. About 3423 males and 3593 females aged 15 years and older were involved. Among all respondents, 6202 (88.4%) felt that smoking is harmful for both the smoker and those exposed passively to the smoke. Only 332 (14.1%) of all male smokers showed a desire to quit smoking. There is a low rate of quitting and a low desire to stop smoking despite high awareness of the health hazards.[26]

2.6 Factors influencing level of attitude on smoking

2.6.1 Age

From January to March 2002, a study called The Malaysian National Healthy Lifestyle Study was conducted in Selangor. Sample was selected through a two-stage proportionate-to-size sampling strategy. A total of 10545 respondents age 18 and above across Malaysia were interviewed. The result revealed that age group more than 60 show more positive attitude toward smoking compared to other age group included 18, 19-29, 30-39, 40-49 and 50-59.($p<0.001$, $F=13.08$).[23]

2.6.2 Ethnicity

A study was conducted by Lim et.al. in 2002. A total of 10,545 respondents age 18 years and above in Malaysia were interviewed. Among the ethnic that being studied (Malay, Chinese, Indian and others), others shows more negative attitude toward smoking. It was followed by Indian, Chinese and Malay. ($p<0.01$, $F=0.34$).[23]

2.6.3 Educational level

The Malaysian National Healthy Lifestyle Study was conducted from January to March 2002. Sample was selected by a two-stage proportionate-to-size sampling strategy. A total of 10545 respondents age 18 and above from the selected households were interviewed. The result indicated that there was an association between education level and level of attitude on smoking. ($p<0.001$, $F=72.41$). Those who have attended public/private institutions of higher learning show more negative attitude towards smoking compared to those who never attended school, attended primary school and attended secondary school.[23]

2.6.4 Family

In 2003, 1,417 high school students in Houston, Texas, completed a cross-sectional survey to identify whether the attitudes that children of smokers hold toward smoking are significantly more positive than the attitudes of children of non-smokers we examined.[29] As a result, compared to participants whose parents did not smoke, participants who reported one or both parents currently smoke, had increased odds of ever smoking (OR = 1.31; 95% CI: 1.03–1.68; and OR = 2.16; 95% CI: 1.51–3.10, respectively). Moreover, the relationship between attitudes and ever smoking was stronger among participants when at least one parent currently smokes (OR = 2.50; 95% CI: 1.96–3.19) than among participants whose parents did not smoke (OR = 1.72; 95% CI: 1.40–2.12). One interpretation of the findings is that parental smoking moderates their children's attitudes towards smoking and thereby impacts their children's behavior.[27]

2.7 Factors that influences the practice of smoking

2.7.1 Age

According to cross-sectional study by Lim et al. (2013) reported that for males respondents aged 21-30 years old were most likely to smoke which are 59.3% (95% CI 57.4-61.2) followed by aged 31-40 years old which are 56.8% (95% CI 55.0-58.6). The lowest age group that practice smoking are >61 years old which are 35% (95% CI 32.9-37.1).[28]

According to study done by Jha *et al.* (1995) , reported that the age group 30-39 years old and 40-49 years old having the highest practices of smoking which are 34%, followed by age group 20-29 years old which are 26%. The lowest age group of practice of smoking are 15-19 years old which are 20%. [29]

2.7.2 Ethnicity

According to cross-sectional study by Lim H.K *et al.* (2012) reported that for males the Malay ethinicity have highest prevalence in practice of smoking which are 55.9% (95% CI 54.8-57.1), followed by others ethinicity which are 55.0% (95% CI 50.6-60.3). The lowest practices of smoking are Indian ethinicity which are 35% (95% CI 32.0-38). [28]

According to study by Ghani *et al.* (2012) reported that for males the Malays were found to have the highest prevalence (70.4%), followed closely by the 'others'(65.5%), while among females, the prevalence was highest among those in the 'others' group (17.1%). [30]

2.7.3 Educational level

According to Turkey Global Adult Tobacco Survey (GATS),2008 for males in urban area, practice of smoking was highest among high school education 52.5% (95% CI 47.5-57.6) and the lowest was among university education 38.9% (95% CI 33.1-44.8). For males in rural area, the practice of smoking are highest among primary education 51.5% (95% CI 47.5-55.5). For females, reported that the highest practice of smoking was among high school education 27.4%(95% CI 22.5-32.3) and the lowest was among not graduated education. [31]

According to cross-sectional study by Lim *et al.* (2012) reported that the respondents without formal education which are 48.5 %(95% CI 45.2-51.8)were more likely to smoke than those with tertiary education which are 31.4% (95% CI 29.0-33.8) . The primary education which are 49.5% (95% CI 48.0-51.0) were less likely to smoke than those with secondary education which are 53.8% (52.5-55.1).This shows that the education level can influences the practice of smoking among adult. A person with higher education level have lower tendency to smoke as compared to a person with lower education level.[28]

2.7.4 Marital status

According to cross-sectional study by Lim H.K *et al.* (2012) reported that the for males respondent that are divorced are more likely to smoking which are 55.2%(95% CI 48.1-62.1), followed by single status which are 54%(95% CI 53.0-56.8).[28]

According to the study done by Hong J.C et al. (2008), reported that for females, divorced are the more likely to smoke which are 16.0%(95% CI 13.2-18.9) followed by widowed which are 9.0%(95% CI 6.2-11.8). Married is the lowest status that having a practice of smoking which are 2.5%(95% CI 2.3-2.6). For males, reported that the highest

practice of smoking are divorced status,which are 77.3%(95% CI 70.5-84.2) followed by widowed which are 75.8%(95% CI 55.6-96.1). The lowest practice of smoking for males are married, which are 62.8%(95% CI 61.9-63.6).[32] People think smoking can help them relax and cope with stressful situations. Reported that smokers feel calmer and have improved concentration after a cigarette. Female respondent saw peers' smoking as a way to solve stress and other personal problems. [28]

