

Research paper

Levels and correlates of awareness of tobacco promotional activities among adult smokers in Malaysia and Thailand: findings from the International Tobacco Control Southeast Asia (ITC-SEA) Survey

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ABSTRACT

Aim: To examine the impact of tobacco advertising policy on adult smokers' awareness of tobacco promotion in two developing countries—Malaysia and Thailand.

Methods: Data from 2004 Malaysian and 2000 Thai adult smokers who participated in the baseline wave of the International Tobacco Control Southeast Asia survey (ITC-SEA). Respondents were asked in a face-to-face interview their levels of awareness of tobacco advertising and promotional activities in the last six months.

Results: Unprompted awareness of any tobacco marketing activities was very low in Thailand (20%) but significantly higher in Malaysia (53%; OR = 5.6, 95% CI: 3.5 to 8.9, $p < 0.001$). When prompted about specific locations, Thai adult smokers reported very low recall of tobacco advertising where it was banned, being highest around point of sale, particularly street vendors (7.5%). In contrast, Malaysian adult smokers reported significantly higher levels of awareness of tobacco advertising in all locations (range = 17.7% noticing in disco lounges to 59.3% on posters) including where they are notionally banned (for example, billboards).

Conclusions: These findings demonstrate that comprehensive tobacco advertising legislation when well implemented can lead to dramatic decline in awareness of tobacco promotion, thus supporting strong implementation of Article 13 of the Framework Convention on Tobacco Control.

Tobacco companies rely heavily on marketing activities to increase the sale of their products and have invested heavily in these activities. Marketing involves four groups of strategies organised in terms of the 4 Ps mnemonic of promotion, price, place and product.¹ Marketing activities have led to increases in prevalence of smoking generally, and in specific populations targeted by tobacco companies.²⁻³ The World Health Organization's Framework Convention on Tobacco Control (FCTC) calls for comprehensive bans on all forms of marketing activities.⁴ Ratifying countries of the FCTC are required to comply with the requirements of the FCTC. Previous research, primarily from industrialised countries, has suggested that levels of awareness of tobacco promotional activity is a function of the extensiveness of the restrictions, possible loopholes in the rules, and

the degree of enforcement.⁵⁻⁶ Tightening rules can result in selective reduction in exposure.⁵ Comprehensive bans on advertising and promotional activities can help to prevent uptake⁷⁻⁸ and reduce tobacco consumption.⁹⁻¹⁰

Asia has been seen by the tobacco industries as an important market for the growth of the tobacco business.¹¹ Marketing is a key vehicle for achieving their goals. The extent and level of restrictions on tobacco advertising and promotional activities vary, reflecting the varying levels of tobacco control efforts in these countries. Thailand has been compliant with FCTC requirements for some time, but Malaysia was still in the process of implementing its policies at the time of this study. This has provided an opportunity to monitor and evaluate the implementation of policy initiatives stimulated by the FCTC in these countries.

Thailand, for example, is a leader in tobacco control in the region and has the most comprehensive restrictions on advertising and promotion.¹² The 1992 Tobacco Products Control Act outlawed most types of advertising, promotion and sponsorship, and has been reasonably well enforced, with none of the billboards, free samples or television and radio advertising seen in neighboring countries. However, the Asian financial crisis in 1997 gave the industry an opportunity to increase its indirect marketing activities to try to regain market share as many Thai smokers switched to cheaper hand-rolled cigarettes and Thailand saw a significant increase in product promotion, especially shopfront and point-of-sale advertising.¹³ Little is known of what has happened more recently.

Neighbouring Malaysia, with a population of 26 million (compared to 65 million in Thailand), and an estimated five million smokers (compared to 12 million in Thailand), has had less comprehensive advertising restrictions until more recently. Since 1982, the Malaysian government has banned direct cigarette advertising on television and radio.¹⁴ The ban was extended to all mass media in 1994.¹⁵ However, the legislation had major loopholes which allowed the tobacco companies to indirectly promote their products, often in the guise of promoting an alternative product with the same brand name and trademarks.¹⁶⁻¹⁷ In August 2002, the Malaysian government announced restrictions on indirect advertising of tobacco brand names

effective from January 2003,¹⁷ but it took another almost two years before it became law on 24 September 2004 under the Malaysian Control of Tobacco Products Regulations 2004.¹⁸

As formal channels for advertising and promotion are closed to the tobacco industry, tobacco companies are increasingly resorting to informal and harder-to-regulate channels or making use of indirect advertising.¹⁹ In Asia, it is not uncommon to find cigarettes being sold off the back of a truck, trishaw, pushbike or some such vehicle by street vendors. However, in Thailand this practice is disappearing especially for factory-made cigarettes. There are informal reports of street vendors having glossy tobacco-related displays and offering promotional items. It is unclear to what extent tobacco advertising and promotional activities seen around street vendors are part of tobacco company's systematic marketing strategies or are simply part of the effort of the mobile retailers to increase sales of their products. Street vendors are hard to effectively regulate as they can be mobile and thus harder to catch by enforcement personnel. Even if they are caught violating the laws, the small penalties that typically apply may not be a sufficient deterrent.

