Youth Smoking: Knowledge, Attitudes, Smoking in Schools and Families, and Symptoms due to Passive Smoking
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Risks of positive attitudes to smoking*, ever-smokers vs never-smokers

* Excluding those who answered "don't know"
** Age and sex adjusted

Risks of ever-smoking in students by number of smokers at home

* Age and sex adjusted

Risks of any respiratory symptoms in never-smoking students by number of smokers at home

* Age and sex adjusted
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Introduction

The Youth Smoking and Health Survey 1994, Report No. 1 was released in November 1994\(^1\). The survey included 6304 students in Form 1 to Form 3 from a representative sample of 172 classes in 61 secondary schools, excluding International and English Foundation Schools. Each student completed a self-administered and anonymous questionnaire from May to July, 1994. The response rate for schools and students was 92% and 96% respectively. Half of the students were boys (51%); 94% were aged 12 to 15 years. The prevalence of ever-smoking was 29% (34% in boys and 24% in girls). This second report describes further results about the students’ knowledge of the health hazards of smoking, their attitudes to smoking, smoking in schools, the smoking habits of their family members and the health risks from exposure to second-hand or passive smoking (environmental tobacco smoke) in their homes.

Knowledge about health hazards of smoking

1. About 90% of the students knew that smoking can harm the lungs (93%), cause cancer (88%) and harm the heart (83%) and that passive smoking is harmful to health (92%). Few answered incorrectly (1-3%) and some indicated (or selected) ‘don’t know’ (6-14%). These are the health hazards which are well publicized in the government health warnings. Most students had seen the health warning of ‘smoking can cause cancer’ (92%), followed by ‘smoking can kill’ (87%), ‘smoking harms yourself and others’ (87%) and ‘smoking can cause heart disease’ (77%).

2. Students’ knowledge of the health hazards which are not included in the government warnings was much less: 80% knew that smoking can cause addiction (8% were wrong and 12% ‘don’t know’), 77% knew that smoking can cause cough (6% were wrong and 17% ‘don’t know’) and 69% knew that smoking can cause breathlessness (9% were wrong and 22% ‘don’t know’). Only 30% knew that smoking can make people more likely to get colds, flu or sore throats (17% were wrong and 53% ‘don’t know’). These adverse health effects are more relevant to the students than cancer and heart disease. The ever-smoking students were 40% more likely to have throat problems and 70-80% more likely to have cough or phlegm, as described in Report No. 1.

3. Ever-smokers had less knowledge of all the health hazards of smoking than never-smokers. The most remarkable difference was that ever-smokers were much more likely to give wrong answers (Figure 1).

There were few differences between the two groups in ‘don’t know’ answers and they were excluded in the calculation of odds ratios. The strongest association was observed for ‘more cough’, the odds ratio of 6.6 means that ever-smokers were 5.6 times more likely than never-smokers to give a wrong answer to this question (Figure 2).

4. No differences were found between ever-smokers and never-smokers in their awareness of the government health warnings.

Attitudes to smoking

1. Most students (83%) agreed that ‘smoking is a waste of money’ (11% disagreed and 6% said ‘don’t know’). The majority of the students (69%) disagreed that ‘smoking makes you feel grown up’ (8% agreed and 23% ‘don’t know’) and about two-thirds disagreed that ‘smoking is fun’ (10% agreed and 24% ‘don’t know’), ‘youth smoke to show off’ (13% agreed and 21% ‘don’t know’), ‘smoking gives you confidence’ (5% agreed and 29% ‘don’t know’)

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*Figure 1. Wrong answers to questions on health hazards of smoking*

*Figure 2. Risks of wrong answers about health hazards of smoking*, ever-smokers vs never-smokers

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*Excluding those who answered ‘don’t know’

**Age and sex adjusted
and ‘smoking makes you look tough’ (11% agreed and 25% ‘don’t know’). About half disagreed that ‘smoking makes you lose weight’ (10% agreed and 36% ‘don’t know’) and that ‘smoking calms your nerves’ (16% agreed and 36% ‘don’t know’).

