

Prevalence and Reasons for Smoking among Upper Secondary Schoolboys in Hulu Langat, Malaysia

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ABSTRAK

Merokok dikalangan remaja adalah suatu masalah kesihatan yang perlu diatasi kerana ia mengakibatkan berbagai penyakit kronik dan meningkatkan mortaliti. Ia juga berkaitan rapat dengan tabiat-tabiat berisiko tinggi lain di kalangan remaja. Ini adalah satu kajian keratan rentas untuk menentukan prevalens merokok di kalangan pelajar-pelajar lelaki Tingkatan 4 dan 5 dan sebab-sebab mereka merokok. Pelajar-pelajar dari tiga buah sekolah menengah di Daerah Hulu Langat di pilih secara rawak. Mereka yang bersetuju mengambil bahagian diberi borang soal-selidik. Sejumlah 343 pelajar terpilih dan prevalens merokok dikalangan mereka ialah 37%. Walaupun majoriti daripada mereka mula merokok dalam lingkungan umur 13-15 tahun, 21% daripada mereka mula merokok dibawah umur 12 tahun (semasa sekolah rendah). Terdapat perhubungan signifikan antara merokok dikalangan remaja dan ahli keluarga mereka yang merokok ($p < 0.05$). Dua sebab utama mereka mula merokok ialah 'sikap ingin tahu' (69%) dan pengaruh kawan (51%). Walaubagaimana pun sebab utama mereka meneruskan tabiat merokok ialah 'tekanan mental' (70%) dan ketagihan (49%). Faktor utama yang menyebabkan mereka menghadapi tekanan mental adalah 'kerja sekolah'. Kesimpulannya, program anti-merokok perlu di mulakan awal di sekolah rendah dan remaja-remaja perlu diajar cara-cara menghadapi tekanan mental dan menyelesaikan masalah dengan efektif.

Kata kunci: merokok, remaja, sekolah menengah, sebab merokok.

ABSTRACT

Smoking in adolescence is a great health concern as it is related to many chronic diseases and mortality in later life. It is also associated with other high-risk behaviours among adolescents. The objective of this study was to determine the prevalence and reasons for smoking among upper secondary schoolboys. This was a cross-sectional study conducted among Form 4 and Form 5 students. Three schools in the District of Hulu Langat were identified and students from these schools were selected randomly. The students were given a self-administered questionnaire. A total of 343 students were included in the study. The prevalence of smoking among the schoolboys was 37%. Although the majority of them initiated smoking between 13-15 years old (67%), 21% of them began smoking below 12

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years of age (primary school). There was a significant association between adolescent smoking and smoking among family members ($p < 0.05$). The common reasons reported for initiating smoking were curiosity (69%) and peer pressure (51%). However, the common reasons for continuing smoking were stress (70%) and addiction (49%). Schoolwork was reported as the most important factor which contributed to their stress. Smoking prevention programmes should begin early in primary schools. Adolescents should be educated on effective coping strategies in managing stress and learning to be assertive.

Keywords: smoking, adolescents, secondary school, reasons.

INTRODUCTION

Smoking is a major public health problem in the developing world. Rapid socio-economic development in developing countries is accompanied by consistent increase in tobacco consumption (WHO 1996). In the 1990s, a world total of three million people died each year from tobacco induced diseases (Anthony et al. 1997).

Over 75% of adult smokers reported that their first smoking experience began during adolescence (Anthony et al. 1994). Smoking is a great concern among adolescents as it is related to many chronic diseases and mortality which become evident only after two or three decades of tobacco use. It is also associated with other risky behaviours such as other drug abuse, truancy and physical fighting (Epps et al. 1995, Kulig et al. 2005). Once a regular smoking pattern is established, it is difficult to cease, with onset during adolescence being highly predictive of lifetime use (Heischouer et al. 1997).

There are not many studies done in Malaysia previously which looked into the reasons for smoking and the contributing factors influencing it. Thus, the objective of this study was to determine the prevalence of smoking among upper secondary schoolboys, reasons for smoking and the contributing factors to the commonest reason given. The findings in this study could be used to improve strategies in smoking prevention programmes for adolescent schoolboys.