The current study presents data from the first wave of the International Tobacco Control-Southeast Asia (ITC-SEA) adult smokers survey to examine reported exposure to pro-tobacco promotional activities in both of these countries, a first of its kind to make such a comparison. These two countries were chosen because they are non-industrialised countries with varying level of tobacco control, and pragmatically had capacity to support population surveying. The levels of regulation on tobacco advertising, promotion and sponsorship in both of these countries at the time of the ITC-SEA baseline survey were notionally similar (see table 1) although, compared with Thailand, enforcement appeared to be weaker in Malaysia and the laws were only recently passed. The law to ban all indirect advertising in Malaysia (except for motor vehicle racing event) was formally implemented by the Malaysian government unannounced on 24 September 2004, about three months before the launch of our baseline survey, unknown to most, including us. This low-key introduction makes it seem likely that compliance would take some time to occur. As a result, we expected levels of awareness of promotions to be not much, if any, reduced from what they might have been before the laws were formally implemented. Thus, we expected higher levels of reported exposure to advertising and promotional activities in Malaysia than in Thailand. The aims of this paper were: (1) to examine adult smokers' levels of awareness of various tobacco promotional activities in two South East Asian countries—Malaysia and Thailand; in particular, how effective Thailand has been in eliminating awareness of pro-tobacco promotion; and (2) to determine the sociodemographic and behavioural correlates of noticing various promotional activities in each country.

METHODS

Sample and study design

Data are from a nationally representative sample of adult smokers aged at least 18 years from Malaysia ($n = 2004$, 1906 men and 98 women) and Thailand ($n = 2000$, 1846 men and 154 women), respectively. The gender difference reflects the low smoking prevalence among women in both countries. They were interviewed face to face between January and March, 2005. In Thailand a combined eligibility and cooperation rate of 0.587 was achieved. In Malaysia, the combined rate was 0.324, reflecting the difficulty of accessing a more urbanised and heterogeneous population. Characteristics of both samples are

Table 1 Levels of regulation on tobacco advertising, promotion and sponsorship in Malaysia and Thailand at wave 1 survey (January–March 2005)

| | Malaysia | Thailand |
|---|----------|----------|
| Mass media | | |
| Television | B | B |
| Radio | B | B |
| Posters | B* | B |
| Billboards | B* | B |
| Newspapers/magazines | B | B |
| Specific venues | | |
| On shop/store window or inside shops/stores | B* | B* |
| On or around street vendors | N | B* |
| In coffee shops | B* | B |
| In discos/karaoke lounges or other entertainment venues | B* | B |
| Sponsorships | | |
| Sporting events | B*† | B‡ |
| Arts/music/fashion events | B* | B‡ |
| Promotions | | |
| Free samples of cigarettes | B | B |
| Special price offers for cigarettes | B* | B |
| Free gifts/discounts on other products | B* | B |
| Clothing or items with cigarette brand/logo | B* | B* |
| Competitions linked to cigarettes | B | B |

B = complete ban; N = no ban; *not enforced by public health officers; †exclude motor vehicle racing events; ‡exclude tobacco company name.
Source: Southeast Asia Tobacco Control Alliance.

presented in table 2. In Thailand, our sample is similar to other surveys that aimed for representative samples, but no appropriate comparison for Malaysia was available.

The respondents were selected based on a multistage cluster sampling procedure. The primary strata consisted of regions (five in Thailand, six in Malaysia). In Thailand, respondents were selected from Bangkok and two provinces in each of Thailand's four regions: Chiang Mai, Phrae, Nakhon Ratchasima, Nong Khai, Nakhon Pathom, Samut Sakhon, Nakhon Si Thammarat and Songkhla. In Malaysia, respondents were drawn from one state in each of the country's six zones (the six states were Kedah, Selangor, Johor, Terengganu, Sabah and Sarawak). For both countries, within each state or province, there was a secondary stratification into rural and urban regions. Subdistricts and communities were selected within urban and rural districts, with probability proportional to population size in both Thailand and Malaysia, for a total of 125 sampling clusters of about 300 households in each country.

Households were selected within each cluster using systematic sampling methods in Malaysia (where one of every four dwellings was selected systematically for interview) and simple random sampling in Thailand until the respondent quota (16 adult smokers) in each cluster was filled. Once an eligible household was identified and contacted, interviewers enumerated all household members. In households with more than one eligible respondent per quota cell, respondents were randomly selected by using a "Kish Grid."²⁰ Smokers were current smokers who smoked at least weekly and had smoked at least 100 cigarettes in their lifetime.

The face-to-face interviews (in English or Malay in Malaysia and in Thai language in Thailand) took on average about 50 minutes. All survey questions and study procedures were standardised as far as possible across the two countries. Additional information on the research design and survey methodology is available (see Thompson *et al*²¹).