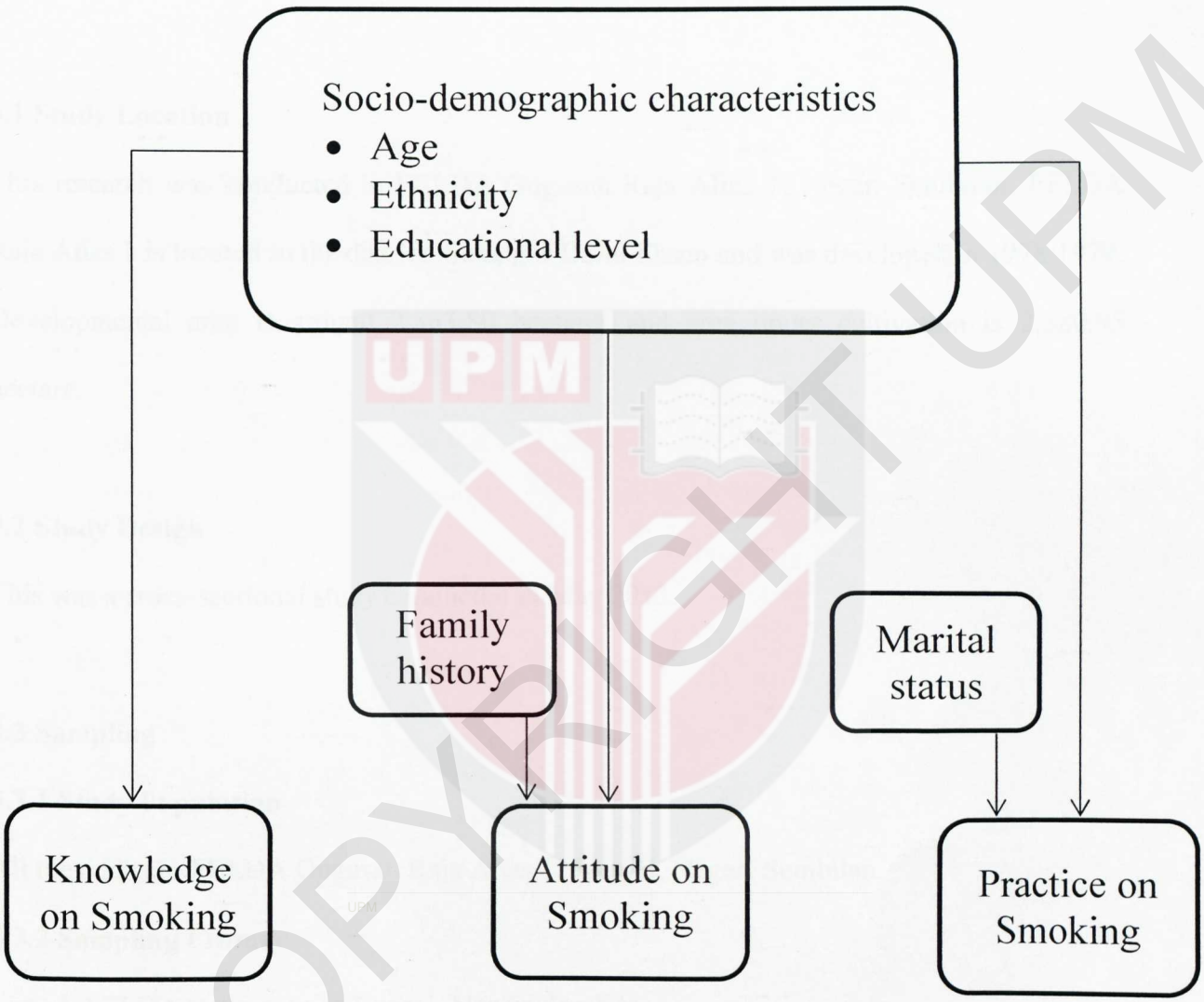

Figure 2.1 : Factors influencing level of knowledge, attitude and practice on smoking

CHAPTER 3

METHODOLOGY

3.1 Study Location

This research was conducted in FELDA Gugusan Raja Alias 1, Negeri Sembilan. FELDA Raja Alias 1 is located in the district, Selangor Darul Ehsan and was developed in 1978/1979. Developmental area is around 2,563.80 hectares and area under cultivation is 2,380.95 hectare.

3.2 Study Design

This was a cross-sectional study conducted in May 2013.

3.3 Sampling

3.3.1 Study Population

All the adults in FELDA Gugusan Raja Alias 1, Jempol, Negeri Sembilan.

3.3.2 Sampling Frame

List of FELDA settlement in Jempol, Negeri Sembilan.

3.3.3 Sampling unit

An adult in FELDA Gugusan Raja Alias 1, Negeri Sembilan.

3.3.4 Sampling Method

Cluster sampling was used in this study.

3.3.5 Sample size

Sample size was determined based on formula.

Formula used :

$$n = \frac{Z^2 P (1-P)}{d^2}$$

n – Required sample size

P – Prevalence of the parameter to be estimated in population

z – Confidence level at 95% (standard value of 1.96)

d- Margin of error at 5% (standard value of 0.05)

For level of knowledge on smoking

$$n = \frac{1.96^2 \times 0.39 (1-0.39)}{0.05^2}$$

= 366

To prevent non-responding bias we compute for extra 10 %

Sample size = 403

For level of attitude on smoking

$$n = \frac{1.96^2 \times 0.87 (1-0.87)}{0.05^2}$$

= 174

To prevent non-responding bias we compute for extra 10 %

Sample size = 191

For level of practice on smoking

$$n = \frac{1.96^2 \times 0.34 (1- 0.34)}{0.05^2}$$

= 345

To prevent non-responding bias we compute for extra 10 %

Sample size = 380

From the calculation, the maximum sample size was 403. So, the estimated sample size was 403.

3.3.6 Inclusion criteria

i. Age 20 years old and above

3.3.7 Exclusion criteria

i. Household agree to participate but have mental retardation.

ii. Non-Malaysian citizen.

3.3.8 Dependent Variables

i. Level of knowledge regarding smoking.

ii. Level of attitude towards smoking.

iii. Practices of smoking.

3.3.9 Independent Variables

i. Sociodemographic characteristics such as age, ethinicity, marital status, family, and educational level.

3.4 Instrument and Data Collection

3.4.1 Questionnaire

A self administered questionnare was used. The questionnare was developed in Malay language. It was divided into 4 sections.

i) Section A: Sociodemographic data

ii) Section B: Knowledge on smoking

iii) Section C: Attitude on smoking

iv) Section D: Practice on smoking

Knowledge was assesed by asking Yes/No/Don't know questions. 12 questionswhich mostly consist of questions on effects of smoking were asked to the respondents. 1 mark would be given for each correct answer, and 0 mark would be given for wrong/don't know answer. Level of knowledge was determined by median of the score. The score which was greater than the median was considered as high level of knowledge whereas score which was lesser than the median was considered as low level of knowledge.

Attitude was measured using Likert Scale from 1(Strongly Disagree) to 5(Strongly Agree). A sum of 12 questions on attitude towards smoking and anti-smoking were asked. Minimum 1 mark, and maximum 5 marks would be given for every question. Level of attitude was determined by mean of the score. The score which was greater than the mean was considered as positive attitude whereas score which was lesser than the mean was considered as negative attitude. The score was counted reversely if the question was a positive statement.

Practice was determined by asking whether the respondents were smoking or not, the frequency of smoking per day and also the factors affecting it. 7 questions were asked.

3.4.2 Validity and Reliability

The validity of the questionnaire was reviewed by the expert.The reliability was established through pre- testing. It was carried out on 1th June 2013 among FELDA settlers in Negeri Sembilan not included the selected of the sample population. After completing the pre-testing, some necessary changes would be made to the questions according to the respondents' feedback.

3.4.3 Data Collection

Data collection was started on 24th Jun 2013 and ended on 5th July 2013. The questionnaire were distributed personally to the respondents. They were given a period of times to complete the questionnaires and the completed questionnaires were collected personally.

3.5 Data Analysis

The data collected was analysed using SPSS 21.0 for Windows. For knowledge and attitude on smoking, descriptive method of continous data was used to interpret the result by measuring the central tendency and the variability or dispersion. Measures of central tendency include the mean and median, while measures of variability or dispersion include the standard deviation or variance, the minimum and maximum variables, kurtosis and skewness. For practice of smoking, descriptive method was used to interpret the result by measuring the percentage. To test for associations between the independent and dependent variables, statistical methods such as Pearson Chi- square Test and Fischer's Exact Test were used. All tests were significant at $p<0.05$.

3.6 Ethics

Approval from the Ethical Committee of Faculty of Medicine and /Health Sciences was obtained. Permission was obtained from FELDA Gugusan Raja Alias 1. Written personal consent was obtained from each respondent. The information given by respondents was strictly confidential and used exclusively for this research. The identities of the respondents were kept anonymous.

