

Teachers' smoking

B. R. BEWLEY, M. R. D. JOHNSON, AND M. H. BANKS

From the Department of Community Medicine, St. Thomas's Hospital Medical School, London

SUMMARY Children take up smoking for many reasons and it is suggested that the example set by schoolteachers may have some influence. Smoking by male teachers appears to have some effect on boys' smoking, particularly in their first two years at secondary school. Thus, in any comprehensive study of what causes children to take up smoking and in any attempt to prevent this by means of health education, the influence of teachers as well as that of relatives and friends must be considered.

'At school, all the teachers go and have a quick smoke in the staffroom. When the door is open you can see them all smoking. If you ask a question, and the teacher comes to answer it, you can smell that their breath stinks of smoke... I think this is a bad example to set on children of this school'.

Unsolicited comment by a pupil.

The influence of psychosocial factors on schoolchildren's smoking has been the subject of a number of studies. Some of these have paid particular attention to parental smoking (Bewley *et al.*, 1974), peer group smoking (Bynner, 1969), and type of school (Holland *et al.*, 1969; Banks *et al.*, 1978). Until now there has been no major study of teachers' smoking in this country.

Many habits of lifestyle are acquired by children during their years at school and the development of these is influenced by various factors acting both inside and outside school; the actions of teachers are a major influence at this time (Egsmose and Egsmose, 1973). Nash (1972) has suggested that the less formal aspects of teacher/pupil relations may be more influential than what children are actually taught in a formal classroom situation.

Morrison and McIntyre (1971) suggest that children imitate what they perceive as correct 'grown-up' behaviour and this probably includes smoking behaviour. This hypothesis is strengthened by the findings of Bewley and Bland (1977) that 39% of Kent schoolchildren agreed that 'smoking makes you feel grown up'; there was no difference in expression of this belief between smoking and non-smoking children.

This paper examines the prevalence rates of various modes of smoking among teachers. The 'hidden prevalence' of pipe smoking is demonstrated, and comparisons are made between levels of smoking among staff and pupils.

Method

A five-year prospective study of approximately 6000 secondary schoolchildren in Derbyshire was started in 1974 when the children were aged 11-12. The detailed methodology of the study has been fully described before (Banks *et al.*, 1978). In 1974 and 1975 the children were given self-administered questionnaires to complete in their school class; a child smoker was defined as one who smoked one or more cigarettes per week. The teachers in these schools were asked to complete a short anonymous questionnaire in both years; the anonymity precluded follow-up of any teacher who did not reply.

In 1974, 1333 teachers from 48 schools completed questionnaires, which gave a response rate of 69%, and in 1975, 1226 teachers from 49 schools completed questionnaires (a 59% response rate). The response rates for the children's questionnaire were 86% in both 1974 and 1975. No significant associations were found between the response rates of teachers and pupils in each school. Reported prevalence levels were not found to be depressed in schools with low response rates and adjustment of figures for prevalence rates, drawing upon various assumptions about prevalence among non-responders, did not provide significantly improved results.

Results

Between 1974 and 1975 the prevalence of smoking increased among both boys and girls as they grew one year older (Table 1). The teachers' cigarette smoking rates (Table 2) remained constant, and rates for males and females were similar. However, most female teachers smoked cigarettes only, but nearly 20% of male teachers smoked cigars or pipes, or a

Table 1 Prevalence of children's smoking

	1974 (11-12 years old)		1975 (12-13 years old)	
	Boys %	Girls %	Boys %	Girls %
Smokers (one cigarette or more per week)	6	3	9	6
Experimental smokers	49	38	51	42
Non-smokers	45	60	39	51
Nos. of children	3098	3232	3254	3401

Table 2 Prevalence of teachers' cigarette smoking

Smoking pattern	1974		1975	
	Male %	Female %	Male %	Female %
Currently smokes cigarettes	22	21	21	20
Used to smoke cigarettes	33	19	31	24
†Never smoked cigarettes	45	60	48	56
Nos. of teachers	706	627	636	590

† Includes other types of smokers and non-smokers.

combination of these and cigarettes. In both 1974 and 1975, more than one-third of male teachers used tobacco in one form or another. There was no significant difference between age groups in the prevalence of cigarette smoking, but pipe smoking was more common in older men.