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Table 2 Sample characteristics for Malaysia (n = 2004) and Thailand (n = 2000)

| | Malaysia (%) | Thailand (%) |
|--|--------------|--------------|
| Age (years) | | |
| 18–24 | 17.0 | 6.7 |
| 25–39 | 32.9 | 24.5 |
| 40–54 | 31.1 | 41.1 |
| 55+ | 18.9 | 27.7 |
| Sex | | |
| Male | 95.3 | 94.5 |
| Race | | |
| Malay | 58.1 | – |
| Chinese | 22.2 | – |
| Indian | 6.7 | – |
| Thai | – | 98.1 |
| Other | 13.1 | 1.9 |
| Income | | |
| Low | 34.5 | 37.6 |
| Medium | 31.7 | 33.3 |
| High | 33.8 | 29.1 |
| Education levels | | |
| No schooling/elementary | 26.1 | 75.1 |
| Secondary | 61.6 | 17.5 |
| Post-secondary | 12.3 | 7.5 |
| Locality | | |
| Rural | 39.2 | 73.9 |
| Urban | 60.8 | 26.1 |
| Cigarette per day | | |
| 1–5 | 15.7 | 19.1 |
| 6–10 | 29.6 | 35.1 |
| 11–20 | 49.3 | 38.2 |
| 20+ | 5.4 | 7.6 |
| Time to first cigarette upon waking | | |
| Immediately | 10.6 | 24.8 |
| Before breakfast | 10.0 | 40.5 |
| With or after breakfast | 71.0 | 31.7 |
| Later in the day | 8.4 | 2.9 |
| Type of cigarette smoked | | |
| Factory-made only | 82.4 | 41.8 |
| Roll-your-own only | 7.7 | 32.9 |
| Both | 9.9 | 25.3 |

Percentages are weighted to the age and sex distribution of the smoking population in each country.

Dependent variables

Salience of pro-smoking cues

"In the last 6 months, how often have you noticed things that are designed to encourage smoking or which make you think about smoking?" with response options "never, once in a while, often and very often."

Cued awareness of tobacco marketing

Respondents were asked about awareness of three types of tobacco marketing: (1) advertising; (2) sponsorship; and (3) promotions. For advertising, respondents were asked "Still thinking in the last 6 months, have you noticed cigarettes or tobacco products being advertised in any of the following places: television, radio, posters, billboards, newspapers or magazines, shop/store windows or inside shops/stores where you buy tobacco, around street vendors, coffee shops, and discos/karaoke lounges, or other entertainment venues." For each location, they could answer "yes/no/don't know." For the purpose of analysis, we computed the following two composite

variables: (i) number of locations noticed advertising: the sum of all "yes" responses (total score ranges from 0 to 9), and (ii) any location noticed advertising which is scored as 1 for those who noticed advertising in any of the nine locations and 0 otherwise. For sponsorship, respondents were asked about awareness of any sport or sporting event sponsored by or connected with either cigarette brands or tobacco companies; and also any similar sponsorship of music, theatre, art or fashion events (coded 1 for noticing either and 0 otherwise). For promotions, respondents were asked about five types of tobacco promotion: free samples of cigarettes, special price offers, gifts/discounts, branded clothing or competitions (coded 1 for noticing any and 0 otherwise). We also computed two overall indices of awareness across the three types of tobacco marketing: (i) overall number of channels of tobacco marketing; and (ii) overall noticing of tobacco marketing in any channel.

Among other collected data used in this paper were socio-demographic variables (age, sex, annual household income, highest level of education, ethnicity and locality), daily cigarette consumption, time elapsed before smoking the first cigarette of the day and whether smoking mainly factory-made cigarette, hand-rolled cigarette or both.

Data analysis

All analyses were conducted using complex survey commands in Stata/SE Version 8.2 to adjust for clustering, stratification and sampling weights. Weights were calibrated to take into consideration household and individual within household and raised to the national level in each country to adjust for uneven representation by age, sex and rural-urban status. Differences in levels of awareness across country were examined using conventional χ^2 test for categorical measure and *t* test for the continuous measure. Logistic regression models were used to examine the relation between sociodemographic variables and likelihood of noticing tobacco promotional activities in each country.

RESULTS

Levels of awareness of tobacco advertising and promotion

Table 3 presents the overall salience of pro-smoking cues (unprompted recall) and levels of awareness of various promotional activities in various channels (prompted recall). For the unprompted recall measure, 17.6% of the Malaysian respondents reported noticing often or very often (52.8% at least once in a while) things that were designed to encourage or promote smoking in the last six months, compared to only 5.7% in the Thai sample (20.0% reported at least once in a while; OR = 5.6, 95% CI: 3.5 to 8.9, $p < 0.001$ for noticing often).