3.7 Definition of Operational Variable Terms

1. Level of knowledge on smoking – The score which is greater than median is considered as high level of knowledge .The score which is lesser than median is considered as low level of knowledge.
2. Level of attitude on smoking - The score which is greater than mean is considered as positive attitude.The score which is lesser than mean is considered as negative attitude.
3. Practice of smoking – " Do you ever smoke?' was asked to the respondents to determine whether they have practice smoking before or currently. Heavy smoking was defined as ≥25 cigarettes per day. Moderate smoking was defined as 16--24 cigarettes per day Light smoking was defined as ≤15 cigarettes per day.[33]
4. Age – The respondents are within the age group of 20 years old and above. Respondents are required to fill in their age in the questionnaire.
5. Ethnicity- The ethnicity includes Malays, Chinese and Indian. Respondents are required to fill in their race in the questionnaire.
6. Marital status- the condition of being single, married or widow.
7. Educational level- The educational level is divided into 4 groups: No formal education, primary, secondary and tertiary.

CHAPTER 4

RESULTS

4.1. Response Rate

439 questionnaire were distributed in Felda Gugusan Raja Alias 1, Jempol, Negeri Sembilan. However, only 418 of the respondents responds to the study. The response rate was 95%.

4.2. Socio-demographic Characteristics and Family History of Smoking among the Respondents

Table I shows the socio-demographic characteristics and family history of smoking among the respondents in Felda Gugusan Raja Alias 1,Jempol,Negeri Sembilan. The mean age of the respondents was 45.27 years old and the majority of the respondents were in the age group of 30-60 (48.8%). Out of 418 respondents, 417 (99.8%) of them were Malays, and 1 (0.2%) were others. There were 230 (54.0%) of the respondents were males, and 188(45.0%) were females.

There were 204(48.8%) of the respondents have the family history of smoking and 214(51.2%) of the respondents have no family history of smoking. Regarding educational level, majority of the respondents had secondary education 232(55.5%) and followed by primary education 119(28.5%), university 42(10.0%) and no formal education 25 (6.0%). Most of the respondents were married 229(71.5%), while 94(22.5%) were single and 25(6.0%) were widowed.

Table I : Socio-demographic status.

Socio-demographic status		n	%
1. Age			
	<30	105	25.1
	30-60	272	65.1
	>60	41	9.8
2. Ethnicity			
	Malay	417	99.8
	Others	1	0.2
3. Gender			
	Male	230	54.0
	Female	188	45.0
4. Family history of smoking			
	Yes	204	48.8
	No	214	51.2
5. Educational level			
	No formal education	25	6.0
	Primary school	119	28.5
	Secondary education	232	55.5
	University	42	10.0
6. Marital status			
	Single	94	22.5
	Married	299	71.5
	Widow	25	6.0

4.3. Knowledge, Attitude and Practice on Smoking

4.3.1. Knowledge on smoking among respondents

Table II shows that 77.0% of respondents knew that nicotine in the cigarette can cause addiction on smokers and 71.1% of the respondents knew that smoke of the cigarette contains carcinogen. Majority of them (79.4%) knew that smoking while pregnant can affect the baby. 40.0% of the respondents did not know that quit smoking clinic is available at Public Health Clinics in Malaysia and gives services for free. Less than half (47.1%) of the respondents knew that smokers will be fined if they smoke at the restaurant.

Table II : Distribution of correct and wrong answer on knowledge of smoking among respondents. (n=418)

	Statement	Correct		Wrong		Don't know	
		n	%	n	%	n	%
1	Nicotine causes addiction.	322	77.0	15	3.6	81	19.4
2	Smokes contain carcinogen.	297	71.1	10	2.4	111	26.6
3	Smokes do not affect people surrounds it.	51	12.2	28	68.9	79	18.9
4	Cough with sputum is one of the sign of respiratory problem related to smoking.	269	64.4	27	6.5	122	29.2
5	Smoking do not affect asthmatic patient.	51	12.2	269	64.4	98	23.4
6	Pregnant women can smoke.	34	8.1	318	76.1	66	15.8
7	Smoking while pregnant can affect the baby.	332	79.4	29	6.9	57	13.6
8	Smoking can cause cancer like lung cancer.	326	78.0	17	4.1	74	17.7
9	National Fatwa Council prohibit smoking.	218	52.2	38	9.1	162	38.8
10	Exercise can reduce smoking	247	59.1	41	9.8	130	31.1
11	You will be fined if you smoke in restaurant.	197	47.1	64	15.3	157	37.6
12	Quit Smoking Clinic is available at Public Health Clinic.	225	53.8	23	5.5	170	40.7

4.3.2. Attitude towards smoking among respondents

Table III shows that majority of the respondents (45.1%) support anti-smoking campaign. Meanwhile, the least of them (2.6%) strongly disagree that compound has to be given to those who smoke in public places.

Table III: Distribution of attitude towards smoking among the respondents. (n=418)

	Question	Strongly disagree		Disagree		Not sure		Agree		Strongly agree	
		n	%	n	%	n	%	n	%	n	%
1	Smoking gives energy.	158	37.8	84	20.1	123	29.4	39	9.3	12	2.9

2	Smoking can calm someone down.	142	34.0	83	19.9	125	29.9	56	13.4	12	2.9
3	Smoking can reduce stress.	123	29.4	68	16.3	125	29.9	91	21.8	11	2.6
4	Smoking help me make more friends.	138	33.0	111	26.6	125	29.9	31	7.4	13	3.1
5	I don't mind if my family member(s) is/are smoker.	122	29.2	108	25.8	129	30.9	46	11.0	11	2.6
6	I don't mind if my family member(s) is/are smoking in front of me.	125	29.9	129	30.9	105	25.2	43	10.3	14	3.3
7	Stop smoking is difficult.	62	14.9	47	11.3	110	26.5	120	28.9	76	18.3
8	I support the anti-smoking campaign.	24	5.8	17	4.1	64	15.3	124	29.7	188	45.1
9	Increase in cigarette price can reduce the number of smoker.	25	6.0	39	9.4	130	31.3	116	27.9	106	25.5
10	Pictures of the disease related to smoking have to be change frequently.	13	3.1	26	6.3	102	24.5	146	35.1	129	31.0
11	Smoking must be prohibited at public places.	17	4.1	16	3.8	80	19.2	131	31.4	173	41.5
12	Compound has to be given to those who smoke in public places.	11	2.6	22	5.3	86	20.6	130	31.2	168	40.3

4.3.3. Practice of smoking among the respondents

From this study, table IV shows that 180 (43.1%) from a total 418 respondents have ever practiced smoking while 238 (56.9%) of the respondents not ever practiced smoking. There were 148(54.6%) of the respondents still practice smoking while 123 (45.4%) of the

respondents were not practiced smoking. Regarding the family history of smoking, 204(48.8%) of the respondents have family members who are smoking and 214(51.2%) of the respondents do not have a family members who are smoking.

Regarding what make them start smoking, majority of the respondents start smoking due to other reasons 83 (46.4%), followed by stress 43 (24.0%), to stay focus 25 (14.0%), to be accepted in the group 12 (6.7%), loneliness 6 (3.4%), dissapointment 4 (2.2%), anger 4 (2.2%), and sadness 2 (1.1%).

