LETTERS TO THE EDITOR

Letters intended for publication should be a maximum of 500 words, 10 references, and one table or figure, and should be sent to the editor at the address given on the inside front cover. Those responding to articles or correspondence published in the journal should be received within six weeks of publication.

Consumers' knowledge and beliefs about the safety of cigarette filters

EDITOR,—The primary purpose of the cigarette filter is reduction of tar in tobacco smoke.^{1,2} Filters also keep tobacco flakes out of smokers' mouths.¹ The standard filter used on cigarettes today contains 15 000 fibres per filter.¹

Several studies have demonstrated that the filter material (cellulose acetate fibres) can become detached.³⁻⁷ Pauly and colleagues have recently observed cigarette filter fibres in human lung specimens, indicating that the material is respirable.⁸ A study of filter fibres implanted in mice for six months demonstrated that fibres resist biodegradation.⁵ As a result of burning tobacco, the discharged fibres are also coated with tobacco tar, which contains carcinogens.⁵ Such inhaled filter fibres may pose a previously undefined health risk to the smoker beyond exposure to the chemical toxins found in tobacco smoke.⁵

We have found no mention of the problem of filter fibre fallout in advertisements for filtered cigarettes. On the contrary, consumer surveys demonstrate that many smokers believe that filtered cigarettes reduce the risks of smoking.⁹⁻¹¹

This study was undertaken to explore consumers' beliefs about cigarette filter safety and the ingestion/inhalation of cigarette filter fibres. Fifty three current smokers and 24 former smokers were interviewed while waiting in line at a division of motor vehicles office in Erie County, New York in the summer of 1997. Fewer than 5% of those approached refused to participate in the survey interview. Overall, the sample was 52% male and 48% female; 56% were aged 40 years or younger. A current smoker was defined as someone who has smoked 100 cigarettes in one's lifetime and currently smokes. Two thirds of the current smokers smoked more than 15 cigarettes per day. A former smoker was defined as someone who had smoked 100 cigarettes in one's lifetime, but who was not currently smoking at the time of the interview. Most of the former smokers (91%) had discontinued their smoking more than two years before the interview. All but two respondents (one current smoker and one former smoker) reported past use of filter tipped cigarettes.

The brief (approximately 10 minute) survey was administered by a trained research assistant who asked a series of questions designed to measure beliefs about the safety and benefits of cigarette filters. Table 1 displays the responses of smokers and former smokers to six questions. These data demonstrate that most consumers believe that: (1) filters make cigarettes safer; (2) are unaware of the possibility of loose fibres from cigarette

Table 1 Beliefs about the safety of cigarette filters and the problem of filter fibre fallout

Question		Smokers n (%)	Former smokers n (%)
Do you think a filter makes a cigarette safer than the same cigarette without a filter?	Yes	30 (58)	14 (58)
	No	22 (42)	10 (42)
Have you ever noticed if the filter material comes off in your mouth when you smoke?	Yes	3 (6)	1 (4)
	No	49 (94)	22 (96)
Have you ever heard of any research on whether filter material can get into smokers' lungs?	Yes	11 (21)	4 (17)
	No	42 (79)	19 (83)
If cigarette filter fibres are inhaled into the lungs or eaten, would you consider this an additional health risk beyond the exposure to tobacco itself?	Yes	47 (90)	22 (96)
	No	5 (10)	1 (4)
If you were to learn that some of the filter material is inhaled into your lungs, would this new knowledge increase your chances of quitting?	Yes	26 (50)	NA
	No	27 (50)	
If cigarette fibres become loose, and the cigarette companies are aware of this, do you think they have an obligation to warn the public about this?	Yes	53 (100)	24 (100)
	No	0 (0)	0 (0)

filters being ingested and/or inhaled into their lungs during smoking; and (3) cigarette companies should be required to inform consumers about potential for filter fibre fallout. Also, it appears that knowledge about the filter fibre fallout problem might influence at least some smokers to give up cigarettes. Although the sample was not selected to be representative of the entire US population, the consistency of responses across different age, sex, and smoking status groups strongly suggests that the findings from this survey would be reflective of the views of most consumers.

The health benefits associated with putting filter tips on cigarettes continues to be a hotly debated issue.¹²⁻¹⁴ It is now clear that cigarette filters do not make cigarette smoking a safe behaviour and may actually introduce smokers to new risks not associated with unfiltered cigarettes.