The marked difference between the two countries in levels of awareness remained for prompted awareness (see table 3). Noticing of tobacco promotions in any channel was 86.6% in Malaysia compared with 21.9% in Thailand. Across areas asked about, reported awareness levels were generally low or negligible in Thailand with "around street vendors" at 7.5% clearly the highest (see table 3). Given this, we explored the relation between noticing promotional activities around street vendors and those of other specific promotional activities to determine the extent to which they co-occurred (see table 4). Of those who noticed promotions around street vendors, 66.7% also reported noticing free samples of cigarettes, 43.1% also noticed special price offers for cigarettes and 23.9% also noticed tobacco ads on shop windows or inside shops.

Table 3 Reported levels of awareness of tobacco marketing activities by country

| | Malaysia (%) (n = 1954) | Thailand (%) (n = 1998) |
|---|----------------------------|----------------------------|
| Saliency of pro-smoking cues | | |
| Noticed often/very often | 17.6 | 5.7 |
| Noticed at least once in a while | 52.8 | 20.0 |
| Advertisements | | |
| Noticed tobacco ads | | |
| on TV | 50.4 | 1.6 |
| on radio | 23.2 | 1.1 |
| on posters | 59.3 | 2.0 |
| on billboards | 52.9 | 0.7 |
| in newspapers/magazines | 44.7 | 1.7 |
| on shops windows/inside shops | 54.9 | 3.5 |
| on/around street vendors | 45.6 | 7.5 |
| in coffee shops | 58.1 | 1.6 |
| in disco lounges | 17.7 | 2.2 |
| any venue above | 81.7 | 14.3 |
| Mean (SE) no of venues noticed tobacco ads | 3.96 (0.24) | 0.22 (0.04) |
| Sponsorships | | |
| Sports sponsorship | 23.3 | 3.4 |
| Arts sponsorship | 7.2 | 0.4 |
| Any type of sponsorship | 24.8 | 3.6 |
| Promotions | | |
| Free samples of cigarettes | 14.2 | 3.3 |
| Special price offers for cigarettes | 21.6 | 2.5 |
| Gifts/discounts on other products | 11.7 | 0.3 |
| Clothing with cigarette brand name or logo | 15.4 | 4.6 |
| Competitions linked to cigarettes | 8.5 | 1.4 |
| Any form of promotion | 34.0 | 9.4 |
| Mean (SE) overall no of channels of tobacco marketing | 4.98 (0.33) | 0.38 (0.05) |
| Overall noticing tobacco marketing in any channel | 86.6 | 21.9 |

The percentages are weighted to the age and sex distribution of each country. All country differences are significant at $p < 0.001$.

Correlates of noticing tobacco promotional activities

Table 5 presents logistic regression results for the correlates of noticing tobacco promotional activities in each of the three channels for Malaysia. For Thailand, we limited the comparison between the two countries to noticing advertising at or around street vendors. This is because of the low level of awareness reported by Thai smokers in all specific areas/venues except for street vendors, thus the aggregated data for each channel in Thailand is too reliant on summing very low frequencies, with the risk of cumulating error.

Table 5 shows that a range of demographic variables were related to noticing pro-smoking promotions, but aspects of smoking behaviour were not associated with noticing. In Malaysia, rural smokers were more likely to notice advertising, promotions and sponsorships than urban smokers (all p values at least < 0.05). Rural smokers were also more likely to notice advertising around street vendors in Malaysia ($p < 0.05$), but not in Thailand ($p = 0.147$). In Malaysia, age had varying associations

with noticing, although older (> 55) smokers were less likely to report noticing smoking in all settings. Female smokers were also less likely to notice promotions, although the effects were only significant around street vendors (in both countries).

Among the Malaysian respondents, we also explored whether length of time since the indirect ad ban (number of days elapsed between interview date and 24 September, 2004) had an effect on levels of noticing of tobacco marketing activities. We did this by repeating the above logistic regression analyses where number of days elapsed was added as a covariate and found as time went on, there was a marginal decline in noticing any tobacco advertising (OR = 0.98, 95% CI: 0.95 to 1.00, $p = 0.087$) but no significant effect on noticing any sponsorship or promotion ($p = 0.304$ and 0.444 , respectively).

DISCUSSION

A high proportion of adult smokers in Malaysia but only a small minority of those in Thailand reported noticing various kinds of

Table 4 Association between noticing tobacco ads around street vendors and awareness of other more prevalent marketing activities in Thailand

| | Noticing tobacco ads around street vendors | | |
|--|--|--------|-----------|
| | Yes (%) | No (%) | p Value |
| Noticed tobacco ads on shop windows/inside shops | 23.9 | 6.9 | < 0.001 |
| Noticed free samples of cigarettes | 66.7 | 5.5 | < 0.001 |
| Noticed special price offers for cigarettes | 43.1 | 6.6 | < 0.001 |
| Noticed clothing with cigarette brand or logo | 8.6 | 7.4 | 0.679 |
| Noticed sports sponsorships | 7.2 | 7.5 | 0.935 |

