

Smoking Among University Students: A Comparative Study Between Malaysian Students in Malaysia and Australia

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Summary

A total of 209 randomly selected Malaysian university students (128 from Universiti Kebangsaan Malaysia, 81 from the University of New South Wales) completed a self-filled questionnaire enquiring about their smoking behaviour and psychosocial characteristics. The prevalence of smoking was 26.6 per cent among students in Malaysia and 18.8 per cent among students in Australia (average 23.4%). Both samples have similar patterns in terms of age of starting smoking, time of the day when they smoked, family and peer history of smoking, and whether or not they inhaled deeply during smoking. The smokers tend to be male, studying beyond the first year, staying with peers outside the hostel, having financial sources other than a scholarship, and abnormal mental health score. However, the smokers from the Australian samples were noted to smoke less and made fewer attempts at quitting the habit.

Key Words: Smoking behaviour, University student, Cross-sectional study, Malaysia

Introduction

The strong association between cigarette smoking and increased morbidity and mortality from respiratory, cardiovascular and neoplastic diseases is well documented^{1,2}. The benefits of not smoking or quitting smoking in terms of reducing excess morbidity and mortality due to smoking have been established. Rapid socio-economic developments in developing countries including Malaysia, is accompanied by consistent increase in tobacco consumption³⁻⁵.

Cigarette smoking has gradually been accepted as part of 'modern culture'. Small scale community studies⁵⁻⁶ and the 1987 nationwide survey conducted by the Ministry of Health⁵ have reported a smoking prevalence of 40 to 50 per cent. Studies among university students in the 1970's have found a smoking prevalence of about 25 per cent⁶.

In 1990, about 60,000 Malaysian students enrolled for various courses at the local universities, and another 52,000 at universities overseas⁵. Being potential leaders and opinion makers of the

country, it is important to determine their perception regarding important issues including health and smoking in particular.

Subjects and Method

A cross-sectional study was conducted among Malaysian students in a Malaysian university (Universiti Kebangsaan Malaysia) and those in an Australian university (University of New South Wales). The study was conducted between March 1992 and June 1992.

Table I
Socio-demographic characteristics of the students

Characteristics	Students in Malaysia (n = 128)	Students in Australia (n = 81)	Total (n = 209)	Sig
1. Gender				
Male	105	61	166	
Female	23	20	43	NS
2. Ethnic				
Malay	124	60	184	
Others	4	21	25	S
3. Marital status				
Single	126	74	200	
Married	2	7	9	S
4. Field of study				
Medicine	50	10	60	
Others	78	71	149	S
5. Year of study				
First year	11	42	53	
Second year and above	117	39	156	S
6. Residence				
Hostel	87	47	134	
Others	41	34	75	NS
7. Financial source				
Scholarship	128	21	179	
Others	0	30	30	S
8. Mean age (years)	22.2 (SD 1.5)	21.3 (SD 3.6)	NS	

Note: Sig = Significance (at 0.05 level)

S = Significant

NS = Not Significant

The students were selected randomly based on their respective academic fields and their year of study. They were requested to fill personally handed self-completed questionnaires addressing their socio-demographic, mental health and smoking habits.

Mental health status was determined by a 25-item self-rated questionnaire (SRQ-25)⁸⁻⁹. Total score of seven was used as the cut-off point suggestive of abnormal mental health status. Smokers were defined as those who reported smoking regularly each day. Ex-smokers were those who quit smoking for at least 12 months prior to the study. The data was analysed by constructing contingency tables and performing the Chi-square test. A p value of less than 0.05 was taken as the level for statistical significance.

Results

Two hundred and nine students completed the questionnaires; 128 students (61.2%) were studying in Malaysia, and 81 students (38.8%) were studying in Australia. The response rate was 71.1 per cent for the students in Malaysia and 67.5 per cent for the students in Australia. The majority of the samples were males (79.4%), Malay in ethnic group (88.0%), attending courses other than medicine (71.3%), and were in year two or beyond in their studies (74.6%). Their socio-demographic distribution is shown in Table I.

Smoking status

The overall smoking rate was 23.4 per cent. The rate was slightly higher among students in Malaysia (26.6%) compared to those in Australia (18.5%) but this was not statistically significant ($p = 0.1811$) (Fig 1). Smoking was significantly more common among males in both samples (Table II). About 6.2 per cent of the subjects in both samples was ex-smokers. The majority of the subjects (46.9%) smoked between 10 and 19 cigarettes per day (Figure 2). Heavy smokers (smoking 20 or more cigarettes per day) constituted about 14.3 per cent of the sample. Students in Australia smoked significantly less number of cigarettes per day as compared to those in Malaysia (Chi-squared = 6.05, d.f. = 2, $p = 0.048$).