SUBJECTS AND METHODS

This was a cross-sectional study conducted among upper secondary schoolboys (Form 4 and Form 5 students). Three secondary schools in the District of Hulu Langat, Selangor were selected randomly. From each school, an equal number of students was chosen randomly from the class registration lists. Form 4 and form 5 students from all ethnicities were included in the study. Consent was obtained from the students and their parents. Those who refused to give consent to participate in the study were excluded. The students were then given a self-administered questionnaire. The questionnaire was pre-tested and consisted of questions regarding socio-demographic characteristics, age at which smoking was initiated, smoking among family members as well as reasons for initiating and continuing smoking. Non-smokers were those who never smoke for at least one month while smokers are those who smoked at least one cigarette for the preceding one month (Khadijah et al. 2000). Data entry and analysis was done using Epi-info 2002. A confidence interval of 95% and p value of less than 0.05 were considered as significant.

RESULTS

A total of 343 students were included in the study. The respondents comprised 57% Malays, 36% Chinese and 6.7% Indians. Their ages ranged between 16 and 18

years old; 57% of them were aged sixteen years, 40% seventeen years and 3% eighteen years. The majority of them were from families with a family income ranging from RM500 to RM2000 (66%).

The prevalence of smoking among the boys was 37%. Although the majority of them initiated smoking at 13 to 15 years old (66%), 21% of them began smoking during primary school (≤ 12 years old) (Table 1). Among the smokers, the majority of them smoked more than 10 cigarettes per day (57%) (Table 1). There was a significant association between adolescent smoking and smoking among family members ($p < 0.05$).

Table 1: Smoking habits of the respondents who smoked

Variable	Number of patients (N = 127)*	Percentage (%)
Age of initiating smoking		
≤ 12 years	27	21
13-15 years	84	66
16 years	16	13
Number of cigarettes smoked (per day)		
More than 10 sticks	65	51
5-10 sticks	38	30
Less than 5 sticks	24	19
Type of cigarettes smoked		
Branded cigarette	114	90
Hand-rolled in leaves	13	10
Smoking family member		
Yes	90	71
No	37	29

p value < 0.05

* Number of respondents who smoked was 127 (prevalence =37%)

The common reasons given by the respondents for initiating smoking and continuing smoking varied widely. The most frequent reasons for initiating smoking were curiosity (69.3%) and peer pressure (51%) while stress (70%) was reported as the commonest reason for continuing smoking followed by addiction (49%) (Table 2). The students reported

schoolwork as the most important factor which contributed to their stress (Table 2).

Table 2: Reasons for smoking

	Number of patients (N=127)*	Percentage (%)
Reasons for initiating smoking		
Curiosity	88	69.3
Peer pressure	65	51.2
Stress	53	41.7
Feel more mature	32	25.2
Reasons for continuing smoking		
Stress	89**	70.0
Addiction	62	48.8
Keep awake (at night)	52	40.9
Boredom	48	37.8
Peer pressure	46	36.2
Contributing factors to stress (N =89)**		
Schoolwork	42	47.2
Peers	31	35.4
Girlfriends	26	30.7
Teachers	23	26.0
Parents	23	26.0
Other family members	22	25.2

The respondents were allowed to give more than one answer.

* Total number of respondents who smoked was 127.

** Number of respondents who gave the reason 'stress' for continuing smoking = 89.

The majority of cigarette smokers initiate smoking during their adolescence (Anthony et al. 1994, Heischouer 1997). The prevalence of smoking among adolescent schoolboys in Asian countries ranges from 3% to 30% in the 1980s (Thambipillay 1985, Emmanuel et al.1990, Stone et al. 1992, Habibul et al. 1998). The National Health Morbidity Survey done in Malaysia reported an increasing trend in the prevalence of smoking among adults from 39% in 1986 (MOH Malaysia 1986) to 49% in 1996 (MOH Malaysia 1996). However, data on the prevalence of smoking among adolescents was not available. In 1997, a study done in Kota Bharu, Kelantan reported the prevalence of cigarette smoking among male secondary students as 33.2% (Khadijah et al. 2000). In the present study, the prevalence of smoking

among male upper secondary school students was 37%. Although the setting in the study by Khadijah et al (2000) was different, there may be a rising trend in cigarette smoking among adolescent boys; thus it is essential for health care providers to address this issue and improve the preventive intervention strategies against smoking.

