The Youth Smoking and Health Survey 1999

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Trends in Youth Smoking, Health and Tobacco Promotion from 1994 to 1999
TH Lam, SY Ho, CY Kui
Department of Community Medicine, The University of Hong Kong

Figure 1. Smoking trends in Form 1 to 3 students, 1994 and 1999

Figure 7. Daily number of cigarettes smoked in the past 30 days, 1994 and 1999

Figure 17. Prevalence of respiratory symptoms by smoking status in 1999 survey
Introduction

The first Youth Smoking and Health Survey was conducted from May to July 1994. 1,2 6,304 Form 1 to Form 3 students from a probability sample of 61 secondary schools were included. The second survey was conducted with a total of 21,044 Form 1 to Form 3 students from 589 classes of 64 secondary schools, who completed a self-administered (anonymous) questionnaire from May to July and October to December, 1999. The response rate for schools was 72% and the response rate for the students was 96.2%. In order to make a fair comparison between the two surveys, only schools which had participated in both surveys from May to July were included in this report. There were 45 schools meeting these criteria with 4,539 (48% male, 52% female) and 8,737 (47% male, 53% female) students from the 1994 and 1999 survey, respectively. There were more students in the 1999 survey as two classes from each form instead of one in 1994 were selected in that year. Information provided by the students has been used to assess current patterns of smoking in Hong Kong junior secondary school students; trends in their use of tobacco and their preferences for brands in relation to the attractiveness of advertisements; and to study the relationship between smoking and respiratory symptoms.

Smoking status

1. The ever-smoking (those who had ever tried) and current smoking (those who had smoked in the past 30 days) prevalence increased from Form 1 to Form 3 in both 1994 and 1999 (Figure 1). While the ever-smoking prevalence was significantly lower in 1999 in Form 3 and in Form 1 to 3 students as a whole, the current smoking prevalence was significantly increased in all forms by 3-4% points.

2. The drop in ever-smoking prevalence was mainly observed in males and was statistically significant in Form 2 by 5% points and in Form 3 by 10% points (Figure 2). The ever-smoking prevalence in females increased by 2% points in Form 2 and reduced by 2% points in Form 1 and 1% point in Form 3 (Figure 3), but the differences were not significant. For current smoking, the relative increases in Form 1 were greater in males (by 57%) than in females (by 40%), but in Form 2 and Form 3, the relative increases were far greater in females (by 67% and 100% respectively) than in males (by 30% and 8% respectively) (Figures 2-3).

3. The ever-smoking and current smoking prevalence in males and females by age (Figures 4-5) showed trends similar to those estimated by Forms mentioned above. Current smoking prevalence had increased at all ages from below 12 to above 16 by 2-6% points in males and 1-7% points in females.

4. The mean age at first smoking increased from 10.6 years in 1994 to 10.9 years in 1999. The proportion of ever-smokers who first smoked before the age of 11 dropped from 40% to 34% and those who first smoked after the age of 12 rose from 26% to 32% in 1999. Nevertheless, 68% of the ever-smokers had already experienced smoking before 13 years old (Figure 6).
5. The current smokers smoked on average 6.6 (standard deviation (SD) = 11.3) cigarettes per day in 1999, which was 0.9 cigarette more than that of 5.7 (SD = 7.3) in 1994 (Figure 7).

6. Fewer students had bought cigarettes for themselves or others (30% in 1999 vs 54% in 1994). Sources of bought cigarettes were mostly from supermarkets, 24-hour stores, stalls and general stores. However, more students had bought broken pack cigarettes (9% vs 7%) and suspected smuggled cigarettes (9% vs 6%) (Figure 8).

Tobacco promotional activities and advertisements

7. Although there were fewer students who had ever watched or participated in cigarette sponsored activities (35% in 1999 vs 50% in 1994), there were more students who had used empty cigarette packs to exchange for admission tickets for movies, sports competitions or other entertainment (6% vs 5%) and to exchange for free gifts or reduced price goods (8% vs 6%). There were also more students who had been given free publicity cigarettes in 1999 (11%) than in 1994 (8%) (Figure 9).

