Smoking behaviour, knowledge and opinion of medical students

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Summary

On the basis of a questionnaire on smoking behaviour, knowledge and attitudes administered to medical students in the University of Malaya in July 1987, the prevalence of smoking was found to be low (10%) among medical students. Smokers and non-smokers were equally well informed about common smoking complications. Most students, irrespective of smoking status, felt that they would as future doctors, often advise sick smokers against smoking. In contrast, less than half would do so for healthy smokers who do not themselves raise the question of smoking. The students' personal smoking behaviour also influenced their view of their professional role. Appropriate values, attitudes and a preventive approach towards smoking need to be further developed in the medical students' thinking and behaviour.

Key words: Medical students, smoking prevalence, knowledge, opinion.

Introduction

Doctors have a key role to play in the prevention of smoking-related diseases, both in giving advice directly to patients and in the wider area of influencing public opinion by their own behaviour and attitudes. During their training, medical students acquired not only knowledge and skills in medicine but also the fundamental norms and values of the profession that will determine their view of their proper conduct as doctors. Thus, the best opportunity to influence their future behaviour and attitudes on issues concerning smoking is during their training.

Studies done in other countries had shown a substantial decline in cigarette smoking among medical students. At Manchester University in England, the smoking rate decreased from 29% in 1972 to 17% in 1981.[1] A number of studies had also been carried out on the smoking behaviour, attitudes and knowledge of medical students in developed countries. In England, Elkind[2] noted that medical students were almost unanimously agreed that it was appropriate for a doctor to advise a chronic bronchitic patient on smoking, but only seven in ten took this view about a healthy young man. In USA, Mausner[3] also noted the limited extent to which students had incorporated the preventive view-point into their thinking and behaviour. This was further confirmed by Anda et al.,[4] who noted that most smokers did not perceive physicians to be even minimally involved in their efforts to quit. Subsequent studies have confirmed the importance of the students personal smoking behaviour in influencing their views of their professional role. In Malaysia, Pathmanathan in 1972[5] noted that the prevalence of smoking was

high among medical students (20.3%). Their views and attitudes of the doctor's role was not examined in her study.

The present study aimed to determine the smoking behaviour, knowledge and attitudes of medical students and thereby assessed the concurrent change in their knowledge, attitudes and behaviour.

Method

The data in this study was collected in 1987 from the 271 medical students in the third and fourth year of the Faculty of Medicine, University of Malaya through a self-administered questionnnaire on smoking. The questionnaire was prepared by the Tobacco and Health Commission of the International Union against Tuberculosis, based on a questionary by the World Health Organization. Its aim was to measure the attitudes and the general knowledge of medical students concerning tobacco usage. The questionnaire forms were distributed and collected immediately on completion of regular class. The response rate was 100%.

Results

General: A total of 271 students were studied: 55.4% were males and 44.6% females. Their ages ranged from 20 years to 24 years, with the highest proportions being 22 years of age (35.8%) and 23 years of age (39.3%).

Smoking behaviour: Table 1 showed that 87.5% of the medical students were non-smokers, 2.6% ex-smokers and 10.0% current smokers, of whom about one-third (32.4%) smoked regularly (at least one cigarette per day). Male students were more likely to be smokers (17.3%) than their female colleagues (0.8%).

Table 1
Smoking Behaviour of Medical Students

Sex	Non-smoker N	%	Ex-smoker N	%	Smoker N	%	Total N	%
Male	119	(79.3)	5	(3.3)	26	(17.3)	150	(100.0)
Female	118	(97.5)	2	(1.7)	1	(0.8)	121	(100.0)
Total	237	(87.5)	7	(2.6)	27	(10.0)	271	(100.0)

Level of knowledge: The level of knowledge of the medical students was assessed: questions were asked regarding the effects of smoking on the 11 diseases or conditions listed in Table 2, in terms of the effects being a major cause, contributory cause, associated with or unassociated with cigarette smoking. The responses given were mutually exclusive for each disease and condition. The number of students who answered as either one of the former three, namely, that smoking is a major cause, contributory cause or is associated with the disease or condition have been combined together and were presented in Table 2. It will be noted that there was no difference in the mean knowledge score among smokers (8.1) and non-smokers (8.5).

Virtually all students, irrespective of their smoking status, knew of the association of lung cancer, chronic bronchitis and coronary artery disease with smoking. Thus the students' smoking behaviour did not appear to be related to their level of knowledge. However, smokers and non-smokers were equally less well informed on the association of soft tissue lesions of the mouth/lip, laryngeal cancer, leukoplakia and bladder cancer with cigarette smoking.