For daily activities related to smoking, majority of the respondents like to smoke after a meal 106 (59.6%), followed by hanging out with friends 24 (14.0%), wake up 20 (11.2%), others 12 (6.7%), watching tv 8 (4.5%), and driving 7 (3.9%). For things they like about smoking, most of the respondents 111 (63.8%) feels relaxed. 39 (22.4%) relieve stress, 8 (4.6%) to be accepted by friends, 8(4.6%) feels great, and 8 (4.6%) others.

Table IV : Frequency and percentage of practices of smoking among the respondents.

	n	%
1. Person who ever smoke (n=418)		
Yes	180	43.1
No	238	56.9
2. Person who still smoking (n=418)		
Yes	148	54.6
No	123	45.4
3. Have family members who(s) smoke		
Yes	204	48.8
No	214	51.2
4. Reasons to start smoking		
Stress	43	24.0
Sadness	2	1.1
Loneliness	6	3.4
Disappointment	4	2.2
Anger	4	2.2
To be accepted in the group	12	6.7
To stay focus	25	14.0
Others	83	46.4

5. Daily activities related to smoking		
Wake up	20	11.2
After meal	106	59.6
Driving	7	3.9
Watching TV	8	4.5
Drinking alcohol	0	0
Hanging out with friends	25	14.0
Others	12	6.7
6. Things they like about smoking		
Feel relaxed	111	63.8
Relieve stress	39	22.4
To be accepted by friends	8	4.6
Feel great	8	4.6
Others	8	4.6
7. Person influence them to stop smoking		
Self-awareness	81	57.9
Husband/wife	33	23.6
Friends	6	4.3
Doctor's advice	10	7.1
Others	10	7.1

4.4. Association Between Level of Knowledge, Level of Attitude and Practice with Socio-demographic Characteristics

4.4.1. Association between level of knowledge of smoking and sociodemographic characteristics

The total score for knowledge on smoking was 12. The highest score of the respondents was 12 and the lowest score was 0. The mean was 7.91 and the standard deviation was 3.448. The median score was 9. As histogram showed that it was skewed, so median score which was 9 was used as cut-off point. Respondents who score more than 9 was considered had high knowledge level whereas lower than 9 was considered had low knowledge level. Among all the 418 respondents, only 200 (47.8%) of them had high knowledge while 218 (52.2%) of them had low knowledge.

Chi Square Test or Fischer"s Exact Test were used to determine the associations of

knowledge, attitude and practice of smoking with sociodemographic characteristics.

Table V shows that there was a significant association between the level of knowledge of smoking and educational level ($x^2 = 16.542$, $p = 0.001$)

Table V : Association between the level of knowledge of smoking and socio-demographic status and among respondents.

Sociodemographic status	High knowledge		Low knowledge		X^2	p
	n	%	n	%		
1. Age (n=418)						
<30	48	45.7	57	54.3	0.666	0.717
30-60	134	49.3	138	50.7		
>60	18	43.9	23	10.6		
2. Ethnicity (n=418)						
Malay	200	49.2	217	52.0	-	1.000[a]
Others	0	0.0	1	100.0		
3. Educational level (n=418)						
No formal education	7	28.0	18	72.0	16.542	0.001[b]
Primary school	59	49.6	60	50.4		
Secondary education	103	44.4	129	55.6		
University	31	73.8	11	26.2		

[a] Fisher's Exact Test
[b] Significant ($p<0.05$)

4.4.2. Association between level of attitude and socio-demographic characteristics and family history of smoking among the respondents

The total score for attitude towards smoking was 60. The highest score of the respondents was 60 and the lowest score was 23. The mean ± standard deviation was 44.41 ± 8.081. The median score was 43. As the histogram showed that it was normally distributed, mean score which was 44.41 was used as cut off point. Respondents who score more than 44.41 was considered had positive attitude whereas for those who score less than 44.41 was considered had negative attitude. Among the 418 respondent in Table VI, 202 (48.3%) of them had

positive attitude, while 216 (51.7%) of them had negative attitude. However, level of attitude towards smoking was not significantly associated with socio-demographic characteristics and family history of smoking.

Table VI : Associations between level of attitude towards smoking and socio-demographic status and family history among respondents.

Socio-demographic status	Positive attitude		Negative attitude		X^2	p
	n	%	n	%		
1. Age (n=418)						
< 30	47	44.8	58	55.2	0.904	0.636
30-60	136	50.0	136	50.0		
>60	19	46.3	22	10.2		
2. Ethnicity (n=418)						
Malays	202	48.4	215	51.6	-	1.000[a]
Others	0	0.0	1	100.0		
3. Educational level (n=418)						
No formal education	8	32.0	17	68.0		
Primary school	60	50.4	59	49.6	5.154	0.161
Secondary education	109	47.0	123	53.0		
University	25	59.5	17	40.5		
4. Family history (n=418)						
Yes	93	45.6	111	54.4	1.195	0.283
No	109	50.9	105	49.1		

[a] Fisher's Exact Test

4.4.3. Associations between practice of smoking and the socio-demographic characteristics.

Table VII shows that practice of smoking was highest among age group 30-60 and it was about 113 (41.5%). There was no significant association between practice of smoking and the age of respondents (X^2=0.926 ,p=0.629). Table VII also shows that for the ethnicity, the practice of smoking was higher aomng the Malays ethnicity 179 (42.9%). However, practice

of smoking was not significantly associated with ethnicity of the respondents (x^2=1.325, p=0.431).

Table VII also shows the practice of smoking was higher among the respondents who have a secondary education 104 (44.8%). However, practice of smoking was not significantly associated with the educational level of the respondents (x^2=4.884, p=0.180).

Finally, table VII shows among the respondents who were married 129 (43.1%) were practiced smoking. There was significant associations between practice of smoking and the marital status of the respondents (x^2=6.747, p=0.034)

Table VII : Association between practice of smoking and socio-demographic status among respondents.

Socio-demographic status	Practice		No practice		X^2	p
	n	%	N	%		
1. Age (n=418)						
<30	47	44.8	58	55.2	0.926	0.629
30-60	113	41.5	159	58.5		
>60	20	48.8	21	51.2		
2. Ethnicity (n=418)						
Malay	179	42.9	238	57.1	-	0.431[a]
Others	1	100	0	0.0		
3. Educational level (n=418)						
No formal education	9	36.0	16	64.0	4.884	0.180
Primary school	55	46.2	64	53.8		
Secondary education	104	44.8	128	55.2		
University	12	28.6	30	71.4		
4. Marital status (n=418)						
Single	46	48.9	48	51.1	6.747	0.034[b]
Married	129	43.1	170	56.9		
Widow	5	20.0	20	80.0		

[a] Fisher's Exact Test
[b] Significant (p<0.05)

CHAPTER 5

DISCUSSIONS AND CONCLUSIONS

5.1 Discussions

5.1.1 Level of knowledge on Smoking

Among the 418 adults that participated in this study, 200 (47.8%) of them had high knowledge, while 218 (52.2%) of them had low knowledge. The prevalence of high knowledge among the respondents was 47.8%. However, a study which was conducted among students and staffs in UPM by Sharker et.al(2005) showed that the prevalence of high knowledge on smoking was high, which was 62%.[34] The difference was because this study was conducted in Felda and most of the respondents were only received secondary education whereas the study done by Sharker (2005) was conducted in a university setting and the respondents were students from all categories (diploma, bachelor, masters, and doctoral) and academic and non-academic staff.