8. Tobacco advertisements seen from the media were significantly increased in newspapers, MTR stations, buses, hand bills and LRT stations, but significantly decreased in magazines, television, large outdoor billboards, posters, movies, taxis, railway stations, mini-buses and ferries (Figure 10). The Internet was not asked about in 1994, but in 1999, 10% of the students had seen Internet tobacco advertisements.

9. Cigarette advertisements seen recently were significantly decreased in most goods such as lighters, ash trays, T-shirts, compact discs, hats, jeans, pens, knapsacks, video tapes and laser discs (Figure 11). Many students had still seen cigarette advertisements on many non-cigarette goods. The variety of goods used for cigarette advertisement had increased as reflected by a remarkable rise of 'other' goods from 1% in 1994 to 13% in 1999.
10. The perceived attractiveness of all cigarette brands had reduced by 4 (Came] to 14 (Marlboro) percentage points (Figure 12). While Marlboro was the most attractive (30%) followed by Salem (22%) in 1994, they had become equally attractive to students in 1999 (both 16%). Marlboro and Salem remained the two brands which the students most liked to smoke and "usually smoked". The students who liked to smoke "no specific brand" reduced dramatically from 42% to 12% and those who usually smoked "no specific brand" from 33% to 11% (Figure 13).

11. Significantly more ever-smokers had used empty cigarette packs to exchange for tickets (12% in 1999 vs 8% in 1994) or goods (14% vs 10%) (Figure 14). Participation in cigarette sponsored activities had significantly reduced by 13% points in ever-smokers and 16% points in never-smokers. The risk ratios (estimated by odds ratios) for participation in the above three cigarette promotions activities were 3.8, 3 and 1.5, respectively, meaning that ever-smokers were 280%, 200% and 50% more likely to participate in these activities than never-smokers (Figure 14a). These risk ratios (RRs) were greater than those of 2.4, 2.6 and 1.3 in 1994, suggesting that cigarette promotion activities had become more strongly associated with smoking in youth.

12. The perceived attractiveness of cigarette advertisements to students has reduced for both ever-smokers and never-smokers. The proportion of students who perceived that Marlboro advertisement was attractive has reduced from 56% to 41% in ever-smokers and 20% to 7% in never-smokers (Figure 15). However, students who perceived that cigarette advertisements was attractive were much more likely to have ever smoked with RRs from 4.5 to 9.0 in 1999, which were much greater than those of 2.4 to 6.0 in 1994 (Figure 15a). Although cigarette advertisements were perceived to be attractive by fewer students, the association between perceived attractiveness and smoking had become much stronger.

Smoking and health

13. Smoking status of the students can also be classified into six categories: (a) never smoked, (b) tried once or a few times, (c) used to smoke but did not smoke now, (d) sometimes smoked, but smoked less than 1 cigarette per week, (e) smoked 1-6 cigarettes per week and (f) smoked more than 6 cigarettes per week. Figure 16 shows decreased prevalence in "tried only" and "used to but stopped" categories and...
increased prevalence in "smoked >6 cigarettes per week" in 1999 when compared with 1994.

14. The respiratory symptoms of students increased with the amount of cigarettes smoked as indicated by the 6 categories. In 1999, the prevalence of often having phlegm or cough rose from 22% in never-smokers to 49% in students smoking 6 or more cigarettes per week. Similar increasing trends were also observed for having phlegm or cough for at least 3 months in the last year (6% to 21%) and for often having throat problems (18% to 37%) (Figure 17). These produced increasing risk ratios with increasing cigarette consumption for all three respiratory symptoms (all showed highly significant trends) (Figure 17a). Such consistent exposure-response relations suggested that the associations were causal and that the information on smoking reported by the students was likely to be valid.