Table 3 shows that the prevalence of teachers' smoking varied with the type of school; teachers in grammar schools tended to smoke less.

A number of teachers admitted smoking in front of pupils, either in or out of the classroom (Table 4). In

Table 3 Teachers' cigarette smoking by sex and type of school (1974)

	Middle school %	Secondary modern %	Comprehensive %	Grammar %
MALE				
Smokers	22	25	23	15
Non-smokers	78	75	77	85
No. of teachers	23	158	443	82
	%	%	%	%
FEMALE				
Smokers	27	28	18	15
Non-smokers	73	72	82	85
No. of teachers	26	188	313	100
No. of schools	3	18	20	7

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Table 4 Percentage of teachers who reported smoking in front of pupils

	1974		1975	
	Male %	Female %	Male %	Female %
Denied smoking in front of pupils	71	79	80	91
Admitted smoking in front of pupils	29	21	20	9
Nos. of teachers currently smoking	249	134	216	121

1974 this habit was admitted by 29% of male smokers and 21% of females; in 1975 the rates were 20% for males and only 9% for females. The proportion of children and teachers in each school who smoked cigarettes was examined. No relationship was found for boys or girls or for male or female teachers, but when the proportions were calculated to include all types of smoking by teachers in 1974, a significant relationship was found between boys' cigarette smoking and male teachers' smoking of all types in 1974 (Table 5). No significant relationships were found for girls or for female teachers.

In 1975 the data showed that smoking by boys was again more common in those schools where in 1974 high prevalence of smoking of all types among male teachers had been found (Table 5). Furthermore, the relative prevalence (ratio of prevalence in 1975 to that in 1974) of smoking among girls was also found to be significantly linked to the 1974 report of the prevalence of smoking among male teachers (Kendall's Tau = 0.23; P < 0.05). We have observed that teachers' smoking was lower in grammar schools, but these associations remain true when examined within grammar or comprehensive schools alone. We have no evidence from the other data we collected to suggest that there are any major differences between staff in different types of schools.

Discussion

These results demonstrate how children are likely to encounter the use of tobacco by adults at school. There were, however, variations between schools in prevalence of teachers' smoking and these appeared to be linked with variations in the prevalence of children's smoking.

From our study data, Johnson (1977) had demonstrated that variation of children's smoking rates with type of school was partly a result of the social class distribution between schools. By linking the 1974 children and their fathers' occupations, it

Table 5 Relationship between proportion of male teachers who smoked and regular boy cigarette smokers by number of schools in each category

Male teacher smokers (all types) in 1974	1974			1975		
	Boy smokers			Boy smokers		
	5%	5-9%	>9%	<7%	7-11%	>11%
<29%	9	2	2	7	3	1
29%-42%	2	7	4	4	5	6
>42%	3	5	7	2	5	6

1974: 41 schools (Kendall's Tau = 0.3; P < 0.02).
 1975: 39 schools (Kendall's Tau = 0.35; P < 0.01).

was found that children from middle class families had lower rates of smoking than children from working class families, and a smaller proportion of the latter attended grammar schools. Similar variations in smoking were apparent among teachers, but no clear-cut associations could be found to explain this.

Secondary school teachers are in Social Class II; in Table 6 the Tobacco Research Council smoking data for Social Class II in 1974 (Lee, 1975) and the General Household Survey (Office of Population Censuses and Surveys, 1977a) age-standardised smoking rates for socioeconomic group A (professional) in 1973 are compared with the 1974 and 1975 data for Derbyshire teachers. For all types of smoking, teachers smoked much less than other members of Social Class II. Data from another study of smoking by professional people (Office of Population Censuses and Surveys, 1977b) support this finding. For British data these are the only sources of information related to teachers' smoking.