2. More ever-smokers (11% to 33%) had positive attitudes to smoking than never-smokers (3% to 10%) (Figure 3). The biggest discrepancy found was for ‘smoking is fun’ with ever-smokers 9.9 times more likely than never-smokers to consider that ‘smoking is fun’ (odds ratio 10.9) (Figure 4).

3. Students were asked whether they agreed that smokers tended to perform worse in school work and sports. Ever-smokers were 2.5 times more likely to deny that smoking students tend to perform worse in school work (odds ratio 3.5) and 1.3 times more likely to deny worse performance in sports (odds ratio 2.3) (Figure 5).

Confidence

More ever-smokers than never-smokers said that they were not confident in their academic performance (19% versus 9%) and in life in general (10% versus 6%); the odds ratios were 2.3 and 1.8 respectively. However, marginally fewer ever-smokers felt a lack of confidence than never-smokers in their performance in sports (16% versus 20%) and the odds ratio was therefore less than unity (0.8). No statistically significant differences were found between ever-smokers and never-smokers in their confidence in making friends (8% versus 7%) (Figure 6).

Smoking in school

1. About half (49%) of the students had seen their classmates smoking. Twenty-three percent thought it was all right for their classmates to smoke (55% thought not all right and 22% ‘don’t know’). Ever-smokers were nearly three times more likely than never-smokers to have seen their classmates smoking (odds ratio 3.9) and 110% (i.e. 1.1 times) more likely to consider that it was all right for their classmates to smoke (odds ratio 2.1) (Figure 7).

2. About 30% of the students had seen their teachers smoking. Forty-two percent thought it was all right for their teachers to smoke (38% said no and 20% ‘don’t know’). Two-thirds of the students thought that their teachers would interfere if they smoked (4% said their teachers would not and 30% said ‘don’t know’). Ever-smokers were 40% more likely than never-smokers to have seen their teachers smoking, 160% more likely to think that it was all right for teachers to smoke and 110% more likely to think that their teachers would not interfere if they smoked (Figure 7).
Smoking in the family home

1. About half (53%) of the students were living with at least one smoking household member and were therefore exposed to passive smoking in the family home. Thirty-eight percent of their fathers were smokers; 3% of mothers, 11% of brothers, 4% of sisters, 6% of grandparents, and 11% of other persons in the family home were smokers.

2. The smoking habit of the students was strongly associated with family smoking. Those with a smoking father were 40% more likely than those without a smoking father to have smoked (odds ratio 1.4). For those with smoking sisters the risk of ever-smoking was the highest (odds ratio 4.6). Those with any one smoking family member were 120% more likely than those without a smoking family member to have smoked (Figure 8).

3. There was a dose-response relationship between ever-smoking and the number of smokers in the family home: the more smokers in the family home, the more likely it was that the children would have smoked. Those with 3 or more smokers in the family home were 3.6 times more likely to have smoked than those with no smoking family members (Figure 9).

4. Most of the students (88%) thought that their mothers would interfere if they smoked (3% said no and 9% said ‘don’t know’). Slightly less (82%) thought that their fathers would interfere (4% said no and 14% ‘don’t know’).

However, ever-smokers were over two times more likely than never-smokers to think that their fathers and mothers would not interfere (odds ratio 3.1 and 3.9 respectively) (Figure 10).

Attitudes to smoking and advertisements

1. About 35% perceived at least one cigarette brand advertisement as attractive. Because positive attitudes were strongly associated with ever-smoking, the relationship between positive attitudes and students’ perceived attractiveness of cigarette advertisements were studied. Adjustment was made for age, sex, smoking habit of the students and their family members.

Except for the description that smoking ‘is not a waste of money’, students who perceived advertisements as attractive were more likely to have positive attitudes towards all the stated supposed benefits of smoking (Figure 11).