15. There was no consistent pattern of change between 1994 and 1999 in the prevalence of cough, phlegm and throat problems for never smokers, but for ever-smokers the prevalence for all three symptoms were increased (Figure 18).

Discussion

16. The results in this report were based on two highly comparable data sets (1994 and 1999). The students were from the same schools and were surveyed in the same months. The sample size in 1999 was doubled that in 1994 to increase the statistical power. As only 4,539 out of the 6,304 students in 1994 were used in the present study, the 1994 results presented here may differ slightly from those presented in the previous reports. As for the 1999 sample, only 8,737 out of 21,044 students were used in the present report. To achieve maximum comparability, some representativeness may have been compromised. A future report on the total sample of 21,044 students will produce more representative data for 1999.

17. As in previous reports, the validity of the students reported smoking status was checked by analysing its relationship with respiratory symptoms. The significant trends of increasing symptoms with increasing smoking can confirm that the smoking data are valid.

18. The small delay in starting experimenting and the small decrease in experimenters could be due to some limited success resulting from the efforts in preventing children from starting or experimenting with smoking. However, among those who did start to experiment, more have become current smokers. This increasing trend of current smoking is particularly serious among female students. The aims of smoking prevention should therefore include prevention of experimenting, as well as preventing continued smoking among those who have experimented. Special efforts are needed to prevent smoking in girls.

19. Purchase of suspected illegal cigarettes had increased. As a result of banning of tobacco sponsored activities, students’ exposure to such advertisements decreased. However, this was accompanied by increasing exposure through other means. Perception of tobacco advertisements has become more strongly associated with smoking.

20. Smoking is causing health problems in the students and there was an increase in the health burden from students who had smoked. Frequent and chronic phlegm, cough or throat problems in smokers should be recognized as important health problems.
a significant proportion of which is attributable to smoking. Parents, teachers and health professionals should remain alert about these common respiratory problems and try to find out whether such symptoms could be due to smoking, and to help the smokers quit smoking.

21. The prevention of smoking in children and young students cannot succeed with health education alone, if the health education effort is haphazard, if more and more adults, particularly young women, are seen to be smoking, and if the laws are too permissive (e.g. allowing smoking in restaurants and tobacco advertisements in retailing outlets) or are not enforced. Previous efforts altogether in the past 5 years had made a small progress, but the overall situation has become worse, particularly in girls. There are increasing trends of smoking in young people, particularly females, in many countries. Without the past efforts, the Hong Kong situation could have been worse. Urgent measures are needed to stop or reverse this increasing trend of smoking in children and young people in Hong Kong.

Key Points

1. From 1994 to 1999, there was a small delay and a small decrease in experimentation with smoking in Form 1 to 3 students.

2. Since 1994, the prevalence of current smoking had increased by about 3-4 percentage points.

3. The increase in current smoking was observed in both male and female students, and the increase in Form 3 female students was the most striking, from 6% in 1994 to 12% in 1999.

4. In 1999 in students aged 16 or above (the older Form 3 students), the prevalence of current smoking was 20% in males and 13% in females. These prevalences were 5-6 percentage points higher than those in 1994.

5. More students had bought broken pack or suspected smuggled cigarettes. Fewer students had watched or participated in cigarette sponsored activities but more had used empty packs to exchange for tickets, gifts or goods. Fewer students were exposed to tobacco advertisements, although 44% saw tobacco advertisements on TV and 10% on the Internet.

6. Fewer students perceived cigarette advertisements as attractive, but such perception was more strongly associated with smoking experience.

7. Compared to students who had never smoked, students who smoked more than 6 cigarettes per week had much more frequent phlegm or cough (excess risk 240%), chronic phlegm or cough (excess risk 290%) and frequent throat problems (excess risk 170%).

8. Tobacco control efforts in the past 5 years have had some limited successes but overall the situation is getting worse, particularly in females. Urgent measures are needed to stop and reverse the increasing trend of smoking in young people.

References


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