



UNIVERSITI PUTRA MALAYSIA

**PREVALENCE OF SMOKING AMONG SECONDARY SCHOOL
STUDENTS AND ITS ASSOCIATED FACTORS IN THE DISTRICT OF
KUANTAN, MALAYSIA**

AZLAN BIN HJ. OSMAN

FPSK(M) 2007 13



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By

AZLAN BIN HJ. OSMAN

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
Malaysia, in Fulfilment of the Requirements for the
Degree of Master of Science**

November 2007



Dedicated

To

Dedicated especially to my parents the Late Hj. Osman Bin Baki and Hajah Ramlah Binti Abdul Rahman, parents in law Khadijah, beloved wife Umi Kalsom Binti Ibrahim, beloved daughters Zarith Sufia, Zarith Najiha, beloved sons Muhammad Azzat, Muhammad Akhimullah, Muhammad Asraff and youngest son Muhammad Al Aziq and MARA and all those individuals behind the scenes who make me possible to complete my study successfully



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science.

PREVALENCE OF SMOKING AMONG SECONDARY SCHOOL STUDENTS AND ITS ASSOCIATED FACTORS IN THE DISTRICT OF KUANTAN, MALAYSIA.

By

Azlan Bin Hj. Osman

November 2006

Chairman : Prof. Mohd Yunus bin Abdullah MD. MPH

Faculty : Medicine and Health Sciences, UPM.

The aims of this study were firstly to determine the prevalence of smoking and factors associated with smoking, and secondly to determine the knowledge, attitudes and practices among secondary school in the District of Kuantan, Malaysia.

A cross-sectional study design was used. A stratified proportionate and random size sampling technique was used to select the sample. The lists of 29 selected schools with a population of 10,983 students are registered under the District of Kuantan Education Department served as the sampling frame. By using formula in Krejcie & Morgan (1970), for determining sample a total of 1036 samples was used. Data was collected commencing July 2005 through using a structured pre-



test and actual test questionnaire. The response rate was 86.9%. Out of 900 respondents, 55.4% are males' students and 44.6% are females' students with 94.9% of them being Malays (Muslim). More ever 33.4% of respondents were in Form 1, 33.2% were in Form 2 and 33.4% were Form 3 students.

The overall prevalence of smoking is 43%; with males' and females' proportions at 63.5% and 17.5% respectively. Among the three forms, the Form 3 with 18.6% represents the highest percentage of smoking. The main reason for male students to start smoking is the influence of friends with 60.3% and females 35.7%. Waiting for the bus (32.4%) was the most common occasion for smoking. The prevalence of smoking was significantly associated with age, economic status, race, religions, and family and peer groups smoking habits. Most students had average knowledge on the health risk of smoking. Females and non-smoker had better knowledge on hazards of smoking and possessed more positive attitudes.

In conclusion, smoking prevalence of school students from the district of Kuantan, Malaysia is low in comparison with the national prevalence. However, It stills constitutes a problem among secondary students in spite of their knowledge of its hazard, attitudes and practices. There is a need to implement an anti-smoking program for secondary school students.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Master Sains

**PREVALENS MEROKOK DI KALANGAN PELAJAR SEKOLAH MENENGAH
DAN FAKTOR YANG BERKAITAN DI DAERAH KUANTAN, MALAYSIA.**

Oleh

AZLAN BIN HJ. OSMAN

November 2006

Pengerusi: Professor Mohd Yunus Bin Abdullah, MD. MPH

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Tujuan kajian ini dijalankan adalah untuk mengenalpasti prevalens merokok dan factor yang berkaitan seperti pengetahuan, sikap dan amalan di kalangan pelajar sekolah menengah di daerah Kuantan, Malaysia.