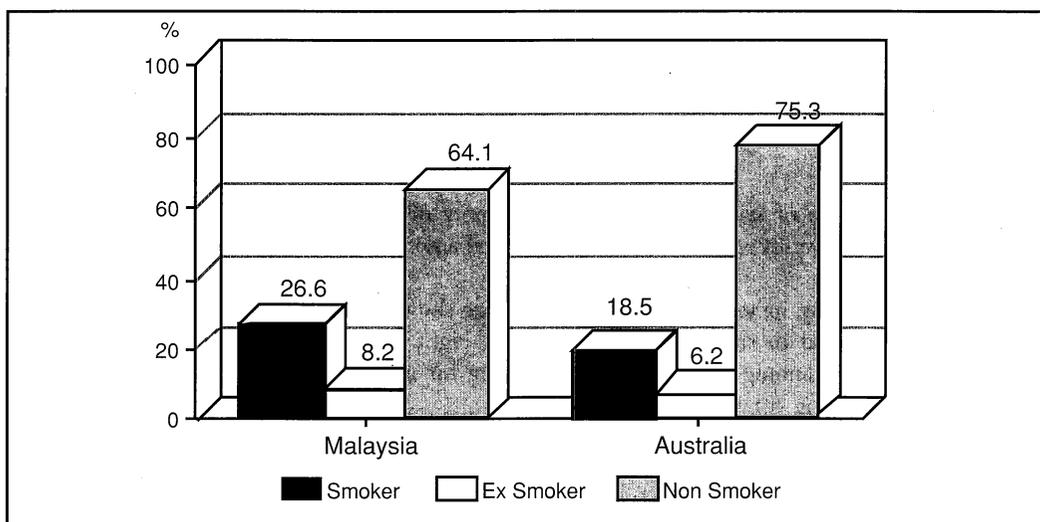


Fig. 1: Smoking prevalence among Malaysian students in Malaysia and Australia

Table II
Demographic and psychosocial factors and smoking behaviour

Factors	Non smoker (n = 160)	Smoker (n = 49)	p value
1. Gender			
Male	118	48	
Female	42	1	0.0000 S
2. Nation			
Malaysia	94	34	
Australia	66	15	0.1811 NS
3. Ethnic group			
Malay	140	44	
Others	20	5	0.8558 NS
4. Year of study			
Second and above	109	47	
First year	51	2	0.0000 S
5. Field of study			
Medicine	48	12	
Others	112	37	0.5717 NS
6. Residence			
Hostels	109	25	
Others	51	24	0.0440 S
7. Mental Health Score			
0 to 6	124	27	
7 and more	35	22	0.0031 S

S = Significant NS = Not Significant

Figure 3 shows the age of starting smoking. The majority of the smokers (69.7%) started smoking before they entered university. A similar pattern was noted among samples from Malaysia and Australia.

The pattern of smoking in terms of time of the day is shown in Table IV. Most of the smokers in both samples tended to smoke after meals and at night. On the average, 3.5 more cigarettes were smoked at night among those who were studying for their examinations, compared to those who were not preparing for examinations.

The smokers were also asked whether they regularly inhaled deeply during smoking. In our study it was found that deep inhalation during smoking is a common feature among the smokers both in Malaysia and in Australia. About 70.6 per cent of the smokers from the Malaysian sample and 60.0 per cent from the Australian sample claimed that they regularly inhaled deeply during smoking.