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Table 5 Sociodemographic and behavioural correlates of noticing tobacco promotional activities in Malaysia and Thailand

| Correlates | Malaysia, advertising Adj OR (95% CI) | Malaysia, promotions Adj OR (95% CI) | Malaysia, sponsorships Adj OR (95% CI) | Malaysia, street vendors Adj OR (95% CI) | Thailand, street vendors Adj OR (95% CI) |
|-------------------------|--|---|---|---|---|
| Age | | | | | |
| 18–24 | 1.86 (1.32 to 2.61)** | 3.04 (1.36 to 6.81)* | 1.35 (0.51 to 3.59) | 2.74 (1.21 to 6.18)* | 1.17 (0.25 to 5.52) |
| 25–39 | 1.13 (0.72 to 1.77) | 2.10 (0.93 to 4.72) | 1.41 (0.79 to 2.52) | 2.12 (1.23 to 3.67)* | 1.11 (0.45 to 2.74) |
| 40–54 | 1.55 (1.10 to 2.16)* | 1.63 (0.62 to 4.32) | 1.53 (0.83 to 2.83) | 1.65 (0.93 to 2.92) | 1.37 (0.78 to 2.40) |
| 55+ | Ref | Ref | Ref | Ref | Ref |
| Sex | | | | | |
| Female | 0.40 (0.13 to 1.19) | 0.77 (0.49 to 1.21) | 0.90 (0.30 to 2.69) | 0.42 (0.18 to 0.98)* | 0.17 (0.03 to 0.84)* |
| Male | Ref | Ref | Ref | Ref | Ref |
| Locality | | | | | |
| Rural | 2.30 (1.13 to 4.66)* | 2.25 (1.18 to 4.28)* | 2.94 (1.60 to 5.42)** | 2.09 (1.37 to 3.20)** | 2.41 (0.66 to 8.82) |
| Urban | Ref | Ref | Ref | Ref | Ref |
| Income | | | | | |
| Low | Ref | Ref | Ref | Ref | Ref |
| Medium | 0.85 (0.55 to 1.32) | 1.50 (0.89 to 2.52) | 1.61 (0.99 to 2.62) | 1.41 (0.96 to 2.08) | 0.51 (0.32 to 0.80)** |
| High | 0.92 (0.60 to 1.42) | 2.16 (1.23 to 3.78)* | 1.81 (1.18 to 2.79)* | 1.51 (1.02 to 2.24)* | 0.28 (0.15 to 0.51)*** |
| Education | | | | | |
| No schooling/elementary | Ref | Ref | Ref | Ref | Ref |
| Secondary | 1.77 (0.89 to 3.53) | 1.58 (0.92 to 2.74) | 1.03 (0.62 to 1.72) | 0.89 (0.57 to 1.41) | 1.35 (0.78 to 2.34) |
| Post-secondary | 2.24 (1.17 to 4.27)* | 2.58 (1.26 to 5.31)* | 1.38 (0.61 to 3.09) | 0.71 (0.23 to 2.22) | 0.23 (0.06 to 0.93)* |
| Cigarette per day | | | | | |
| 5 or less | Ref | Ref | Ref | Ref | Ref |
| 6–10 | 0.79 (0.41 to 1.53) | 0.79 (0.50 to 1.25) | 1.52 (0.78 to 2.94) | 0.83 (0.44 to 1.58) | 1.63 (0.64 to 4.17) |
| 11–20 | 0.91 (0.34 to 2.43) | 0.89 (0.54 to 1.49) | 1.09 (0.63 to 1.90) | 0.82 (0.43 to 1.58) | 2.08 (0.91 to 4.78) |
| 21+ | 0.89 (0.37 to 2.11) | 1.01 (0.41 to 2.52) | 0.78 (0.33 to 1.87) | 1.35 (0.36 to 5.04) | 2.02 (0.71 to 5.76) |
| Time to first cigarette | | | | | |
| Immediately | Ref | Ref | Ref | Ref | Ref |
| Before breakfast | 2.17 (0.71 to 6.67) | 0.62 (0.37 to 1.04) | 0.51 (0.14 to 1.85) | 1.11 (0.38 to 3.25) | 1.13 (0.73 to 1.74) |
| With/after breakfast | 1.46 (0.68 to 3.14) | 0.65 (0.37 to 1.15) | 0.80 (0.25 to 2.58) | 0.92 (0.31 to 2.71) | 1.06 (0.53 to 2.11) |
| Later in the day | 5.05 (0.80 to 32.08) | 0.72 (0.42 to 1.22) | 0.49 (0.12 to 2.03) | 1.02 (0.34 to 3.12) | 0.53 (0.10 to 2.86) |
| Cigarette type | | | | | |
| Hand-rolled | Ref | Ref | Ref | Ref | Ref |
| Factory-made | 2.18 (0.89 to 5.35) | 1.49 (0.89 to 2.47) | 1.62 (0.79 to 3.35) | 1.39 (0.59 to 3.30) | 0.46 (0.16 to 1.33) |
| Both | 0.99 (0.41 to 2.37) | 0.69 (0.33 to 1.41) | 0.85 (0.35 to 2.08) | 0.74 (0.33 to 1.68) | 0.98 (0.58 to 1.68) |

*Significant at $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; adj, odds ratios are adjusted for all other variables in the model.

advertising and promotional activities. Reported awareness in Thailand was concentrated around street vendors.