Satu kajian keratan rentas telah diijalankan di kalangan pelajar sekolah menengah di daerah Kuantan dan pemilihan sampel adalah berdasarkan teknik secara rawak dan "stratified proportionate". Sebanyak 29 sekolah menengah telah terpilih dengan populasi pelajar seramai 10,983 yang telah didaftar di Pejabat Pendidikan Daerah Kuantan. Dengan menggunakan saiz sampel kaedah penentuan sampel oleh Krejcie & Morgan. (1970) seramai 1036 sampel telah digunakan. Data telah dikumpul dengan menggunakan borang soal selidik yang telah diuji. Peratusan reponden adalah sebanyak 86.9%. Dari 900 responden ,



55.4% adalah pelajar lelaki sementara 44.6% adalah pelajar perempuan dengan 94.6% adalah dari bangsa Melayu beragama Islam. Juga terdapat responden dari kumpulan pelajar di Tingkatan 1 (33.4%), Tingkatan 2 (33.2%), dan Tingkatan 3 (33.4%).

Prevalens merokok keseluruhannya ialah sebanyak 43.0% dan bagi responden lelaki 63.5% sementara responden perempuan 17.5%. Diantara tingkatan, kumpulan pelajar di Tingkatan 3 mempunyai peratusan tabiat merokok yang tinggi (18.6%) berbanding dengan tingkatan yang lain. Sebanyak (60.3%) responden lelaki dan (35.7%) responden perempuan merokok kerana dipengaruhi oleh rakan. Prevalen merokok didapati berkaitan dengan faktor umur, taraf ekonomi keluarga, bangsa, agama, pengaruh keluarga dan rakan sebaya. Kebanyakan pelajar tersebut mempunyai pengetahuan yang sederhana tentang risiko kesihatan akibat merokok. Pelajar perempuan dan responden yang tidak merokok mempunyai sikap dan pengetahuan yang lebih baik mengenai risiko kesihatan akibat merokok.

Kesimpulannya, menunjukkan bahawa prevalen merokok pelajar sekolah menengah daerah Kuantan, Malaysia lebih rendah dibandingkan dengan prevalens peringkat kebangsaan/nasional. Walau bagaimanapun terdapat masalah besar di kalangan pelajar sekolah menengah daerah Kuantan, Pahang Darul Makmur mengenai pengetahuan tentang kemudahan, sikap dan amalan

merokok. Oleh itu, pelaksanaan program anti merokok perlu diadakan khususnya pelajar-pelajar sekolah.



ACKNOWLEDGEMENT

My greatest and ultimate debt and gratitude to Allah S.W.T the Most Beneficent and the Most Merciful. May He pardon and forgive my weakness and endow me with knowledge and help.

I would like to take this opportunity to express my highest gratitude and thanks, to my supervisor, Professor Dr. Mohd Yunus Bin Abdullah for his time, support, advices, encouragement and consistent guidance throughout the completion of my study. And most of all, for giving me chance to improve myself to be better person in real life.

I am also indebted to members of my supervisory committee and I would like to express my special appreciation to Dr. Hejar Abdul Rahman for her interest and invaluable suggestions that had enabled me to carry on the study successfully.

A word of thanks and very sincere gratitude and appreciation to my other supervisor Dr. Mohd Nasir Bin Mohd Taib , who have insisted on helping me to check my thesis draft, for his time, effort and encouragement and valuable suggestions.



To those who have helped me in the survey, from the Pahang Education Department, Kuantan District Education Office, teachers, counselor and students of secondary schools in the District of Kuantan.

I also wish to express my appreciation to MARA (Majlis Amanah Rakyat) for giving me a chance to persuade my study, my Principal, friends and especially thanks also go Datuk Zamani, for their supports and encouragement.

I am grateful to my family for all the support, encouragement and love they gave me and for raising me the way I am today. Finally I am most grateful to beloved wife Umi Kalsom Binti Ibrahim, sons and daughters for all the patients and understanding, sacrifices, love and prayers. I would like to express my humbly apology to those persons, who helped me but may not find their names in my narration here.