The finding of this study indicate that level of knowledge on smoking was not significantly associated with age ($p= 0.312$). However, the study conducted by Lim et al. among Malaysian aged 18 and above showed that there was significant associaton between level of knowledge on smoking and age ($p< 0.001$).[23] Moreover, in Malaysia, GAT Survey in 2011 showed that 90.0% of Malaysian adults in the age of 25 to 44 years old knew that smoking is the major cause of health effects like heart attack and lung disease. For those in the age of 65 years and above, only 70.1% of them knew about the same matter.[5]The inconsistency of the result might because most of the respondents only received secondary education, regardless the age.

A study conducted by Lim. et al. among Malaysian aged 18 and above showed that

therewas significant associaton between level of knowledge on smoking and ethnicity ($p< 0.001$).[23] Indian had the highest knowlegde level, followed by Malays and Chinese subsequently.However, our research showed that there was no significant association between level of knowledge on smoking and ethnicity ($p=1.000$). The difference might be due to the ratio inequality in ethnicity as there were 99.8% Malays and only 0.02% respondent which was in other ethnic group.

In this study, the association between the level of knowledge and education level was found to be significant ($p=0.001$). This finding was consistent with the study conducted by Yue Xu et al. (2012) among 2112 adults in Zheijing Province, China. There was 13.21% of them had completed college level and above while 36.13% had just completed primary school and less than it. It was found that among those who had completed their college level and above, 149 or 63.41% knew that smoking can cause health diseases such as heart attack, lung cancer and stroke ($p<0.001$). Moreover, 22.54% of those who had just completed primary school level and less knew that smoking can cause those effects (Ad. OR = 0.32, $p< 0.001$) [21]. Besides, a cohort survey of over 9000 adult smokers from four countries: the United States, Canada, the United Kingdom, and Australia showed that there was a significant association between level of knowledge on smoking and educational level ($p<0.05$).The odds of knowing that smoke contains cyanide, mercury, arsenic and carbon monoxide were respectively 66%, 26%, 44% and 108% larger for respondents with a university degree than those with a high school diploma or lower level of education.[35]This relationship was further supported bya study conducted by Lim et al. among Malaysian aged 18 and above.The result showed that there was significant associaton between level of knowledge on smoking and educational level ($p< 0.001$).[23]

5.1.2 Level of attitude on Smoking

The prevalence of positive attitude towards smoking was 48.3%. This was lower than the study done among the students from two medical universities in Riyadh, the capital of Saudi Arabia (94%).[39]The inconsistency of the findings was because our study was conducted at Felda whereas other study was at university setting. Most of the respondents in our research had only received secondary education, followed by primary education. Thus, they might not know the health hazards of smoking and prone to show negative attitude.

In the bivariate analysis of association between level of attitude and socio-demographic characteristics of the respondents, none of the independent variables were significantly associated with the level of attitude (Table VI).

The association between level of attitude and family history of smoking was also not significant (p=0.283). This finding was inconsistent with the study carried out among 1417 students in Houston, Texas. The result showed that, the relationship between attitudes and ever smoking was stronger among participants when at least one parent currently smokes (OR = 2.50; 95% CI: 1.96–3.19) than among participants whose parents did not smoke (OR = 1.72; 95% CI: 1.40–2.12). One interpretation of the findings is that parental smoking moderates their children's attitudes towards smoking and thereby impacts their children's behavior.[27]

These different results might be due to the low awareness of the danger and health hazards of smoking since only 48.3% of the respondents had positive attitude towards smoking.

5.1.3 Practice on Smoking

The overall prevalence of smoking in this study was 43.1%. However, according to Ministry of Health Malaysia [MOHM], 1996, the prevalence of smoking was 30.6%.[17]Moreover, Malaysian National Health and Morbidity Survey had documented that smoking prevalence among adults 18 years old and older was 24.8% in 1996 and 21.5% in 2006.[18] The difference might be due to the ratio inequality of the gender. In our study, there were 288 male (54.0%) while only 130 female (45.0%) were involved. Male practices smoking more frequently than female. This was the reason why the prevalence of smoking in our study was higher than other studies.

In this study, the association between practice of smoking and age was found to be not significant (p=0.629). This finding was consistent with the study conducted by Khalil et. al. (2011) which stated that age was not significant associated with smoking habit among men in Kabul city.[36]

Ethnicity was not significantly associated with practice of smoking (p= 0.431). This finding was consistent with the study conducted among students and all the staff of UPM by Sharker MD. Numan, 2005 which stated that ethnicity was not associated with practice of smoking (p> 0.05)[34]. This relationship was further supported by a research done by Khalil Ahmad Mohmand, Khalid Sharifi and AhadBahram (2011) which stated that ethnicity was not significant associated withpractice of smoking.[36]

Educational level also found to be not associated with practice of smoking (p= 0.180). This finding was consistent with a study conducted byKhalil et.al. (2011) which stated that

educational level was not significant associated with smoking habit ($p>0.05$).[36]

In our study, marital status was found to be significant associated with practice of smoking ($p= 0.034$). This finding was consistent with the study done by Lim et. al. (2012) which reported that for males respondent that are divorced are more likely to smoking which are 55.2%(95% CI 48.1-62.1), followed by single status which are 54%(95% CI 53.0-56.8).[28]Furthermore, a study was carried out among Kuwaiti adults by Anjum et. al (1996) also showed that marital status was significantly associated with practice of smoking ($p< 0.0001$).[14] This relationship was further supported by study done by Hong et al. (2008), which reported that for females, divorced are the more likely to smoke which are 16.0%, followed by widowed which are 9.0%. Married is the lowest status that having a practice of smoking which are 2.5%. For males, reported that the highest practice of smoking are divorced status,which are 77.3%, followed by widowed which are 75.8%. The lowest practice of smoking for males are married, which are 62.8%.[32]Moreover, according to a study conducted by Tingzhong et. al.(2008), marital status was found to be significantly associated with practice of smoking.[37] In addition, the study done by Venkat et. al. in Delhi, urban India among 13 558 men and women aged 25-64 years also indicated that there was significant association between marital status and practice of smoking.[38]

5.2 Limitations

This was a cross-sectional study. Therefore, it can only represent the population in the study at the period the research was conducted. The results are not valid for any other time period.

As this study was conducted in Jun 2013, this period was also during semester holiday. Many

of the households were not available during the period of data collection because some of them were away for holiday. Therefore, this study was expected to be more successful if it was conducted during the semester.

Although the findings of this study are representative of the adults settlers in Felda Gugusan Raja Alias 1, it is not representative of other Felda in Malaysia and Malaysia population as it was densely populated by Malays.

In assessing the practice on smoking of the respondents, some questions in the questionnaire required respondents to recall the frequency of smoking per day and how long do they quit smoking. This may lead to recall bias.

Some of the respondents were reluctant to take part in this study because they were also requested to participate in other studies conducted in the same time period. They refused to complete the thick questionnaire and as a result, they were regarded as non-respondents.

As this research used a self-administered questionnaire, the message in the questionnaire might be misunderstood and therefore, giving rise to information bias.

There were possibilies that respondents did not report themselves as smokers due to the negative perception on smokers among the population nowadays. This would affect the estimation of prevalence of smoking.The smoking prevalence at Felda Gugusan Raja Alias 1 was lower than half which was 43.1% .This indicated that most of the respondents did not participate or did not express their actual smoking history in the study and there was a possibilty of smokers being missed in this study.