The marked difference in reported levels of awareness of tobacco advertising and promotions between the two countries bears testimony to the success of tobacco control efforts in Thailand, particularly its comprehensive advertising policy, which bans all forms of tobacco advertising, sponsorship and promotional activities.^{12 22} Our data suggest that presence of any form of advertising and promotions in Thailand is likely to be limited to those that are either difficult to regulate, or incidental or accidental.

Mobile street vendors form only a small minority of tobacco outlets in Thailand (only 3.3% of our sample reported that their most recent purchase was from such vendors) and yet they are where most advertising and promotional activities were reported. A high proportion of Thai smokers who reported noticing promotional activities around street vendors also reported noticing free samples of cigarettes and special price offers for cigarettes suggesting that such activities may be employed by the street vendors as a way of increasing cigarette sales. It is unclear to what extent these activities might be encouraged by the tobacco companies that supply the vendors with the cigarettes. Being mobile, these street vendors are harder to monitor by enforcement officials, thus, making them potentially very attractive as a source of advertising and

promotion activities for those interested in getting around the laws.

The differences between prompted and unprompted recall warrant a mention. In Malaysia, cuing increased overall recall markedly, while in Thailand it did not. This is consistent with Thais being sensitive to any promotions in a context where few occur, whereas Malaysians are more likely to have habituated to its more pervasive presence.

In interpreting the findings of this study, one needs to bear in mind that questions asking for recall of advertising or other low salience activity in the last six months are not precise measures. Typically, memories of advertisements or other events are not stored with a date. Thus, recall is really of an indeterminate period, with more salient events more likely to be recalled from before the time window and low salient events most likely to be recalled if relatively recent (but possibly not at all). This can result in considerable recall of events from way outside the defined period, as well as forgetting of low salient events within the period (the latter is less of an issue, since if forgotten, it is likely that these events have less impact).

Furthermore, smokers as a class are not dispassionate observers. What they notice will be affected by their propensity to observe and their active interest in things related to their smoking. For example, quitting activity and attendant cravings to smoke might sensitise smokers, as might thoughts about

quitting. As smokers know smoking is harmful and most regret ever having started,²³ this can trigger emotional responses, increasing the salience of everything to do with smoking. There is also likely to be variability in what is identified as tobacco promotion. Field reports indicate that there were occasional questions from respondents as to whether the questions are supposed to include anti-smoking advertisements and related material. Thus we are not able to discount the possibility that a proportion of reports may be due to anti-tobacco ads being mistaken for pro-smoking ones. As there was a lot more anti-smoking advertising in Malaysia in the months leading up to the survey, it could account for some of the between-country differences found. However, if this confusion occurred at all in Thailand, it would suggest that the laws were even more successful at eliminating pro-tobacco promotions than our results indicate.

The aforementioned limitations of the method limit our capacity to evaluate the effectiveness of the Malaysian law banning all indirect advertising activities. Further, we did not specifically ask respondents about their post-ban experiences, but asked more generally about the last six months, most of which included the post-ban period. For these reasons, some of the reported awareness by Malaysian respondents will refer to pre-ban experiences. The trend of a decline in reports of advertising as a function of date of surveying is consistent with some reduction in the amount of advertising post the rule changes. That all said, it remains probable that promotional activity was continuing to occur for all or most of the period between the ban and the point of survey. We will need to wait for subsequent waves of this survey to get a better picture of the success of the new laws.

We can draw much stronger conclusions about the impact of the previous Malaysian law. The data presented here indicate that the law failed to effectively restrict promotion (for example, 50% reported seeing tobacco ads on TV), supporting other qualitative studies^{15–17} and justifying the Malaysian government's decision to amend and strengthen the legislation. The failure of the past Malaysian laws demonstrates the critical importance of good legislative drafting, to eliminate loopholes and strong enforcement and surveillance to ensure the effects are as intended. Given the intentional and persistent efforts of the tobacco industry in testing the limits of legislation in the past, there is a need for ongoing monitoring and enforcement to ensure that the industry does not sidestep it again.