2. The importance of advertisement is clearly indicated by further analysis of the data. After adjusting for perceived attractiveness of advertisements, age, sex and the students’ smoking habit, positive attitudes to smoking were not significantly associated with living with smokers in the family home, except for the item of ‘smoking calms your nerves’. The odds ratio for this item, although statistically significant, was quite small (1.2) (Figure 12).
Respiratory symptoms and passive smoking

In 1992, the United States Environmental Protection Agency reviewed all the available evidence from studies on passive smoking and concluded that passive smoking was a cause of lung cancer and respiratory illnesses in people who did not smoke\(^3\). In Hong Kong, the 1989-92 Respiratory Health Study found that primary school students had excess respiratory symptoms due to passive smoking in the family home\(^3\). The present study used the same survey methods and found that secondary school students who did not smoke but were living in a family home with smokers had 30% more respiratory symptoms than those who lived in a family home in which no one smoked. The excess risk was 20% for cough, 30% for phlegm and 40% for throat problems (Figure 13).

Conclusions

1. Although most students knew the more serious but chronic health hazards of smoking, the majority were not aware of the acute and to them the more relevant health hazards such as cough and breathlessness.
2. Ever-smoking children were less knowledgeable than never-smoking children and the former tended to deny the health hazards.
3. Many students had positive attitudes to smoking: they thought that smoking could calm the nerves, help one to show off, make one look tough and so on.
4. Ever-smoking children had more positive attitudes to smoking than never-smoking children.
5. Many children were studying in school environments in which many of their peers and teachers were smokers. Many were also living in smoking home environments. The children’s smoking habit was associated with such environments, and their perception that their teachers and parents would not interfere was a factor conducive to smoking.
6. The children’s positive attitudes to smoking were strongly associated with their perceived attractiveness of cigarette advertisements but not with their family members’ smoking, with one notable exception for the item that ‘smoking calms the nerves’. Both advertisements and family smoking were independently associated with positive attitudes that ‘smoking calms the nerves’; the association with advertisements was much stronger than that with family smoking.
7. Never-smoking children were at risk of excess respiratory symptoms from exposure to passive smoking in the family homes. About 16% of any of the respiratory symptoms measured in never-smoking children can be attributed to passive smoking from home. This means that in the whole of Hong Kong about 28,000 Form 1 to 3 students’ symptoms can be prevented if their exposure to smoke at home is eliminated. It should be noted that younger children (pre-school or primary) are more vulnerable and the number affected by passive smoking will be much greater than these estimates.
Recommendations

1. Health education which aims to impart knowledge to youngsters should focus on the more acute and relevant health hazards of smoking and should address the questions which are felt by them to be interesting and important.

2. Positive attitudes are much stronger factors than deficiency in knowledge in influencing children to smoke. Health education for the prevention of smoking should tackle these positive attitudes to smoking, the perceived positive images of smokers and the perceived benefits of smoking.

3. All schools should be smoke-free and teachers should not smoke in schools or be seen smoking by their students.

4. To protect their health, children should be protected from exposure to second-hand smoking at home and elsewhere. Both children and their family members should be educated about the health hazards of passive smoking and be encouraged to promote a smoke-free and healthy home environment.

5. Children are more likely to smoke if they live in a smoking home environment. Smoking parents should know that their smoking habit may be imitated by their children, even if they do not explicitly encourage smoking or promote a positive attitude to smoking. The influence of elder siblings' smoking habits on their younger siblings is also very strong. Parents and other family members who smoke should therefore be helped to stop smoking. Their quitting will provide several benefits: (a) protect the children from passive smoking; (b) prevent the children from imitating their own smoking habit, and (c) protect their own health.

6. Children are not born with positive attitudes to smoking. They are unlikely to have only derived such attitudes from their family. Because parents and other family members who smoke at home often use 'calming the nerves' as an excuse, the children are likely to accept this attitude. No schools would intentionally impart positive attitudes to smoking to the students. The most likely sources of children's positive attitudes are from tobacco advertisements which persistently portray and promote positive images of smokers. Because children with positive attitudes to smoking are more likely to smoke, they should be protected from the influence of tobacco advertising. No health education campaign can completely counteract tobacco advertisements, nor are there enough resources to do so. We emphasize again that a total ban on all forms of tobacco promotion should be an urgent priority in health promotion in Hong Kong.

References


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