Table 2
Level of Knowledge by Smoking Behaviour

Disease or Condition	No. (%) Answering condition is major cause/contributing cause/ associated with smoking							
	Non-smoker		Ex-smoker		Smoker		Total	
	N	%	N	%	N	%	N	%
1. Lung cancer	237	(100.0)	7	(100.0)	27	(100.0)	271	(100.0)
2. Chronic bronchitis	235	(99.2)	7	(100.0)	26	(96.3)	268	(98.9)
3. Pulmonary emphysema	199	(84.0)	7	(100.0)	24	(88.9)	230	(84.9)
4. Coronary artery disease	223	(94.0)	7	(100.0)	25	(92.6)	255	(94.1)
5. Neonatal disease	171	(72.2)	5	(71.4)	14	(51.9)	190	(70.1)
6. Oral cancer	200	(84.3)	7	(100.0)	21	(77.8)	228	(84.1)
7. Laryngeal cancer	163	(68.8)	6	(85.7)	8	(66.7)	187	(69.0)
8. Leukoplakia (mouth/lip)	142	(59.9)	4	(57.1)	15	(55.6)	161	(59.4)
9. Any soft tissue lesion (mouth/lip)	134	(56.5)	4	(57.1)	13	(48.1)	151	(55.7)
10. Peripheral vascular disease	195	(82.2)	6	(85.7)	22	(81.5)	223	(82.3)
11. Bladder cancer	107	(45.0)	5	(71.4)	14	(51.9)	126	(46.5)
Mean knowledge score	8.5		9.3		8.1		8.6	

Reasons for not smoking: The reasons for not smoking which were ranked high by more than half of the students, irrespective of their smoking status, was to set a good example to children and patients (Table 3).

Only a small proportion considered pressure from professional colleagues (13.7%) and the desire to save money (29.2%) as important factors. This view was unanimously shared by both non-smokers and smokers.

Attitudes towards advising patients: Students were asked if they would advise patients on smoking if the patients had symptoms related to smoking, if the patients raised questions and finally if patients had no symptoms and did not raise the issue of smoking. Virtually all the students, irrespective of their smoking status, were of the opinion that they would often advise patients if they had symptoms or confirmed diagnosis of smoking-related diseases(Fig. 1). However, when

Table 3
Numbers of respondents who ranked as high the following reasons for not smoking

Reasons for not smoking (which were ranked high by respondents)	No. (%) of respondents by smoking behaviour							
	Smoker		Ex-smoker		Non-smoker		Total	
	N	%	N	%	N	%	N	%
To protect your health	11	(40.7)	7	(100.0)	208	(87.8)	226	(83.4)
Self-discipline	13	(48.1)	6	(85.7)	180	(75.9)	199	(73.4)
To set a good example for children	17	(63.0)	4	(57.1)	151	(63.7)	172	(63.5)
To set a good example for patients	18	(66.7)	5	(71.4)	145	(61.2)	168	(62.0)
Occurrence of certain symptoms	7	(25.9)	4	(57.1)	134	(56.5)	145	(53.5)
Not to create discomfort to people nearby	14	(51.9)	3	(42.9)	112	(47.3)	129	(47.3)
To set a good example for health workers	10	(37.3)	3	(42.9)	95	(40.1)	108	(39.9)
To set a good example for adults in your social environment	7	(25.9)	3	(42.9)	104	(43.9)	114	(42.1)
To save money	8	(29.6)	2	(28.6)	69	(29.1)	79	(29.2)
To comply with pressure from professional colleagues not to smoke	3	(11.1)	1	(14.3)	33	(13.9)	37	(13.7)

a more proactive and preventive viewpoint was implied by asking their opinion towards advice of patients who were smokers and had no symptoms and did not themselves raise the question of smoking, a marked contrast was noted; only 29.9% said that they would often advise patients under such circumstances. This opinion was unanimously shared by smokers (25.9%), non-smokers (30.4%) and ex-smokers (28.6%).

Opinion of doctor's role on smoking: Students were asked to give their opinion on three statements concerning the doctor's role with regard to his own behaviour in relation to smoking (Fig 2). Their opinion of the doctor's role in relation to smoking appeared to be related to their smoking behaviour. As Fig. 2 indicates, 92.8% of non-smokers and all the ex-smokers compared with 77.7% of smokers somewhat or strongly agreed that it was the doctor's responsibility to convince people to stop smoking. Similarly, whereas almost all the non-smokers (96.7%) and all ex-smokers agreed that doctors should set a good example by not smoking, only 77.8% of smokers held this view and an even smaller proportion (51.9%) strongly agreed with it. On examining their opinion on the doctor playing a more active role against smoking, more non-smokers (92.4%) than smokers (70.3%) agreed on this.