Smokers favour being better informed about the health risks of smoking.¹⁵ Cigarette manufacturers should be required to inform consumers about the potential for ingesting/inhaling filter material during smoking. In addition, cigarette manufacturers should be encouraged and/or required to utilise technology to design cigarette filters so as to reduce the problem of filter fibre fallout.¹⁶

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- 1 Norman A. Cigarette design and materials. In: Davis DL, Nielsen MT, eds. *Tobacco: production, chemistry and technology*. Malden, Massachusetts: Blackwell Science, Inc, 1999:353-87.
- 2 Browne CL. *The design of cigarettes*, 3rd ed. Charlotte, North Carolina: Filter Products Division, Hoechst Celanese Corporation, 1990.
- 3 Farr WK, Revere A. *Examination of whole cigarette smoke by light and electron microscopy*. New York: The Life Extension Foundation, 1958.
- 4 Johnson VC. Particle fall-out. Inter-office correspondence. Philip Morris, Inc, 14 April 1970.
- 5 Pauly JL, Allaart HA, Rodriguez MI, et al. Fibers released from cigarette filters: an additional health risk to the smoker? *Cancer Research* 1995;55:253-8.
- 6 Pauly JL, Stegmeier SJ, Mayer AG, et al. Release of carbon granules from cigarettes with charcoal filters. *Tobacco Control* 1997;6:33-40.
- 7 Collazo H, Crow WA, Gardner L, et al. Application of inertial impactors for the measurement of aerodynamic diameters of cellulose acetate fibers (abstract 64). 53rd Tobacco Science Research Conference, 1999.

- 8 Pauly JL, Stegmeier SJ, Allaart HA, et al. Inhaled cellulosic and plastic fibers found in human lung tissue. *Cancer Epidemiology, Biomarkers & Prevention* 1998;7:419-28.
- 9 Giovino GA, Tomar SL, Reddy MN, et al. Attitudes, knowledge, and beliefs about low-yield cigarettes among adolescents and adults. In: *Smoking and tobacco control monograph No. 7*. National Cancer Institute. The FTC cigarette test method for determining tar, nicotine, and carbon monoxide yields of US cigarettes: report of the NCI Expert Committee. Bethesda, Maryland: National Institutes of Health, 1996:39-57. (NIH Publication No 96-4028.)
- 10 Cohen JB. Smokers' knowledge and understanding of advertised tar numbers: health policy implications. *Am J Public Health* 1996;86:18-24.
- 11 Kozlowski LT, Goldberg ME, Yost BA, et al. Smokers are unaware of the filter vents now on most cigarettes: results of a national survey. *Tobacco Control* 1996;5:265-70.
- 12 Samet J. The changing cigarette and disease risk: current status of the evidence. In: *Smoking and tobacco control monograph No. 7*. National Cancer Institute. The FTC cigarette test method for determining tar, nicotine, and carbon monoxide yields of US cigarettes: report of the NCI Expert Committee. Bethesda, Maryland: National Institutes of Health, 1996:77-92. (NIH Publication No 96-4028.)
- 13 Thun MJ, Lally CA, Flannery JT, et al. Cigarette smoking and changes in the histopathology of lung cancer. *J Natl Cancer Inst* 1997;89:1580-6.
- 14 Djordjevic MV, Stellman SD, Zang E. Doses of nicotine and lung carcinogens delivered to cigarette smokers. *J Natl Cancer Inst* 2000;93:106-11.
- 15 Kozlowski LT, Goldberg ME, Sweeney CT, et al. Smoker reactions to a "radio message" that light cigarettes are as dangerous as regular cigarettes. *Nicotine & Tobacco Research* 1999;1:67-76.
- 16 Chehab F, Fietkau S, Arnold PF, et al. US Patent 5645087: Method of and apparatus for decontaminating the exposed surfaces of filter mouthpieces in smokers' products. Applicant: Hauoi Maschinenbau AG, 1997.

Smoking prevalence in New South Wales correctional facilities, 2000

EDITOR,—Since 1974, periodic national smoking prevalence studies have been published for the general Australian population.¹ However, similar studies on prison populations are non-existent. We report the results of a survey carried out during the year 2000 in 21 of 23 New South Wales (NSW) correctional facilities. These facilities contain about 93% of the state's total prison population.