Azlan Hj. Osman



I certify that an Examination Committee has met on to conduct the final examination of Azlan Bin Hj. Osman on his Masters of Science thesis entitled Smoking Habit, Personality and Academic Performance among Secondary School Students in the District of Kuantan, Pahang Darul Makmur. In accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

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DECLARATION

I hereby declare that the thesis on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

AZLAN BIN HJ. OSMAN

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TABLE OF CONTENTS

	Page
DEDICATION	ii
ABSTRACT	iii
ABSTRAK	v
ACKNOWLEDGEMENTS	vii
APPROVAL	ix
DECLARATION	xi
LIST OF TABLES	xiv
LIST OF FIGURES	xv
CHAPTER	
1. INTRODUCTION	
Background	1
Objectives	3
Hypothesis	4
2. LITERATURE REVIEW	
History of Smoking	5
Smoking Status Definitions	7
Trends of Smoking	7
2.3.1. World Trends	8
2.3.2. Current Malaysian Trends	10
2.3.3. Students Trends among Malaysian Students	11
2.4. Smoking Initiation Age	12
2.5. Content of Cigarettes'	12
Factors Related with Smoking	13
2.6.1. Smoking by Age and Sex	14
2.6.2. Peer Influence	14
2.6.3. Family Influence	15
2.6.4. Socio-Economics Status	16
2.6.5. Smoking and educational Level	17
Health Consequences of Smoking	17
2.7.1. Coronary Vascular Diseases	18
2.7.2. Smoking and Lung Cancer	19
2.7.3. Respiratory System Diseases	19
2.7.4. Mental Problem	20
2.7.5. Appearance Related to Smoking	21
2.8. Knowledge and Understanding of the health hazards	22
2.9. School health Program	22



3	METHODOLGY	
3.1.	Study Location	24
3.2.	Study Design	25
3.3.	Study Population	25
	3.3.1. Sample Frame	25
	3.3.2. Sample Size	25
3.4	Data Collection	29
3.5	Inclusion and Exclusion Criteria	30
3.6.	Ethical Issue and Consent	31
3.7.	Instruments	31
	3.7.1. Demographic and General Information	31
	3.7.2. Knowledge and Attitude about Smoking	31
	3.7.3. Smoking Behaviors	32
3.8.	Pre Testing of the Questionnaire	32
	3.8.1. Reliability	33
	3.8.2. Validity	33
3.9.	Pre Testing Result	33
3.10.	Analysis of Data	35
3.11.	Significance of the Study	35
3.12.	Definition of Terms	36
4	RESULTS	
4.1.	Response Rate	38
4.2.	Demographic Distribution	42
4.3.	Smoking Prevalence	42
4.4.	Associated Factors of Smoking	46
4.5.	Knowledge on Smoking	56
4.6.	Attitude on Smoking	65
4.7.	Associated Factors of Smoking	66
5	DISCUSION	68
6	SUMMARY AND CONCLUSION	78
	REFERENCES	R.1
	APPENDICES	A.1
	BIODATA OF THE AUTHOR	B.1



LIST OF TABLE

Table		Page
2.1	World Smoking Prevalence	10
2.2	Smoking Prevalence by Educational Levels in Malaysia	17
3.1	Expected Sample	26
3.2	Distribution of sample size within forms	26
3.3	Sample size from schools selected	29
3.4	Pre Testing Reliability Test Result	34
3.5	Reliability Test Result after Study Survey	34
4.1	Response Rates According to Schools	38
4.2	Demographic Distribution of Respondents	39
4.3	Respondents from school in the district of Kuantan	41
4.4	Age group and Form of school students by gender	41
4.5	Smoking prevalence male and female students	43
4.6	Smoking prevalence by age group	44
4.7	Smoking prevalence between forms	45
4.8	Smoking prevalence by ethnics	45
4.9	Smoking prevalence by religion	46
4.10	Smoking prevalence by age	46
4.11	Father's occupational level of respondents	47
4.12	Education levels of respondents father	48
4.13	Education levels of respondents mother	48
4.14	Total family income of respondents	49
4.15	Reasons influenced for smoking of male and female school students	50
4.16	Tobacco product use by male and female school students In smoking habit	50
4.17	Favorites' place for smoking	51
4.18	Male and female school students smoke with	52
4.19	Daily consumption of cigarettes	52
4.20	Father's and mother's attitude towards smoking habit	53
4.21	Family members who smokes	54
4.22	Reasons for failed to quit smoking by gender	55
4.23	Reasons for not smoking by gender	56
4.24	Knowledge on smoking	56
4.25	Distribution of respondents knowledge	57
4.26	Comparison of knowledge by sex	57
4.27	Knowledge between smoker and non-smoker on smoking	58
4.28	Knowledge on breathing smoky air harms to babies and young children	59
4.29	Distribution of respondents knowledge on nicotine in cigarettes can cause smoking addiction	59