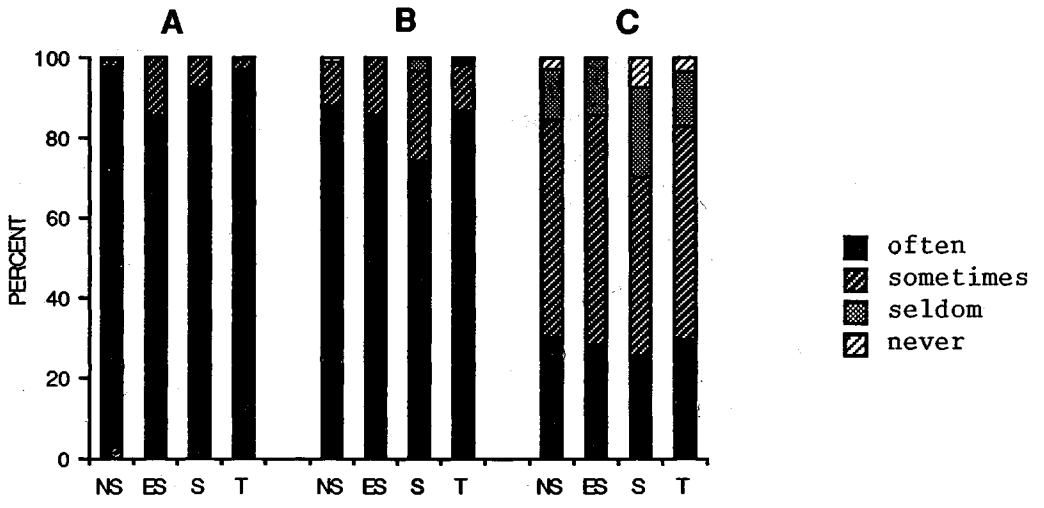

Fig 1: Attitude towards advising **patients against** smoking

A = Patient has symptoms of smoking-related diseases
B = Patient himself raises the question of smoking
C = Patient is asymptomatic and does not himself raise question of smoking

NS = non smoker, ES = ex smoker, S = smoker, T = Total.

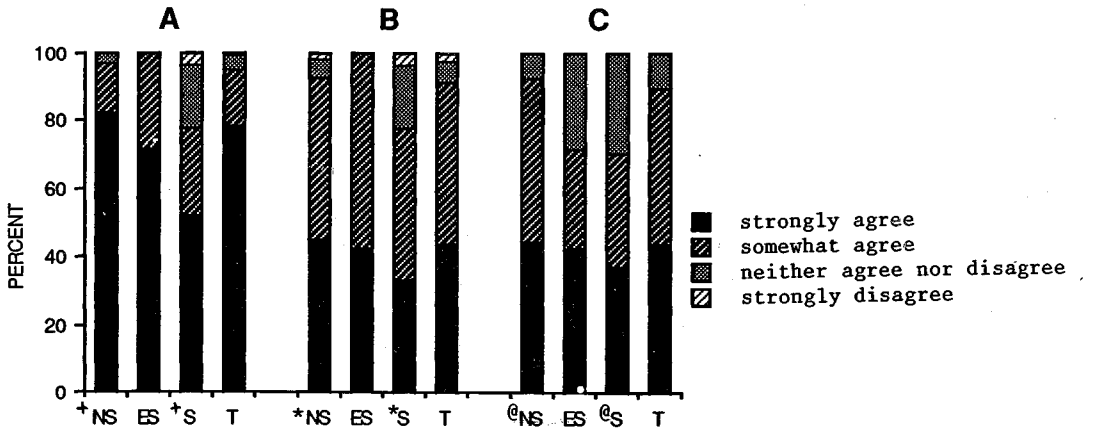

Fig. 2: Opinion of doctor's role on smoking

A = Doctors should set a good example by not smoking
B = It is the doctors' responsibility to convince people to stop smoking
C = Doctors should be more active in speaking to lay groups about smoking

NS = non-smoker, ES = ex smoker, S = smoker, T = Total

† $p < 0.001$) strongly + somewhat agree combined
* $p < 0.01$) versus
@ $p < 0.05$) neither agree nor disagree + strongly disagree combined

Overall, a higher proportion of students (78.6%) strongly agreed that doctors should set a good example by not smoking compared with less than half (43.9%) who felt similarly about the doctor's responsibility to convince people to stop smoking and doctors to be more active against smoking. Thus, the doctor's role is viewed more as an exemplar rather than as an educator.