This study showed that 21% of the adolescent boys who smoked initiated smoking at 12 years of age or younger (during primary school). This indicates that education regarding smoking, emphasizing on its negative consequences, should begin early in the primary schools. It should be part of the primary school curriculum and students should be taught ways to say "no" to tobacco smoking. Many studies have reported that those who started smoking early in life have greater difficulty in stopping. (Epps et al. 1995, Heischober et al. 1997, Bruvold et al 1993, Siquera 2000). They are also more likely to become heavy smokers and are at higher risk of developing smoking-related diseases than those who begin at a later age (MOH Malaysia 1996, Anda et al. 1999). The children who started smoking at an earlier age may be due to earlier exposure to tobacco environment either at home, school or in the community. Electronic media, for example television and movies, also have great influence on children. It is the responsibility of parents and other adults to supervise and educate children that smoking is an unfavourable habit which should not be attempted.

Smoking habits among adolescents had been shown to be influenced by parents and other adult role models who smoke (Heischober et al. 1997, Bruvold et al. 1997). This study also showed a significant association between adolescent smoking and smoking among family members. Thus, health practitioners should increase awareness among parents that they are important role models for their children and should ensure that they do not influence their children towards smoking.

In this study, the most frequent reasons given by the adolescents for initiating smoking were curiosity (69%) and peer pressure (51%). Many adolescents begin smoking to fit into the society or peer group (Heischober et al. 1997, MOH Malaysia 1996). Adolescents tend to experiment smoking together and by doing so they believe that they are more accepted by their peers (Reininger et al. 2005). It is important that health professionals understand the psychosocial developmental process in adolescence. During adolescence, there is lack of impulse control and there is an increase desire to experiment new experiences; thus the inclination to risk-taking behaviours such as smoking. This explains the commonest reason reported by the respondents for initiating smoking which was curiosity. In addition, during the middle adolescence stage, the role of peer groups becomes more evident and they are susceptible to peer pressure. Adolescents tend to be intensely involved in their peer subculture by conforming with peer values and codes (Reininger et al. 2005). They should learn to be assertive to say 'no' to smoking and influence peers against smoking. Other common reasons given by the adolescents for initiating smoking were stress (42%) and 'feel more mature' (25%). Adolescents should be educated that smoking cigarettes is not the solution to alleviate stress or solve their problems but it can lead to many other negative consequences. 'Feel more mature' is an expected response by adolescents as they are in the process of forming an identity. They are frequently exposed to smoking adults and subconsciously identify smoking with maturity which is a misperception. Thus it is important to expose adolescents to better adult role-models and a healthier community.

The commonest reason given by the adolescents in this study for continuing smoking was stress (70%). The main contributing factors to stress reported by them were schoolwork and peers.

Demands from schoolwork such as heavy homework assignments, difficulty in understanding lessons, getting poor grades and high parental expectations contribute to the stress in many adolescents. In addition, peers play an important role in adolescence. Misunderstanding among friends, peer pressure and the need to be accepted by friends are stressors to adolescents. Stress can eventually lead to anxiety or depression in extreme situations. Hence, it is essential that adolescents learn how to deal with stress effectively instead of ignoring it or indulging in bad habits such as cigarette smoking or other substance abuse.

The significance of good coping skills among adolescents is of utmost importance in the planning for anti-smoking campaigns. Current strategies to prevent adolescents from engaging in high risk behaviours include a focus on building protective factors such as strong family relationships, religious beliefs, parental monitoring, adult role models and engagement in structured activities (Reininger et al. 2005). Effective treatment strategies to cease smoking must take place within the context of the youth's normal daily life and resist all the factors that promote continuance (Bruvold et al. 1993). Hwang (2005) examined 65 adolescent psychosocial smoking prevention programmes. They reported that knowledge had the highest short-term effect (less than a year) but rapidly decreased in the long term. Behavioural effect was the most meaningful prevention programme as it persists over a three year period. They also reported that smoking reduction rates were increased by using either cognitive behaviour or life skills programme modalities in a school-community-incorporated programme setting (Hwang et al. 2005).