5.3 Conclusions

As a conclusion, 47.8% of the respondents had high knowledge on smoking. Meanwhile, 48.3% of them had positive attitude and 43.1% of the respondents had the practice of smoking. It is not satisfactory because there were less than half of the respondents who had high knowledge and positive attitude on smoking.

The main factor for starting smoking in this study was reasons other than stress, sadness, loneliness, disappointment, anger, to be accepted in the group and to stay focus. The most common daily activities related to smoking was after meal, followed by hanging out with friends. Most of the respondents did not have family history of smoking. Among the smokers, 10 cigarettes per day was the highest frequency. The most common reason for smoking was felt relaxed, followed by relieve stress. Only 6.1% of the respondents had quitted smoking. Main reason for quitting smoking was self-awarenass. Thus, activities like anti-smoking campaign, talks and exhibitions and mass media can be used to increase self-awareness among adult settlers at Felda Gugusan Raja Alias 1.

There was significant association between the level of knowledge on smoking and educational level. In addition, there was significant association between the practice of smoking and marital status. On the other hand, the level of attitude on smoking was not found to be significantly associated with socio-demographic characteristics or family history of smoking.

5.4 Recommendations

Our research showed that the main reason for quitting smoking among the respondents was self-awareness. Thus, acitivities like anti-smoking campaign, talks, and exhibitions can be held to raise self-awareness among the settlers in Felda Gugusan Raja Alias 1. They can also gain more knowledge about smoking through these events. This can prevent them from obtaining the information from unreliable sources and having misconceptions about smoking.

Mass media can reach the crowd efficiently. Thus, all types of mass media can be utilised to disseminate information about health hazards due to smoking. It not only can increase self-awareness, but also cultivate positive attitude towards smoking.

Toward creating a smoking-free environment, government may develop a "Smoking Cessation Clinic" at Felda Gugusan Raja Alias 1 with the services of counselling, motivation and also providing nicotine replacement therapy (if necessary) for those who are planning to quit smoking.

References :

1.Bahagian Pendidikan Kesihatan, Kementerian Kesihatan Malaysia (2013). Bahaya Merokok. Retrieved from: http://www.infosihat.gov.my/infosihat/isusemasa/Bahaya%20Merokok.php

2. MyHealth Kementerian Kesihatan Malaysia (2012). Akibat Merokok. Retrieved from: http://www.myhealth.gov.my/v2/index.php/my/akibat-merokok

3.World Health Organisation. (2012). Tobacco. Retrieved from http://www.who.int/mediacentre/factsheets/fs339/en/

4. World Health Organisation. (2012) Tobacco Free Initiative. Retrieved from http://www.who.int/tobacco/mpower/en/

5.Global Adult Tobacco Survey. (2011). GATS FACT SHEET MALAYSIA 2011. Retrieved from http://www.moh.gov.my/images/gallery/Report/GATS_Malaysia.pdf

6. Ministry of Health Malaysia.(2012). The tobacco landscape in Malaysia. Retrieved from http://www.mysihat.gov.my/V2/Promosi/images/stories/PusatMaklumat/ITCReport.pdf

7.MyHealth Kementerian Kesihatan Malaysia (2012). Fakta Mengenai Tembakau & Rokok. Retrieved from: http://www.myhealth.gov.my/v2/index.php/my/remaja/perubahan-tingkah-laku/fakta-mengenai-tembakau-a-merokok

8. Ygoy Health Community.What is smoking. Retrieved from March 28, 2013, from http://smoking.ygoy.com/what-is-smoking/

9. Centers for Disease Control and Prevention. (2012). Smoking and Tobacco Use. Retrieved fromhttp://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/

10.Sara C Hitchman& Geoffrey T Fong. (2011). Gender empowerment and female-to-male smoking prevalence ratios. Bulletin of the World Health Organization

11. Promoting evidence-based strategies to fight the global tobacco epidemic.(2012).Tobacco landscape in Malaysia. ITC Malaysia National Report.Retrieved from http://www.mysihat.gov.my/V2/Promosi/images/stories/PusatMaklumat/ITCReport.pdf

12.Carlos Augusto Monteiro, Tania Maria Cavalcante, ErlyCatarinaMoura, Rafael Moreira Claro, CéliaLandmannSzwarcwald. (2007). Population-based evidence of a strong decline in the prevalence of smokers in Brazil (1989–2003). Bulletin of the World Health Organization

13. QuitSmokingSupport.com. (2013). Have You Ever Wondered What's In a Cigarette? Retrieved from http://www.quitsmokingsupport.com/whatsinit.htm

14. Anjum Memon, Philip M. Moody, Thattaruparambil N. Sugathan, Najwa el-Gerges, Mahmoud al-Bustan, Ahmed al-Shatti, & Hussain al-Jazzaf.(1996).Epidemiology of smoking among Kuwaiti adults: prevalence, characteristics, and attitudes. Bulletin of the World Health Organization, 2000

15. Framework Convention Alliance. (2010). Asia hit hard by smoking epidemic. Retrieved from http://fctc.org/index.php?option=com_content&view=article&id=393:asia-hit-hard-by-smoking-epidemic&catid=236:cessation&Itemid=240

16. The World Bank South Asia Human Development, Health, Nutrition, and Population Unit. Tobacco in South Asia. Retrieved from http://siteresources.worldbank.org/INTETC/Resources/TobaccoinSARfinalOct14.pdf

17.Dato' Dr. R. Mahathevan.(2004). A STUDY ON THE LEVEL OF KNOWLEDGE, ATTITUDE, AND PRACTICE ON SMOKING AMONG FROM 1 AND FORM 2 STUDENTS OF SEKOLAH MENENGAH KEBANGSAAN JERANTUT.

18. Promoting evidence-based strategies to fight the global tobacco epidemic. (2012). Tobacco landscape in Malaysia. ITC Malaysia National Report. Retrieved from http://www.mysihat.gov.my/V2/Promosi/images/stories/PusatMaklumat/ITCReport.pdf

19. Global Adult Tobacco Survey. (2012). Malaysia releases its first Global Adult Tobacco Survey. Retrieved from http://www.wpro.who.int/mediacentre/releases/2012/20120613/en/index.html

20. Pathmanathan. Tobacco Smoking Patterns In A Rural Community In Negeri Sembilan. MED MALAYSIA VOL 29 NO 3 SEPT 1974.

21. Xu Y, Xu S, Wu Q, & Guo Y. (2012). Tobacco Knowledge among Adults in Zhejiang Province, China. Retrieved from: http://www.ncbi.nlm.nih.gov/pubmed/23527122

22. Dao Thi Minh An, Hoang Van Minh, Le Thi Huong, Kim Bao Giang, Le Thi Thanh Xuan, Phan Thi Hai, Pham Quynh Nga & Jason Hsia (2012). Knowledge of the health consequences of tobacco smoking: a cross-sectional survey of Vietnamese adults. Retrieved from: http://www.globalhealthaction.net/index.php/gha/article/view/18707

23. Lim, K.H., Sumarni, M.G., Amal, N.M., Hanjeet, K., Wan Rozita, W.M. & Norhamimah, A.(2009) Tobacco use, knowledge and attitude among Malaysians age 18 and above. *Tropical Biomedicine 26(1): 92–99 (2009)*