We assessed smoking prevalence indirectly by auditing the weekly shopping lists presented by inmates in each facility for at least two consecutive weeks June to November 2000. We calculated the average number of inmates presenting shopping lists as well as the average number of inmates buying tobacco. These shopping lists are usually for non-food items, as food is provided for all inmates. Inmates found to have

purchased at least one packet of tobacco were recorded as regular smokers. This methodology was pilot tested in two correctional facilities (by comparing with observed number of smokers) and was found to provide an objective and reliable estimate of smoking prevalence.

Of the 5959 inmates who submitted shopping lists during the study period, 4294 (72%) were found to have purchased at least one packet of tobacco. Smoking prevalence ranged from 48–97%, with facilities at both extremes housing male, minimum security inmates.

Smoking prevalence was significantly higher among females ($n = 324/402$, 81%) compared with males ($n = 3980/5575$, 71%) ($p < 0.001$, 95% confidence interval (CI) 5.85 to 14.15).

Studies in the general Australian population reveal a downward trend in smoking patterns, from 40% adults in 1980 to 22% in 1998.^{2,3} Hence, the prevalence of tobacco use in NSW correctional facilities is currently more than triple that of the general Australian population. Also the higher prevalence of smokers among female inmates contrasts with the smoking trends in the general Australian population, with male smoking prevalence significantly higher than that of women.¹

About 77% of inmates in metropolitan jails smoke ($n = 1881/2430$), compared with 68% in non-metropolitan jails ($n = 2413/3529$)—a significant difference ($p < 0.001$, 95% CI 6.69 to 11.31). The smoking prevalence among inmates in the prison psychiatric hospital wards was 83% ($n = 66/80$), significantly higher than the average prevalence of smoker inmates in NSW correctional facilities ($p < 0.05$, 95% CI 1.76 to 19.48). Comparatively higher smoking prevalence for mentally ill individuals has been reported for the general US community.¹ Smoking rates are known to be consistently high in prison populations. For example, a 1991 statewide survey of 72 county jails in Wisconsin revealed that between 71% and 93% of inmates smoked.⁵

People who are educationally, socially or economically disadvantaged are at increased risk of becoming involved with the legal system, either as perpetrators or victims of crime.⁶ Within the context of “diffusion of innovation” theories,⁷ cohorts of prison inmates comprise socioeconomically marginal individuals, who are least likely to be affected by mainstream educational strategies for tobacco control. Unfortunately, prison settings were not specifically addressed in the current Australia National Tobacco Strategy.⁸ In most correctional facilities in Australia, there is the additional issue of indifference in social concern, and reluctance by correctional authorities to allocate resources and address tobacco use in prisons—an issue that is sometimes perceived as capable of disrupting the “peace” in correctional environments, through protests and riots by inmates.^{9,10}

Preliminary results from an ongoing pilot project on smoking cessation in NSW jails indicate that most inmates who smoke have comparatively less knowledge about tobacco. In line with the diffusion theories, such inmates may be considered not intrinsically unreachable, but as “laggards” who would catch up. Such an approach helps tobacco control workers to avoid victim blaming and focus attention on ways of speeding up the diffusion process. This may be achieved through individual and group counselling

sessions on tobacco cessation, wide distribution of prison based tobacco educational materials, and tobacco cessation programmes incorporating free nicotine replacement therapy. We advocate the introduction of national prison inmate smoking prevalence surveys, and greater attention to tobacco control in prisons.

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- Hill DJ, White VM, Scollo MM. Smoking behaviours of Australian adults in 1995: trends and concerns. *Med J Aust* 1998;168:209–13.
- Hill DJ, Gray NJ. Patterns of tobacco smoking in Australia. *Med J Aust* 1982;1:23–5.
- Commonwealth Department of Health and Aged Care. Australia's National Tobacco Campaign: Evaluation report volume two: 'Every cigarette is doing you damage'. Canberra, May 2000, 42–3.
- Lasser K, Boyd JW, Woodhandler S, et al. Smoking and mental illness—a population based prevalence study, 1991–1992. *JAMA* 2000;284:2606–10.
- Editorial. Cigarette smoking bans in county jails—Wisconsin, 1991. *MMWR Morb Mortal Wkly Rep* 1992;41:101–3.
- Mukherjee S, Carcach C, MacDonald D, et al. Occasional paper: National Aboriginal and Torres Strait Islander Survey: Law and Justice Issues, 1994, Cat no 4189.0, ABS, Canberra, 1998.
- Rogers EM, Shoemaker FF. *Diffusion of innovation*, 3rd ed. New York: The Free Press, 1983.
- Commonwealth Department of Health and Aged Care. National Tobacco Strategy, 1999–2002–3: A Framework for Action. Canberra, June 1999.
- Awofeso N. Controlling tobacco use in prisons. *Int J Tuberc Lung Dis* 1999;3:547–8.
- Spurgeon D. Canadian prisoners strike over smoking ban. *BMJ* 2000;321:1240.