Table 6 Prevalence of smoking in Social Class II: study data compared with two sets of national data

		All smokers %	Cigarette smokers %
MALES	Tobacco Research Council (Social Class II)	61	42
	General Household Survey (Professional-A)	47	33
	Derbyshire teachers		
	1974	36	22
	1975	34	21
FEMALES	Tobacco Research Council (Social Class II)	42	41
	General Household Survey (Professional-A)	30	30
	Derbyshire teachers		
	1974	22	21
	1975	21	19

Sources: Lee (1975); Office of Population Censuses and Surveys (1977a).

It appears that teachers' smoking does have some influence on children's smoking, particularly on boys. In the first year of secondary school, this effect was particularly marked. Probably that is the period when teachers' smoking behaviour is most influential.

It has been suggested (Bynner, 1969), and our findings also illustrate this, that children in their second year of secondary school may be beginning to select 'behaviour models' from among their peers. In schools where smoking among male staff may have encouraged higher rates of smoking among boys, others will inevitably copy those who have taken up the habit despite any changes that may take place in staff smoking behaviour. We observed a marked drop in 1975 in the number of women teachers who admitted to smoking in front of pupils; this may have been partly due to the effect of repeating the questionnaire a year later. Since we were obliged to guarantee staff anonymity, we were unable to examine such changes, or to draw inferences about the effect of these changes.

Apart from its possible direct effect, the smoking behaviour of teachers might also make them reluctant to take part in anti-smoking education, which would be less effective when it is given by teachers who themselves smoke.

Judging from a number of unsolicited comments from pupils, children are well aware of which of their teachers smoke and many voiced disapproval.

We thank all those who helped with this study, which was supported by grants from the Medical Research Council and the Department of Health and Social Security.

Reprints from Dr. B. R. Bewley, Department of Community Medicine, St. Thomas's Hospital Medical School, London SE1 7EH.

References

- Banks, M. H., Bewley, B. R., Bland, J. R., and Pollard, V. (1978). Long-term study of smoking by secondary schoolchildren. *Archives of Disease in Childhood*, **53**, 12–19.
- Bewley, B. R., Bland, J. M., and Harris, R. (1974). Factors associated with the starting of cigarette smoking by primary schoolchildren. *British Journal of Preventive and Social Medicine*, **28**, 37–44.
- Bewley, B. R., and Bland, J. M. (1977). Academic performance and social factors related to cigarette smoking by schoolchildren. *British Journal of Preventive and Social Medicine*, **31**, 18–24.
- Bynner, J. M. (1969). *The Young Smoker*. HMSO: London.
- Egsmose, R., and Egsmose, T. (1973). The smoking pattern of the Danish primary school teachers. *Folkeskolen*, **90**, 4.
- B. R. Bewley, M. R. D. Johnson, and M. H. Banks
- Holland, W. W., Halil, T., Bennett, A. E., and Elliott, A. (1969). Indication for measures to be taken in childhood to prevent chronic respiratory disease. *Milbank Memorial Fund Quarterly*, **47**, 215–227.
- Johnson, M. R. D. (1977). Schools, education and tobacco misuse. Paper presented at meeting of Society for Social Medicine, Birmingham.
- Lee, P. N. (1975). Statistics of Smoking in the United Kingdom. Research Paper No. 1, 7th edition. Tobacco Research Council: London.
- Morrison, A., and McIntyre, D. (1971). *Schools and Socialization*. Penguin Books.
- Nash, R. (1972). Keeping in with teacher. *New Society*, 14 December, 630–632.
- Office of Population Censuses and Surveys (1977a). *General Household Survey, 1973*. HMSO: London.
- Office of Population Censuses and Surveys (1977b). *Smoking and Professional People*. HMSO: London.