24. Anjum Memon. (2000). Epidemiology of smoking among Kuwaiti adults:. *Bulletin of the World Health Organization.*

25. Labib Sharif, A. Q. (2012). Knowledge, attitude and practice of university students toward smoking in Irbid, Jordan. *Journal of Public Health and Epidemiology*

26. Y L Gong, J P Koplan, W Feng, C H Chen, P Zheng, J R Harris. Cigarette smoking in China. Prevalence, characteristics, and attitudes in Minhang District. The Journal Of The American Medical Association (1995)

27. Wilkinson A.V., Shete S., and Prokhorov V. (2008). The moderating role of parental smoking on their children's attitudes toward smoking among a predominantly minority sample: a cross-sectional analysis. *PMC*

28. Lim H.K., Ghazali S.M., Kee C C., Lim K.K., Chan Y.Y., Teh H.C.,Yusoff A.F.M., Kaur G., Zain Z.M,, Mohamad H.K.N and Salleh S. (2013). Epidemiology of smoking among Malaysian adult males: prevalence and associated factors. Retrieved from:

http://www.biomedcentral.com/1471-2458/13/8

29. Jha P., M. Kent Ranson., Son N. Nguyen., and Derek Yach., (2002). Estimates of Global and Regional Smoking Prevalence in 1995, by Age and Sex. *American Journal of Public Health.* 92(6) 1002-1006

30. Ghani W.M.N., Razak I.A., Yang Y.H., Talib N.A., Ikeda N., Axell T., Gupta P.C., Handa Y., Norlida A.,and Rosnah Z. (2012). Factors affecting commencement and cessation of smoking behaviour in Malaysian adults. Retrieved from: http://www.biomedcentral.com/1471-2458/12/207

31. Global Adult Tobacco Survey. The Ministry of Health of Turkey. (2010). Retrieved from: http://www.who.int/tobacco/surveillance/en_tfi_gats_turkey_2009.pdf

32. Hong J.C., Yong H.K., Hee J.J., Kawachi I., (2008). Marital status and smoking in Korea: The influence of gender and age. *Social Science & Medicine, 66(3),* 609-619

33.Centers for Disease Control and Prevention. (2011). Decrease in smoking prevalence. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6005a2.htm

34. Sharker MD. Numan.(2005). Knowledge, attitude and practice on smoking among students and staffs in University Putra Malaysia. Knowledge on Smoking.

35. M Siahpush, A McNeill, D Hammond, and G T Fong (2006). Tobacco Control. Socioeconomic and country variations in knowledge of health risks of tobacco smoking and toxic

constituents of smoke: results from the 2002 International Tobacco Control (ITC) Four Country Survey.

36. Khalil Ahmad Mohmand, Khalid Sharifi and AhadBahram (2011).Social and Health Development Program. Study of Smoking Among Men in Kabul City.

37. Tingzhong Yang, Fuzhong Li, Xiaozhao Yang, Zhenyi Wu, XiangxianFeng, Yibo Wang, Xuhui Wang(2008). Smoking patterns and sociodemographic factors associated with tobacco use among Chinese rural male residents: a descriptive analysis. BMC Public Health.

38. K M Venkat Narayan et. Al. (1996). Prevalence and patterns of smoking in Delhi: cross sectional study. BMJ 1996;312:1576

39. Ali I. Al-Haqwi, H. T. (2010). Knowledge, attitude and practice of tobacco smoking by medical student in Riyadh, Saudi Arabia. *PMC*

JAWATANKUASA ETIKA UNIVERSITI UNTUK
PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,
SELANGOR, MALAYSIA

HELAIAN PENERANGAN RESPONDEN

Sila baca maklumat berikut dengan teliti. Sekiranya anda mempunyai sebarang pertanyaan, sila kemukakan kepada penyelidik.

TAJUK KAJIAN

PENGETAHUAN, SIKAP DAN AMALAN MEROKOK DI KALANGAN DEWASA DI FELDA GUGUSAN RAJA ALIAS 1, JEMPOL NEGERI SEMBILAN 2013

PENGENALAN

Merokok membunuh hampir 6 juta manusia setiap tahun. Dianggarkan setiap 6 saat, seorang akan mati gara- gara rokok. Merokok ialah salah satu punca berlakunya masalah kesihatan dan penyakit kronik seperti serangan jantung, kanser paru paru, angin ahmar dan lain- lain. Rokok mengandungi pelbagai bahan kimia berbahaya seperti nikotin, tar, dan karbon monoksida yang memudaratkan kesihatan. Pengetahuan, sikap dan amalan seseorang tentang merokok dipengaruhi oleh pelbagai faktor seperti umur, etnik, tahap pendidikan, keluarga dan status perkahwinan.

APAKAH YANG PERLU ANDA LAKUKAN?

Anda akan diberikan satu soal selidik dan borang persetujuan responden. Anda diminta mengisi borang persetujuan responden terlebih dahulu sebelum menjawab soal selidik berkenaan. Masa akan diberikan kepada anda untuk menjawab soal selidik ini. Kedua dua borang berkenaan perlu dikembalikan kepada penyelidik setelah selesai diisi.

SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?

Mereka yang tidak boleh menyertai kajian ini ialah:

1) mempunyai masalah mental
2) bukan rakyat Malaysia
3) berumur 19 tahun dan ke bawah

APAKAH FAEDAH MENYERTAI KAJIAN INI?

a) KEPADA ANDA SEBAGAI PENYERTA?

Anda dapat mengenal pasti sejauh mana pengetahuan, sikap dan amalan anda terhadap merokok dan kesan- kesannya kepada kesihatan. Selain itu, anda juga dapat membantu dalam pembangunan program kesedaran yang mampu meningkatkan kesedaran rakyat Malaysia tentang bahaya rokok.

b) KEPADA PENYELIDIK?

Dapat mengetahui tahap pengetahuan, sikap dan amalan di kalangan orang dewasa di kawasan ini serta faktor- faktor yang menyumbang kepadanya. Informasi yang diperoleh dapat membantu dalam membangunkan program kesedaran untuk meningkatkan kesedaran tentang bahaya merokok dan seterusnya mengurangkan bilangan perokok di Malaysia

ADAKAH IA BERISIKO?

Tiada risiko kerana tidak melibatkan prosedur yang berbahaya atau memudaratkan diri. Malah, informasi yang diperolehi tidak akan didedahkan kepada pihak lain.

ADAKAH MAKLUMAT DAN IDENTITI SAYA KEKAL RAHSIA?

Ya, segala maklumat dan identiti anda akan dirahsiakan.

SIAPA YANG SAYA PERLU HUBUNGI SEKIRANYA SAYA MEMPUNYAI SOALAN TAMBAHAN SEMASA MENGIKUTI PENYELIDIKAN INI?

Jika anda mempunyai sebarang soalan tambahan berhubung penyelidikan ini, anda boleh menghubungi:

1) Muhammad Syahir Bin Shaharum (014-8305073)
2) Raba'atul Adawiyah Binti Hasnan Khairi (013-2564956)
3) Soon Hie Jing (016-8079206)

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SELANGOR, MALAYSIA

BORANG PERSETUJUAN RESPONDEN

TAJUK PENYELIDIKAN :

Pengetahuan, sikap dan amalan merokok di kalangan dewasa di FELDA Gugusan Raja Alias 1, Jempol, Negeri Sembilan pada 2013

PENYELIDIK :

1) Muhammad Syahir Bin Shaharum
2) Raba'atul Adawiyah Binti Hasnan Khairi
3) Soon Hie Jing

Saya..... No Kad Pengenalan. .....
beralamat.....
.....dengan ini bersetuju untuk mengambil bahagian secara sukarela dalam menyertai penyelidikan klinikal *(pengajian klinikal/ pengajian soal selidik/ percubaan ubat-ubatan) seperti yang disebut di atas.