Patterns of tobacco use in rural Udmurtia

EDITOR.—The purpose of the current study, which was carried out in 1995, was to explore the prevalence of mental disorders, including tobacco use, in Udmurtia. Udmurtia is a former Autonomous Soviet Socialist Republic that currently is a Constituent Republic of the Russian Federation. According to the census of 1989, the population of the republic is about 1.6 million. The total rural population is 485 890, with the majority of the population being of Udmurt (57.8%) and Russian (37.1%) ethnic origin. The Udmurts are similar to Estonians, Finns, and Hungarians in that they belong to the group of Finno-Ugric nations.

The study sample of 855 subjects was drawn by systematic random sampling from the lists of rural inhabitants in the age range 18–65 years. In order to explore tobacco use patterns we used a Composite international diagnostic interview 1.1,¹ which was designed for assessment of mental disorders (including

tobacco dependence) according to the criteria of the *International classification of diseases*, 10th revision (ICD-10), and the *Diagnostic and statistical manual of mental disorders*, third edition, revised (DSM-III-R). As in our study tobacco dependency showed nearly identical prevalence by both classifications, only data according to ICD-10 are presented.

The prevalence of lifetime smoking (current and ex-smokers) in our sample was 72.3% in men and 2.5% in women, which was slightly more than the average rate of smoking in Russia.² Sixty nine per cent (68.8%) of men and 2.3% of women were current smokers. The rate of tobacco dependent men (52.7%) was similar to the rate of heavy smokers (50.5%). Heavy smokers were defined as those who smoked 15 or more cigarettes per day. Nearly 60% of ever smokers had attempted to quit, but only 5% had been abstinent for more than one year.

We found an association between tobacco use and ethnicity. Russian men were more likely to be current smokers than Udmurt men (78.7% v 64.4% $p < 0.05$), although no association between the ethnicity and tobacco dependence was found. This suggests that Udmurts may be more vulnerable to tobacco dependence than Russians. A similar relation has been found for alcohol dependence.³ In Udmurt men there was a significant association between tobacco dependence and alcohol dependence (odds ratio 2.59, 95% confidence interval 1.39 to 4.88).

Our data also support an association between tobacco use and suicidal behaviour.⁴ A significant association was found between tobacco smoking and suicide attempts in Udmurt men. A suicide attempt was reported by 19 Udmurt men of whom 17 (89.5%) used tobacco ($p = 0.048$). Three of the four Russian men who had attempted suicide smoked cigarettes.

Tobacco is a leading cause of avoidable death in Russia.² The risk for smoking attributable morbidity and mortality increases the earlier in life smoking begins.⁵ In our study, more than half of all smokers (58%) had begun to smoke regularly before they were 20 years old, and 86% before 25 years old. The majority of smokers had a long duration of smoking: 95% of smokers had smoked regularly for five years or more, and 72% for 10 years or more. Moreover, the majority of smokers in our sample used cheap low quality cigarettes without filters that have high nicotine and tar contents, that also increase considerably the risk of mortality.⁶ The findings of this study highlight the urgent need for a more effective tobacco control policy in the region of Udmurtia. The various public health measures that may help to reduce smoking, particularly among the young men, should be vigorously applied.

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1 World Health Organization. *Composite international diagnostic interview 1.1* (CIDI); 1993.

2 McKee M, Bobak M, Rose R, et al. Patterns of smoking in Russia. *Tobacco Control* 1998;7: 22–6.

- 3 Pakriev S, Vasar V, Aluoja, *et al.* Prevalence of ICD-10 harmful use of alcohol and alcohol dependence among rural population in Udmurtia. *Alcohol Alcohol* 1998;33:255–64.
- 4 Tanskanen A, Viinamäki H, Hintikka J, *et al.* Smoking and suicidality among psychiatric patients. *Am J Psychiatry* 1998;155:129–30.
- 5 Anon. Incidence of initiation of cigarette smoking—United States, 1965–1996. *MMWR Morb Mortal Wkly Rep* 1998;47:837–40.
- 6 Armadans-Gil L, Vague-Rafart J, Rossello J, *et al.* Cigarette smoking and male lung cancer risk with special regard to type of tobacco. *Int J Epidemiol* 1999;28:614–19.