Data from this study indicate that, compared to older smokers, both the young and middle-aged Malaysian smokers were more likely to notice tobacco-related advertisements, whereas young smokers (that is, aged 24 years or less) were more likely to notice promotions. The age effect on noticing advertising might be because of a general tendency for younger people to report noticing things more.²⁴ However, the effect for promotions is more likely to reflect a deliberate strategy of staging tobacco promotions at venues young people tend to frequent (for example, discos). This is consistent with evidence of tobacco companies targeting specific groups such as women, youth and socially disadvantaged in other countries.^{25–26} The finding that rural Malaysian smokers were more likely to notice tobacco advertisement, promotions and sponsorships than their urban counterparts could be a salience effect; there is likely to be less advertising overall in rural areas, making what is there more salient. However it is possible that there might be a deliberate effort by the tobacco companies to advertise and promote their products in areas where they are harder to monitor for violation or enforcement is more lax. The greater awareness of tobacco

What this paper adds

- ▶ This study provides an insight into the impact of tobacco advertising policy on adult smokers' awareness of tobacco promotion in two developing countries (Malaysia and Thailand) with very different tobacco control histories.
- ▶ Thailand has had very strong tobacco control measures in place for many years while Malaysia has done so only more recently. Results indicate that Thailand has been very successful at reducing exposure to tobacco advertising, but not yet, at least, in Malaysia. This reinforces the need for tobacco advertising legislation that is comprehensive and well implemented, if declines in awareness of tobacco promotion are to be achieved.
- ▶ Findings support strong implementation of Article 13 of the Framework Convention on Tobacco Control.

promotions and sponsorships among the better educated and higher income group in Malaysia may also reflect targeting of those with the most resources to spend. However, the greater awareness of advertising around street vendors among the high income smokers in Malaysia is rather curious. The pattern in Thailand was very different. Here, the promotional activities around street vendors, the main sources, were more likely to be noticed by the socially disadvantaged, who presumably are more reliant on them.

In conclusion, this study demonstrates that Thai comprehensive tobacco advertising legislation has been effective in keeping exposure to all forms of tobacco advertising and promotional activities to a minimum except perhaps where it is hard to enforce such as around street vendors. The jury is still out on the effectiveness of the more recent indirect advertising ban in Malaysia. Overall, the findings reinforce the need for strong implementation of Article 13 of the FCTC.

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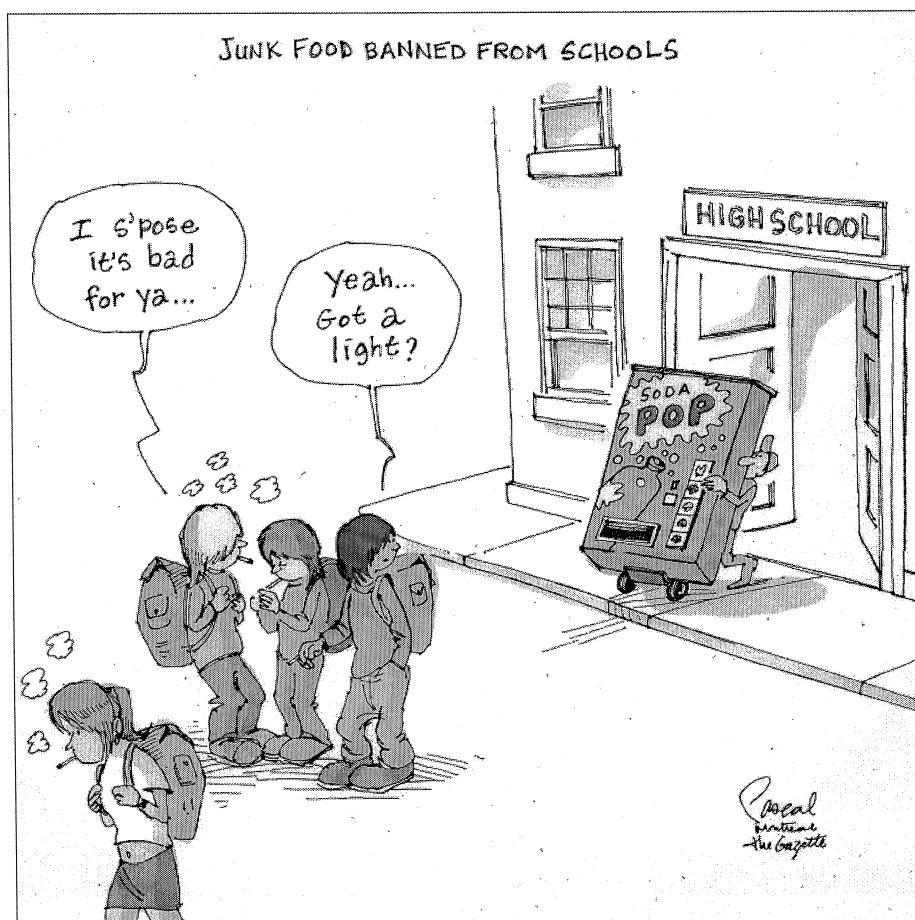
REFERENCES