Opinion on sufficiency of knowledge to counsel patients: The students opinion on their sufficiency of knowledge to counsel patients was examined in Fig 3. Overall, only a small proportion (14.4%) were strongly convinced about their sufficiency of knowledge to counsel patients and about half (48.3%) were somewhat agreeable to this view. Their smoking behaviour did not appear to be related to their opinion on their sufficiency of knowledge as only a small proportion of both smokers (11.1%) and non-smokers (15.2%) strongly agree that their knowledge was sufficient.

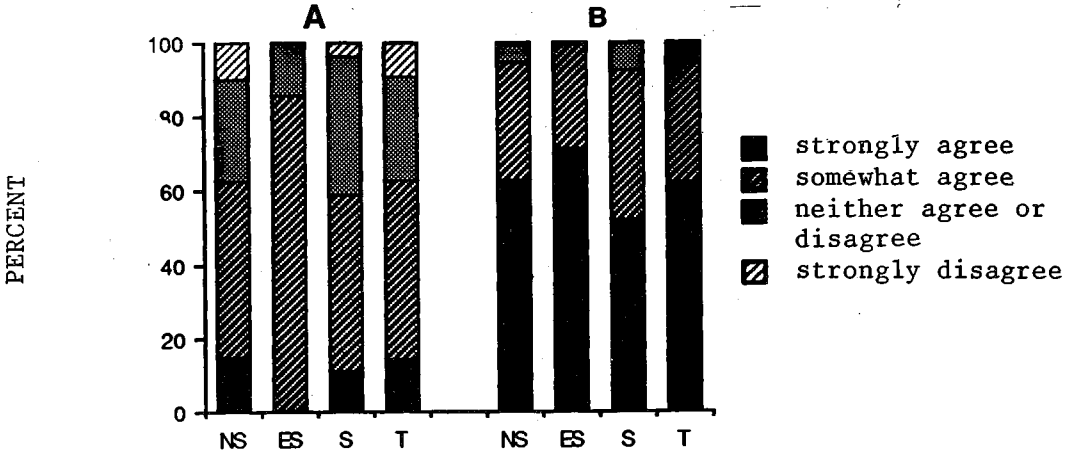

Fig 3: Opinion on the sufficiency of knowledge to counsel patients

A = Your current knowledge is sufficient as a basis for counselling patients
B = Doctors would be likely to advise people to quit smoking if they know of a good approach that really works

NS = non smoker, ES = ex smoker, S = smoker, T = Total

Their lack of confidence in their knowledge to counsel patients was further substantiated by the fact that more than half (62.0%) strongly agreed that doctors would be more likely to advise people to quit smoking if they knew of a good approach.

Discussion

The prevalence of smoking among medical students had declined since 1972, when Pathmanathan noted that 25.2% of males and 1.6% of females were smokers.[5] Medical students were generally well informed on the harmful effects of smoking. Knowledge alone, however, was apparently not sufficient to deter medical students from smoking, because virtually all the smokers knew of the association of lung cancer, chronic bronchitis and coronary artery disease with smoking. Other factors may be influencing their smoking behaviour. It would be interesting to identify these factors which might possibly include the role model of their teachers and parents as well as the influence of public advertisements.

The lack of a preventive orientation in medical students was reflected in their attitude towards advice of parents against smoking. Although virtually all students, irrespective of their smoking status, said that they would often advise patients with symptoms of smoking related diseases, less than one third would do so for those with no symptoms and did not themselves raise the question of smoking.

Students were also more aware of their future professional role as exemplars rather than as educators. In this study, a very high proportion (78.6%) strongly agreed that doctors should get a good example by not smoking with non smokers (81.9%) more agreeable to this view than smokers (51.9%). In contrast less than half, regardless of their smoking status, felt similarly about the doctors' responsibility to convince people to give up smoking.

With regard to sufficiency of knowledge in counselling patients, less than two-thirds (62.7%) somewhat or strongly felt that they have sufficient knowledge to do so, although virtually all knew of the common conditions associated with smoking. Thus having knowledge by itself was not sufficient. A workable and practical approach to advise patients is required and students felt that they were not well equipped on this aspect.

Our findings also indicated that the smoking behaviour of medical students was not related to knowledge and their attitude towards advising patients. However, it was related to their view of the doctor's role on smoking.

The students' lack of preventive orientation, their opinion of insufficient knowledge to counsel patients and their view of the doctor's role as more of an exemplar rather than an educator clearly indicated the need to revise the existing curriculum to incorporate more preventive aspects and approaches towards the counselling of patients.

Steps also need to be taken to develop appropriate values and attitudes toward smoking particularly on the responsibilities and the importance of the doctors' role in smoking cessation.

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