There are limitations in this study. This study included only three secondary schools in a single area. Hence the findings in this study cannot be generalized to represent the country. There may be recall bias among the adolescents while

answering the questionnaire and some may not have revealed the true facts of their smoking behaviour.

CONCLUSION

Early smoking intervention strategies are necessary as younger boys are now involved in smoking. The initiatives should begin early in primary school to reduce the prevalence of smoking among adolescents. Educating the adolescents on being assertive and acquiring effective coping strategies in managing stress are important issues to be included in the preventive strategies. Health care providers should take every opportunity to screen smoking among their adolescent patients. They should incorporate cigarette smoking prevention into daily practice, acquire the necessary skills to identify young people at risk of smoking and provide assessment, intervention and treatment when necessary.

REFERENCES

- Anda, R.F., Croft, J.B., Felitti, V.J., Nordenberg, D., Giles, W.H., Williamson, D.F., Giovino, G.A. Adverse Childhood Experiences and Smoking during Adolescence and Adulthood. *JAMA* 1999; 282 (17): 1652 – 1658. .
- Anthony, G., Janet S., Leo, H.. Family Life and smoking in adolescence. *Soc Sci. Med* 1997; 44 (1): 93-101.
- Anthony, G., Janet S., Leo, H. Social class and adolescent smoking behaviour. *Soc Sci. Med.* 1994; 38 (10): 1449-1460.
- Bruvold ,W.H.. A meta-analysis of adolescent smoking prevention programmes. *Am. J. Public Health* 1993; 83: 872 – 878.
- Emmanuel, S.C., Ho, C.K., Chen, A.J.. Cigarette smoking among school children in Singapore. *Singapore Med. J.* 1990; 31: 211-216.
- Epps, R.P., Manley, M.W., Glynn, T.J. Tobacco use among adolescents: strategies for prevention. *Paediatric Clin North Am* 1995; 42: 389 – 395.
- Habibul, A., Underwood, P., Atkinson, D.. Smoking among male teenagers in Dhaka, Bangladesh. *Preventive Med* 1998; 27: 70-76.
- Heischouer, B.S., Hofman, A.D. 1997 Substance abuse. In *Adolescent Medicine*, edited by Hofmann A.D., Greydanus D. E., 663-682 Third Edition, USA: Appleton & Lange.

- Hwang, M.S. Adolescent smoking was reduced by cognitive behaviour or life skill programmes. *Biotech Weekly* 2005; 2: 632.
- Khadijah, S., Abdul Haris, M. Family influence on current smoking habits among secondary school children in Kota Bharu, Kelantan. *Singapore Med J* 2000; 41(4): 167-171.
- Kulig, J.W., Joffe, A., Behnke, M., et al. Tobacco, Alcohol, and other drugs: The Role of the Pediatrician in Prevention, Identification and Management of Substance Abuse. *Pediatrics* 2005; 115 (3): 816-822.
- Ministry of Health Malaysia. *National Health and Morbidity Survey 1 Report*. Malaysia 1986: Institute of Public Health.
- Ministry of Health Malaysia. *National Health and Morbidity Survey 2 Report*. Malaysia 1996: Institute of Public Health.
- Reininger, B. M., Evans, E., Griffin, S.F, et al. Predicting Adolescent Risk Behaviours Based on an Ecological Framework and Assets. *Am J Health Behaviour* 2005; 29(2): 150-161.
- Siqueira, L., Daib, M. Adolescents becoming Smokers: The role of stress and coping method. *J Adolescent Health* 2000; 27(6): 399-408
- Stone, S.L., Kristeller, J.L. Attitudes of Adolescents towards Smoking Cessation. *Preventive Med.* 1992; 8(4): 221-225.
- Thambypillai, V. Smoking among urban Malaysian school children. *Soc. Science Med.* 1985; 21(7): 819-823.
- World Health Organisation. Evaluating tobacco control behaviour: Experiences and guiding principles 1996: 1-8.