4.30	Distribution of knowledge on smoking in certain places is against the law	60
4.31	Distribution of knowledge on smoking is bad if you smoke a lot everyday	60
4.32	Distribution of respondents knowledge on smokers usually dies younger than nonsmokers	61
4.33	Distribution of respondents knowledge on almost everyone who gets lung cancer has been a regular smoker	62
4.34	Distribution of respondents knowledge on woman who is Going to have a baby could harm the baby if she smokes	62
4.35	Distribution of knowledge on smoking decreases heart rate	63
4.36	Respondent knowledge on smoking for many years	64
4.37	Distribution of respondents' knowledge on if you smoke you are more likely to cough	64
4.38	Distribution of respondents knowledge on smoking can lead to addiction	65
4.39	Median attitude score for respondents	66
4.40	Logistic Regression Analysis Showing Factors Associated With Smoking	68



LIST OF FIGURE

Figure		Page
3.1	Location district of Kuantan, Pahang Darul Makmur	24
3.2	Sampling method taken from schools	28
4.1	Races of respondents	42



CHAPTER I

INTRODUCTION

1.1. Background

Smoking is a habit that is difficult to break once established. It has become a complex global public health problem and a major health-risk factor linked with the development of cancer, heart disease, chronic respiratory diseases and diabetes (WHO 2004a). It is responsible for the largest preventable cause of death in the world. Each day more than 13,000 people die prematurely because of tobacco use (CDC, 2000). Cigarette smoking has become not only a national social problem, but a global one also. Smoking is expected to kill 4 million people in the next 12 months, and by 2030, it will kill 10 million people a year, which is more than any other single cause of death. Seven million of these deaths will occur in low-income and middle-income countries (World Bank, 1999; CDC, 2000).

Many epidemiological investigations have shown that cigarette smoking is an important cause of mortality and morbidity. Numerous studies reveal that smoking prevalence has remained in the United States of America at 23% since 1993 (Etter, 2004; Fiore, 2003; Giovino, 1994). In fact, smoking prevalence rates is increasing in low-income, less-educated, minority, and younger individuals (WHO, 1999) Smoking continues to pose a significant public health in France with over 50% of the population being regular or occasional smokers even though it had declined in recent decades (Sasco et al., 2003). According to Inoue et al., (2004), the prevalence of current



smokers among Japanese has remained 52.2% in males, and is increasing among the younger females.

In Malaysia, prevalence of adult smokers aged 18 years and above has been increasing; currently 49% of all adult males and 5% of all adult females are smokers. This smoking prevalence increasing trends was more among females than males (Ministry of Health Malaysia, 2003) There were about 5 million smokers consuming an average of 14 cigarettes per day in Malaysia (Ministry of Health, Malaysia, 2003). Smoking is responsible for one in every five deaths in Malaysia and about 10,000 people die each year in Malaysia (Ministry of Health Malaysia, 2003)

Schooling is compulsory in Malaysia. A child enters school at the age of 7 and attends primary school for six years, after which he enters lower secondary school (Form 1-3). At the end of Form 3 there is a qualifying examination, and proceed to upper secondary schools (Form 4-5). Therefore, schooling is the major activity of most children between the age of 7 and 17 years and school is the place where most of them socialize outside their home environment for the first time. A school is the place where much knowledge is obtained, attitude is formed and sometimes habits are chosen. Studies have demonstrated that the secondary school age is a critical period in the formation of the smoking habit.(Sufean 2004).