Saya telah diberi penjelasan secara menyeluruh mengenai dasar penyelidikan klinikal dari segi metodologi, risiko dan komplikasi (seperti tertulis pada Helaian Penerangan Responden). Saya memahami bahawa saya berhak menarik diri dari penyelidikan ini pada bila-bila masa tanpa memberi sebarang alasan.Saya juga memahami bahawa sebarang maklumat yang berkaitan identiti saya akan dirahsiakan.

Saya* berminat / tidak berminat untuk mengetahui keputusan kajian yang dijalankan ke atas sampel yang diambil dari saya.

*potong yang tidak berkenaan

Tandatangan .....
(*Responden*)

Tarikh .....

Tandatangan .....
(*Saksi*)

Nama :.....

No. K/P: .....

Saya mengesahkan bahawa saya telah menerangkan kepada responden sifat dan tujuan penyelidikan klinikal tersebut di atas.

Tarikh .....

Tandatangan .....

Sila jawab semua soalan dengan menandakan (√) di kotak yang berkenaan atau mengisi jawapan di ruang yang disediakan.

BAHAGIAN A : Data sosiodemografi

1. Umur : _____
2. Tarikh lahir:
   ☐ Hari ☐ Bulan ☐ Tahun
3. Jantina:
   ☐ Lelaki ☐ Perempuan
4. Bangsa:
   ☐ Melayu ☐ Cina ☐ India ☐ Lain-lain. Nyatakan: _____
5. Agama:
   ☐ Islam ☐ Buddha ☐ Hindu ☐ Kristian
   ☐ Lain-lain. Nyatakan:_____
6. Status perkahwinan:
   ☐ Bujang ☐ Berkahwin ☐ ercerai/Janda/Duda
7. Sila nyatakan tahap pendidikan tertinggi anda:
   ☐ Tiada pendidikan formal ☐ Sekolah menengah
   ☐ Sekolah rendah ☐ Kolej/Universit

BAHAGIAN B: Tahap Pengetahuan Merokok

Tandakan **SATU SAHAJA** bagi setiap pilihan jawapan anda.

Bil	Soalan	Betul	Salah	Tidaktahu
8.	Nikotin menyebabkan ketagihan			
9.	Asap rokok mengandungi karsinogen			
10.	Asap rokok tidak memberi kesan kepada orang di sekelilingnya			
11.	Batuk berkahak ialah salah satu tanda masalah pernafasan berkait dengan merokok			
12.	Merokok tidak mempengaruhi pesakit asma			
13.	Wanita mengandung boleh merokok			

14.	Wanita mengandung yang merokok boleh memberi kesan kepada bayi dalam kandungan			
15.	Merokok boleh menyebabkan kanser (e.g: kanser paru-paru)			
16.	Majlis Fatwa Kebangsaan mengharamkan rokok			
17.	Bersenam boleh mengurangkan merokok			
18.	Anda akan dikenakan denda jika anda merokok di tempat makan			
19.	Klinik berhenti merokok terdapat di Malaysia yang memberikan perkhidmatan percuma			

BAHAGIAN C: Sikap terhadap merokok

Arahan: Berikut disenaraikan beberapa penyataan tentang sikap terhadap merokok. Sila nyatakan darjah persetujuan anda mengikut skala lima mata yang diubahsuai daripada skala Likert yang disediakan dengan menandakan (/) pada petak angka paling sesuai di hujung setiap penyataan.

Skala:

1 - Sangat Tidak Setuju (STS)
2 - Tidak Setuju (TS)
3 – Tidak Pasti (TP)
4 - Setuju (S)
5 - Sangat Setuju (SS)

Bil	Penyataan	STS	TS	TP	S	SS
	I. Sikap terhadap merokok					
20.	Merokok memberi tenaga					
21.	Merokok dapat menenangkan hati seseorang					
22.	Merokok mengurangkan tekanan					
23.	Merokok dapat membantu saya mengenali rakan baru					
24.	Saya tidak berasa apa-apa jika ahli keluarga saya adalah perokok					
25.	Saya tidak berasa apa-apa jika ahli keluarga saya merokok di hadapan saya					
26.	Berhenti merokok adalah perkara yang amat susah					
	II. Sikap ke arah dasar kawalan tembakau					
27.	Saya meyokong kempen "Tak Nak merokok."					
28.	Peningkatan harga rokok dapat mengurangkan					

	bilangan perokok.					
29.	Gambar-gambar penyakit yang berkaitan merokok perlu sentiasa diubahkan .					
30.	Merokok harus dilarang di kawasan awam.					
31.	Denda harus diberi kepada sesiapa yang merokok di kawasan awam.					

BAHAGIAN D : Amalan merokok

32. Adakah anda mempunyai ahli keluarga yang merokok?
☐ Ya ☐ Tidak

33. Adakah anda seorang perokok?
☐ Ya ☐ Tidak

Jika ya, sila jawab soalan 34-36.
Jika tidak, sila jawab soalan 37.

34.Apakah perasaan yang mencetuskan anda untuk merokok?
☐ Tekanan ☐ cewaan Ingi ☐ rima dalam kumpulan
☐ Kesedihan ☐ Kemarahan ☐ umpukan perhatian
☐ Kesepian ☐ Lain-lain. Nyatakan:_____

35. Apakah aktiviti-aktiviti anda paling dikaitkan dengan merokok?
☐ Bangun pagi ☐ Selepas makan ☐ Menonton televisyen
☐ Memandu ☐ Alkohol ☐ hat
☐ Lain-lain. Nyatakan:_____

36. Apa yang anda suka tentang merokok?
☐ Rasa rehat ☐ h diterima oleh kawan-kawan
☐ Melegakan tekanan ☐ Rasa hebat
☐ Lain-lain. Nyatakan:_____

37. Adakah anda pernah merokok?

☐ Ya ☐ Tidak

Jika tidak, sila jawab soalan 38.

38.Apakah yang mempengaruhi anda untuk berhenti merokok?

☐ Kesdaran sendiri ☐ Kawan-kawan

☐ Suami/isteri ☐ Nasihat doktor

☐ Lain lain. Nyatakan :_____

Terima kasih kerana sudi meluangkan masa untuk menjawab survey ini. Segala jasa anda sangat dihargai.

Budget Planning

	Amount of money
Proposal	RM 50
Report	RM 20
Binding	RM 10
Hard cover	RM 30
Transportation	RM 20
Total	RM 130

Gantt Chart

Year	2013																										
Month	Mar	Apr					May					Jun				Jul					Aug					Sept	
Week	4	1	2	3	4	5	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	5	1	
Tasks / Activities																											
Proposal preparation																											
Submission of proposal																											
Proposal presentation																											
Questionnaires preparation																											
Submission of questionnaires																											
Pre-testing questionnaires																											
Data collection																											
Data analysis																											
Submission final report																											
Final presentation																											
Submission of log book																											