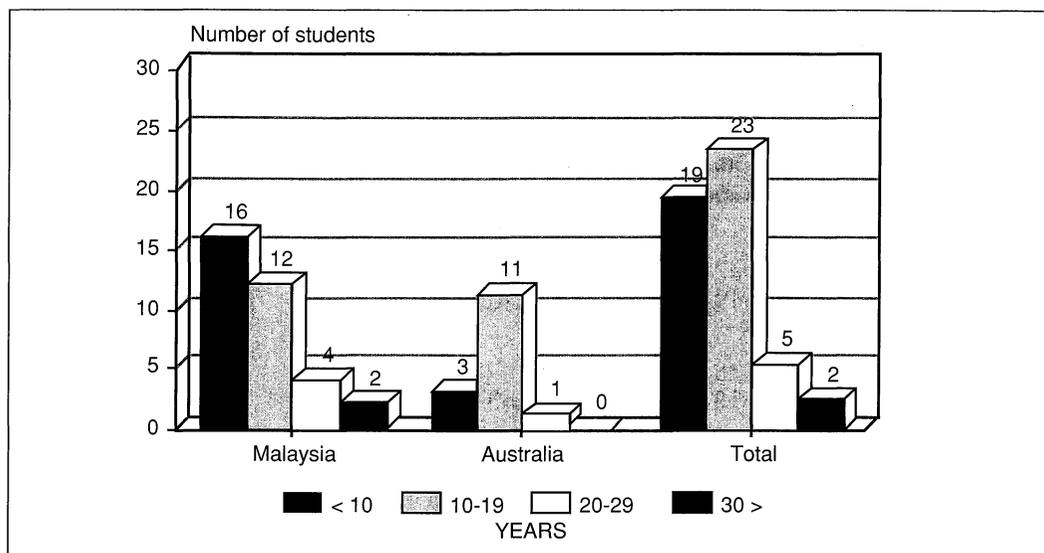


Fig. 2: Number of cigarettes smoked per day

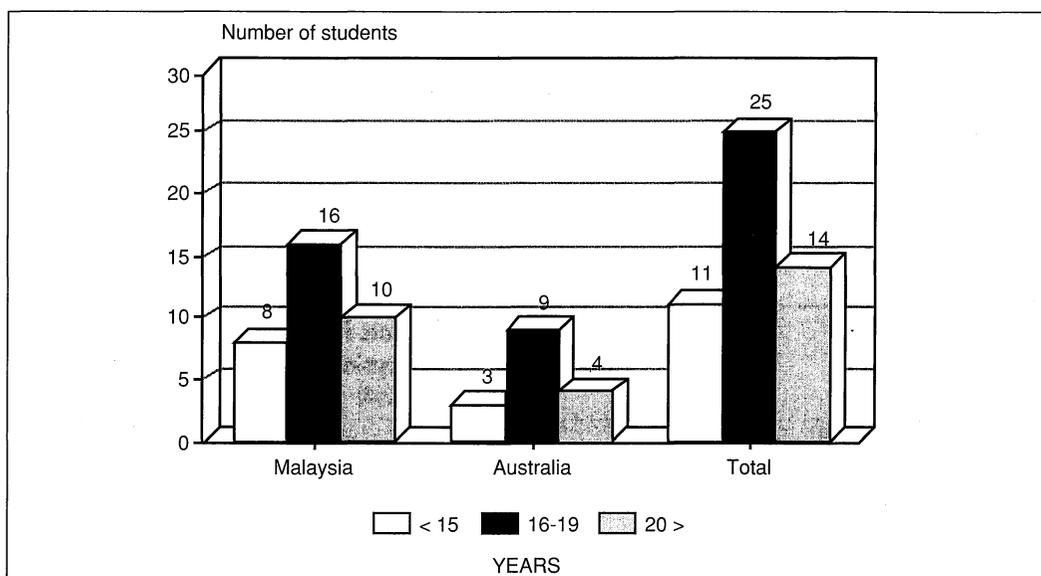


Fig. 3: Age of starting smoking

Most of the smokers from Malaysian sample (91.2%) claimed that they had attempted to quit smoking at least once. This is significantly higher ($p < 0.05$) than smokers from Australia (26.7%). The average frequency of attempts was 3.4 (SE 0.4) among students in Malaysia and 2.7 (SE 1.7) among students in Australia.

The reasons given by the subjects for failure to quit were their inability to refuse cigarettes offered by close friends (80.2%), feeling 'incomplete' and uncomfortable without a cigarette after meals (78.8%), and being unable to concentrate on their work without cigarettes especially at night (76.9%).

Table III
Socio-demographic factors and smoking behaviour

Factors	Australia		Malaysia	
	Non Smokers (n=66)	Smokers (n=15)	Non Smokers (n=94)	Smokers (n=34)
1. Gender				
Male	47	14	71	34
Female	19	1 p=0.07	23	0 p=0.001
2. Ethnic				
Malay	48	12	92	32
Others	18	3 p=0.56	2	2 p=0.28
3. Year of study				
First year	41	1	10	1
Others	25	14 p=0.000	84	33 p=0.17
4. Field of study				
Medicine	10	0	38	12
Others	56	15 p=0.11	56	22 p=0.59
5. Residence				
Hostel	41	6	68	19
Others	25	9 p=0.12	26	15 p=0.08
6. Mental Health Score				
0-6 (Normal)	55	8	69	19
7 & higher (Abn)	10	7 p=0.07	25	15 p=0.05

Table IV
Time of smoking

Time of the day	Students in Malaysia (n=34)	Students in Australia (n=15)
1. Immediately after waking up (morning)	6	4
2. After breakfast	27	14
3. During morning class	8	5
4. During tea break (morning)	25	5
5. After lunch	33	14
6. During afternoon class	11	5
7. During afternoon break	26	10
8. During/after playing games	5	9
9. After dinner	32	11
10. Watching television	25	13
11. During study at night	21	11

Psychosocial factors and smoking behaviour

The effects of psychosocial factors such as gender, ethnic group, year of study, field of study, financial source, place of residence, family and peer history of smoking, and mental health status were analysed. In this study, it was found that smoking behaviour was significantly higher among males ($p = 0.000$), among those who study beyond the first year ($p = 0.000$), staying with peers outside the hostel ($p = 0.044$), have financial sources other than a scholarship ($p = 0.045$), have peers who smoke ($p = 0.009$), and mental health score more than 7 ($p = 0.003$). The smoking rate was higher among Malays as compared to non-Malays but it is statistically not significant ($p = 0.856$). Lower rates of smoking were also noted among those who studied medicine than those in other fields, but it is not statistically significant ($p = 0.571$). When analysis were done separately, there was significant difference ($p < 0.05$) in terms of gender and mental health score among Malaysian students in Malaysia. Among Malaysian students in Australia, the only factor that was significantly different was the year of study (Table III).