Most smokers start smoking during their adolescence or early adult years. The earlier they start to smoke, the more likely they are to become regular

smokers (CDC, 1994). Those concerned about health, welfare and education of young people should be anxious to find ways to prevent them from taking up this habit. The prevalence of smoking among students is increasing and is worrying especially the government itself. A study by Shamsuddin & Haris (2000). on current smoking habits among schoolchildren in Kota Bharu, Kelantan found that one out of every three 15 to 16 year old students are smokers.

Cardiovascular disease has been the number one killer in Malaysia since 1980 (Nainanu, 1993), it was mostly due to life style and smoking habit. However, currently there is inadequate evidence on the prevalence and factors associated with smoking; and, as well as knowledge about consequences and health awareness among school students in Malaysia.

1.2. Objectives

1.2.1 General

To determine the prevalence and other factors associated with smoking among secondary school students in the district of Kuantan, Malaysia.

1.2.2 Specific

- i) To determine the prevalence of smoking among the lower secondary school students in the district of Kuantan, Malaysia.
- ii) To determine the prevalence of smoking between males and females school students at the lower secondary school in the district of Kuantan, Malaysia.

- iii) To determine the association between smoking and age, sex, race, religion, education, total family income level, peer and family history among secondary school students who smoke in the district of Kuantan, Malaysia.
- iv) To determine the knowledge and attitudes on health effect of smoking among the lower secondary school students in the district of Kuantan, Malaysia.

1.3. Hypothesis

- i) There is an association between smoking age and forms.
- ii) There is an association between smoking and sex.
- iii) There is an association between smoking and religion.
- iv) There is an association between smoking and parent's educational attainment.
- v) There is an association between smoking and total family income level.
- vi) There is an association between smoking and peer and family smoking history.
- vii) There is association between knowledge and attitudes with smoking..

CHAPTER II

LITERATURE REVIEW

2.1. History of Tobacco Use

Tobacco was first used in Central and South America for religious ceremonies and has been consumed for hundred of years. (History of Tobacco 2003). The indigenous Arawak Indians of the Amazon also used tobacco in their religious rituals were using tobacco in the form of cigars, chewing tobacco, snuff and pipe tobacco. The group colonized the Bahamas, which were discovered by Columbus on 12 October in 1492. They offered highly prized gift to Christopher Columbus as fruit, wooden spears, and certain dried leaves that gave off a distinct fragrance.

In Europe, tobacco became popular among the Europeans during the sixteenth century, but tobacco could not grow in Europe because of its cold climate. Due to good market demands, Spanish, Portuguese, and Dutch traders brought tobacco back to Europe from different parts of the world. In those days, tobacco was consumed in several ways, sniffing, tobacco chewing, and pipe smoking. Through experimentation and ingenuity, the Europeans refined the ways of tobacco consumptions; they cured the tobacco leaves, added some chemicals to improve the flavor, designed fancy pipes and filters, and invented the leave shredder and cigarette paper. Processed tobacco and related smoking gadgets were marketed throughout Europe and to countries in other continents where the Europeans traded.



The map of the tobacco included the eastern shores of North America, where New Englanders of the eighteenth-century opened up many tobacco plantations, particularly in the state of Virginia. America became the largest cigarette producer in the world, and the Americans were themselves the biggest cigarettes consumers (WHO, 2002).

The invention of cigarette-making machines in 1881 in the U.S.A led to mass production and mass consumption of tobacco in the form of cigarettes from continent to continent. By 1930, about 30 million Americans smoked cigarettes. Viewed as a social fashion, hundreds of millions of people around the world later consumed the famous Virginia-formulated cigarettes, and apparently, the Second World War seemed to be instrumental in spreading the idea of smoking American manufactured cigarettes in many countries.

Today, there are about a billion male cigarette smokers in the world, 35% of them living in developed countries and 50% in developing countries. China alone has 300 million male smokers, the largest potential market for cigarettes. Cigarette smoking and its health consequences are primarily 20th-century phenomena. At the start of the century, cigarette was rare but increased rapidly, and became a global epidemic. (CDC, 1999). Smoking is a highly addictive behavior that is often initiated during adolescent years and has been recognized as an important preventable morbidity and premature death (Fly et al., 1994 cited in Kim, 2004)