BOOK

Book reviews and books of interest to "Tobacco Control" should be sent to the editor at the address given on the inside cover

Twice tested: getting inside policy formulation

The passage of tobacco control laws: Thai Davids versus transnational tobacco Goliaths. Hatai Chitanondh. Bangkok: Thailand Health Promotion Institute, 2000. ISBN 974-87628-5-8. 190 pages. Available through IDRC, 250 Albert Street, PO Box 8500, Ottawa, Ontario K1G 3H9, Canada.

Case study report: global analysis project on the political economy of tobacco control in low- and middle-income countries. J Patrick Vaughan, Jeff Collin, and Kelley Lee, eds. London: London School of Hygiene and Tropical Medicine, 2000. ISBN 0 902657 67 4. 150 pages. Project sponsored by the Tobacco Free Initiative, WHO Geneva.

One should not miss the chance to understand processes of strong policy formulation. These two books give ample opportunity for comparison and thoughtfulness about policy making. Both deal with tobacco control

policy issues and Thailand, making them particularly useful in Asia and for low to middle income countries. Hatai Chitanondh has put together a personal retrospective tracing events over the nearly three years (1989–92) it took to pass two Thai comprehensive tobacco control laws. This occurred during and after Thailand resisted the 301 provision on the US Trade Act threatening trade retaliation if Thailand failed to open its market to US cigarettes. When the General Agreement on Tariffs and Trade (GATT) decision required Thailand to open its market, there was an unwritten understanding in Thailand that there would be immediate legislation to limit the impact of the resulting market expansion. It was far from clear what kind of tobacco control legislation could be passed, considering limited past legislation and the political circumstances of the time.

Thailand's long fight to resist entry of foreign cigarettes was primarily a defensive effort, while the passage of the two laws was a visible, positive initiative reflecting strong resolve and an emerging tobacco control direction. Chitanondh's book shows who the players in this effort were and how they succeeded in passing two complementary tobacco control measures with sweeping articles on advertising, sales and marketing as well as environmental provisions prohibiting or limiting public smoking.

The main thrust of the book involves the processes of political education and strategising. While provisions of the two laws are mentioned, the specific content of the legislation is not discussed in detail except when it is controversial—that is, contested by opponents.

The second book was written by researchers from the London School of Hygiene and Tropical Medicine. They conducted a political analysis funded by the Tobacco Free Initiative of the World Health Organization. Their political economy approach from social epidemiology concentrates on mapping the contextual, organisational, and personal features of the tobacco control situation in Thailand and Zimbabwe. These case studies were part of the second phase of their policy investigation whose purpose includes contributing to the FCTC (Framework Convention on Tobacco Control) process of the WHO and the development of guidelines to

assist policy research in other low and middle income countries.

Since the purpose is a deeper understanding of the quantitative facts and figures shown in the numerous tables, figures, and appendices of this volume, qualitative interview methods were used along with position mapping to illuminate tobacco control policy efforts. "Tobacco control issues were analysed across categories of tobacco production, consumption and health promotion."

An identified key future action is the passage of the enabling bill for the Thai Health Promotion Bill now before the National Assembly. As identified in both books, actions of non-governmental organisations (NGOs) are likely to be central. Thus, I found it interesting that the case report editors feel that academic research institutions are preferable for further research. In fact, the majority of the case findings in the Thai case report come from NGOs (Action on Smoking and Health, and the Thailand Health Promotion Institute) and their leaders. In Thailand, to exclude the research capability and/or information from NGOs would be a mistake.

In another respect, I wonder if the call to expand political economy studies and a broader international strategy for tobacco control research is being considered in light of the larger situation. The utility of the expansion of this kind of research must be balanced with the already recognised need to fund advocacy programmes to get timely policy adoption using accepted best tobacco control methods. Frankly, it is often more palatable for countries and funders to study tobacco control policy than to be responsive to strategic opportunities for policy adoption.

I found a lot of useful information in these two slim volumes. Tobacco control can be viewed both as an art and a science. Hatai Chitanondh deals with the strategic art while the case study report presents an important policy analysis that is useful in policy formulation. Both views benefit by focusing on the essential goal of policy change and including all that seek it.

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