Discussion

The success of any intervention to reduce smoking depends to a great extent on a thorough understanding of the determinants of the high risk behaviour. Potential factors associated with smoking include urbanisation, improved earning capacity, influence of family and peers, culture, other social conditions and mental health status^{1,12,14}. Once started, a smoker often becomes pharmacologically dependent on smoking and may progress along the continuum from habit to psychological dependence¹⁴.

Our finding of a 23.4 per cent smoking rate among university students was alarmingly high. One would expect a lower prevalence among the educated. Further, many of them (91.2% in Malaysia and 26.7% in Australia) had failed with attempts to quit smoking. The lower rates among the samples from Australia could be due to several reasons including the relatively higher frequencies of the non-Malay samples, higher number of samples who are in the first year of their studies, and relatively more aggressive campaigns and regulations against smoking in public places in Australia.

In developed countries such as the United States of America, United Kingdom, Sweden, Norway and Australia, the smoking rate among women was reported to be between 30 to 39 per cent, and still continues to rise^{1,3,4}. The lower smoking rate among female students in Malaysia as compared to those in developed countries (20-30%)^{3,4} and other Asian countries^{3-5,7} such as Indonesia (20%) and Bangladesh (24%), may reflect that smoking is still perceived as an unacceptable behaviour for females in the Malaysian community^{3,4,7}.

However, modernisation, changes in the women's role in society, social interest and smoker's experienced and inaccurate perceptions regarding the maintenance of lower body weight through smoking, which had resulted the higher prevalence of smoking in the developed countries¹⁶⁻²⁰, may also occur among Malaysian females in the future.

The study also found that the samples from Australia appear to smoke less and have less attempts at quitting smoking. There is a possibility that these smokers were actually the small number who came from the high socio-economic status and stayed outside the hostel with their peers. Since the cost of cigarettes was not a problem for them, peer, educational and other social pressures might perhaps persuade them to maintain their smoking behaviour.

Since the majority of the smokers started to smoke cigarettes even before entering university, measures to prevent them from picking up the habit at primary and secondary schools are important in the overall strategy to overcome this habit in the community at large. However, at present there are insurmountable problems to put effective preventive strategies together at this level. This includes personal interests among people in authority, smoking among teachers and limited resources earmarked for this campaign, whilst sleek advertising campaigns and behavioural complexities of the schoolchildren who smoke tend to promote smoking. Further, students who smoke are frequently the ones who have other social problems such as poor educational achievements, rebellious personality and family disharmony.

The pattern of smoking behaviour among our subjects does not indicate severe nicotine addiction. Most of the smokers associate the behaviour with specific activities especially meals. This will influence the strategies to be used in the smoking cessation intervention. Awareness about their behaviour, training in avoiding cigarettes after meals and perhaps also in refusing cigarettes offered by peers and the pursuance of alternative activities for their educational activities at night may be helpful in assisting the motivated smokers to stop their behaviour.

The fact that medical students smoke as frequently as non medical students may again highlight the inadequacy of knowledge alone in translating it into practice^{12,13}. Some of them smoked before they entered university and apparently failed at quitting the habit although they might have the right knowledge when compared with general community members. Studies on smoking habits and attitudes of medical students towards smoking, revealed that only 29 per cent of final year students considered that they had adequate knowledge to counsel patients about smoking. The study also reported that the students had not fully grasped the responsibilities of doctors in promoting preventive actions⁷.

Current evidence suggests that psychological impairment and environmental stress may increase the likelihood of engaging in poor health behaviour such as smoking^{1,10-12}. Our study found that current smokers in both samples tend to have a Mental Health Score of at least seven, suggesting the presence of mental health problems. However, whether these problems are the result or the cause of smoking cannot be determined from our present data. A more extensive quantitation by psychological study using prospective research design should be performed.

In conclusion, our study shows that Malaysian students who are studying at local and Australian universities were almost similar in terms of their rate of smoking, time of smoking and age of starting smoking. The smokers from both samples tend to start their habit at school before enrolling in the university, be males, study beyond the first year, stay with their peers outside the hostel, have financial sources other than a scholarship, have family and peer history of smoking, and have a high mental health score. However, students who smoke in Australia tend to smoke less and make fewer attempts at quitting the habit.

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