1. McCarthy J. *Basic marketing: a managerial approach*. 13th ed. Irwin: Homewood IL, 2001.
2. Pierce JP, Lee L, Gilpin E. Smoking initiation by adolescent girls, 1944 through 1988. *JAMA* 1994;**271**:607–11.
3. Pierce JP, Choi WS, Gilpin EA, et al. Tobacco industry promotion of cigarettes and adolescent smoking. *JAMA* 1998;**279**:511–5.
4. Framework Convention on Tobacco Control (FCTC). *The Framework Convention on Tobacco Control Treaty*. <http://www.fctc.org/treaty/index.php#fctc> [Accessed 9 February 2007].
5. Harris F, MacKintosh AM, Anderson S, et al, for the ITC Collaboration. Effects of the 2003 advertising/promotion ban in the United Kingdom on awareness of tobacco marketing: findings from the International Tobacco Control (ITC) Four Country Survey. *Tob Control* 2006;**15**(Suppl III):iii26–iii33.
6. Lieberman A. The effect of enforcement of the Master Settlement Agreement on youth exposure to print advertising. *Health Promotion Practice* 2004;**5**(Suppl 3):66S–74S.
7. Hastings GB, Aitken PP. Tobacco advertising and children's smoking: a review of the evidence. *Eur J Market* 1995;**29**:6–17.
8. Rimpela MK, Aaro LE, Rimpela AH. The effects of tobacco sales promotion on initiation of smoking—experiences from Finland and Norway. *Scandinavian J Soc Med Suppl* 1993;**49**:5–23.

Research paper

9. **Laugesen M**, Meads C. Tobacco advertising restrictions, price, income and tobacco consumption in OECD countries, 1960–1986. *Br J Addict* 1991;**86**:1343–54.
10. **Saffer H**, Chaloupka F. The effect of tobacco advertising on tobacco consumption. *J Health Econ* 2000;**19**:1117–37.
11. **Mackay JM**. The tobacco industry in Asia: revelations in the corporate documents. *Tob Control* 2004;**13**(Suppl II):ii1–3.
12. **Chitanondh H**. Thailand country report on tobacco advertising and promotion bans. In: *Tobacco Control, WHO tobacco control papers*. World Health Organization. San Francisco: University of California, 2003.
13. **Vateesatokit P**, Hughes B, Ritthiphakdee B. Thailand: winning battles, but the war's far from over. *Tob Control* 2000;**9**:122–7.
14. **Teoh SK**. Smoking in Malaysia: promotion and control. *World Smoking and Health* 1984;**9**:27–30.
15. **Assunta M**, Chapman S. The tobacco industry's accounts of refining indirect tobacco advertising in Malaysia. *Tob Control* 2004;**13**(Suppl II):ii63–70.
16. **Morrow M**, Barraclough S. Tobacco control and gender in Southeast Asia. Part I: Malaysia and the Philippines. *Health Promotion International* 2003;**18**:255–380.
17. **Assunta M**, Chapman S. A mire of highly subjective and ineffective voluntary guidelines: tobacco industry efforts to thwart tobacco control in Malaysia. *Tob Control* 2004;**13**(Suppl II):ii43–50.
18. **Mohamed MHN**. Formula 1 race: sports and tobacco don't mix. http://www.nst.com.my/Current_News/NST/Friday/Letters/20070406080043/Article/index_html (Accessed 16 April, 2007)
19. **Cornwell TB**. The use of sponsorship-linked marketing by tobacco firms: International public policy issues. *J Consumer Affairs* 1997;**31**:238–54.
20. **Kish L**. A procedure for objective respondent selection within the household. *J Am Stat Assoc* 1949;**44**:380–7.
21. **Thompson ME**, Fong GT, Hammond D, *et al*. The methodology of the International Tobacco Control Four-Country Survey. *Tob Control* 2006;**15**(Suppl III):iii12–iii18.
22. **Vateesatokit P**. Tailoring tobacco control efforts to the country: the example of Thailand. In: de Beyer J, Waverley Brigden L, eds. *Tobacco control policy: strategies, successes and setbacks*. Washington, DC: World Bank, 2003:154–76.
23. **Fong GT**, Hammond D, Laux FL, *et al*. The near-universal experience of regret among smokers in four countries: findings from the International Tobacco Control Policy Evaluation Survey. *Nicotine Tob Res* 2004;**6**(Suppl. 3):S341–51.
24. **Farrelly MC**, Heaton CG, Davis KC, *et al*. Getting to the truth: evaluating national tobacco countermarketing campaigns. *Am J Public Health* 2002;**92**:901–7.
25. **Bansal R**, John S, Ling PM. Cigarette advertising in Mumbai, India: targeting different socio-economic groups, women, and youth. *Tob Control* 2005;**14**:201–6.
26. **Wen CP**, Chen T, Tsai Y-Y, *et al*. Are marketing campaigns in Taiwan by foreign tobacco companies targeting young smokers? *Tob Control* 2006;**14**:38–44.

The Lighter Side



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