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Support for and reported compliance among smokers with smoke-free policies in air-conditioned hospitality venues in Malaysia and Thailand: Findings from the International Tobacco Control Southeast Asia Survey

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Abstract

This study examined support for and reported compliance with smoke-free policy in air-conditioned restaurants and other similar places among adult smokers in Malaysia and Thailand. Baseline data (early 2005) from the International Tobacco Control Southeast Asia Survey (ITC-SEA) conducted face-to-face in Malaysia and Thailand (n=4005) were used. Among those attending venues, reported total smoking bans in indoor air-conditioned places such as restaurants, coffee shops and karaoke lounges were 40% and 57% in Malaysia and Thailand, respectively. Support for a total ban in air-conditioned venues was high and similar for both countries (82% Malaysian and 90% Thai smokers who believed there was a total ban) but self-reported compliance with bans in such venues was significantly higher in Thailand than in Malaysia (95% versus 51%, p<.001). As expected, reporting a ban in air-conditioned venues was associated with a greater support for a ban in such venues in both countries.

Keywords

air-conditioned hospitality venues; compliance; restaurants; smoke-free policy; support

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INTRODUCTION

Many countries in recent years around the world have introduced comprehensive nationwide smoke-free regulations to protect people from secondhand smoke (SHS) exposure. The move is consistent with article 8 of the FCTC, which requires ratifying countries to expand local and national regulations to protect people from SHS. [1] Smoke-free policies are usually effective in decreasing SHS exposure[2] and this improves health outcomes.[3] Evidence also suggests that smokers who live in places where smoking is prohibited in restaurants and bars are more likely to support these policies[4] and that the level of support by both smokers and nonsmokers increases following the introduction of such policies and also the longer the policies are in effect.[5,6] Compliance with smoke-free law is also generally high particularly if there is total ban in venues.[7]

However, most of the research to date is from western countries. Lam et al.[8] conducted the first study in Asia where they examined public opinion on smoke-free restaurant policies and the likely impact of a ban on patronage among Hong Kong adults. They found strong community support for smoke-free dining and an overall increase in patronage following implementation. Little else is known about how smoke-free policy in hospitality venues will be received by the general public and even smokers from other Asian countries, or developing countries where 70% of the world's 1.1 billion smokers live.[9] This study examines attitudes to smoke-free policy in Malaysia and Thailand. Both of these countries have ratified the FCTC. They represent two countries in this region with very different tobacco control environments – Thailand being a leader in tobacco control for many years while Malaysia, although stepping up its effort in recent years, remains comparatively weaker in its tobacco control efforts. The manner in which how smoke-free policy is applied in tropical countries such as Malaysia and Thailand may not be the same as those in temperate Western countries. In tropical regions, where there is no air-conditioning indoor areas often have open windows or doors to let breeze in because of the heat. Rules about smoke-free have in some cases focussed on air-conditioned areas as these are usually enclosed and are relatively easily defined. All rules in both countries except where we indicate elsewhere refer to air-conditioned spaces. It is important to understand how smoke-free policy will be received by smokers in these countries for at least two reasons. First, any evidence of public support for such policy will help to reassure governments that implementing such policy will not have adverse political consequences. Second, support for smoke-free policy will help to increase compliance with the law. Moreover, it will provide information as to whether public education is needed to explain the rationale for the policy to smokers.

This study employed baseline data from the ITC-SEA survey conducted in early 2005 in Malaysia and Thailand to help provide insight into the extent of exposure to SHS in hospitality venues as reported by current smokers from these two countries, as well as the factors that might help to promote positive attitudes towards, and actions consistent with, smoke-free laws. At the time of the survey, Thailand already had very extensive smoke-free laws that offered high standards of protection for most of its people, most of the time. At the time, many indoor air-conditioned public places including restaurants in Thailand had indoor smoking bans since November 2002; but entertainment venues like bars, nightclubs,

discos and pubs were exempted.[10] The smoke-free law has been quite well-enforced with individual smokers being fined 2000 baht (about US$56) and venue operators and owners fined 20,000 baht (about US$560) for flouting the law.

Unlike Thailand, in Malaysia smoking ban was introduced only more recently in air-conditioned restaurants and other public places under the government's Control of Tobacco Products Regulation in 2004, a few months before this survey data was collected. The current law still permits smoking in entertainment centres, nightclubs, bars, cafes, casinos and open areas. The law also allows for designated smoking area within air-conditioned restaurants (provided it is no more than one third of the total area and has an approved ventilation system).[11] Anecdotal reports indicate that implementation of the smoke-free law is poor and enforcement of the law is generally weak although the government has since our study pledged to step up its effort in enforcing the smoke-free laws.[12]

The specific aims of this study were (1) to describe levels of smoking restrictions in air-conditioned hospitality venues as perceived by adult current smokers in Malaysia and Thailand; (2) to examine reported levels of support for and compliance with smoke-free policies in such venues; and (3) to examine determinants of support for and reported compliance with smoke-free policies in these venues. We hypothesized that reported level of smoking restrictions, support for, and compliance with smoke-free policy, in these venues would be higher in Thailand than in Malaysia, and that the existence of smoke-free policy would be associated with greater support for such policy, and that support would be associated with better compliance where laws exist. From a social contagion perspective,[13] we also expected that those who had experienced the benefits of smoke-free policy in air-conditioned hospitality places would be more likely to support a similar policy being applied to non-air conditioned venues.

METHOD

Participants

The adult smoker sample consisted of 2,000 respondents from Thailand (1,846 men and 154 women) and 2,004 respondents from Malaysia (1,906 men and 98 women). This reflects the low smoking prevalence among women in both countries.

Sampling Design

Respondents were selected using a stratified multistage sampling design. The primary strata consisted of Regions (5 in Thailand, 6 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: Kedah, Selangor, Johor, Terengganu, Sabah and Sarawak. In both countries, within each province or state, there was a secondary stratification into urban and rural regions. Ultimate sample allocations within the secondary strata were made proportional to their sizes.

From this, 125 clusters of about 300 households were identified. Each cluster was given a quota of about 16 adult smokers. Sampling within a cluster proceeded until the respondent quota in each sampling category was filled. Once an eligible household was identified, interviewers enumerated all household members. Males and females were recruited separately to maximise female smoker participation - so both could be recruited from the same household. This means that the male and female data are not independent, and the relative proportions should not be used to estimate relative prevalence. A variant of the Kish Grid[14] was used when there were multiple eligible respondents of each gender.

Data Collection

Smokers were interviewed face-to-face, in interviews taking about 50 minutes. In Malaysia, questionnaires were available in either English or Malay; in Thailand, all respondents completed surveys in Thai.

The surveys were conducted between January and March 2005. In Malaysia, the study was administered by experienced interviewers from the Ministry of Health and from the National Poison Centre (University Sains Malaysia); fieldwork in Thailand was completed by experienced interviewers from the Institute for Population and Social Health Research (University of Mahidol). All survey questions and study procedures were standardized as far as possible across the two countries. There is additional information on the research design and survey methodology available.[15]

Measures

Smoke-free policy in air-conditioned hospitality venues were assessed by using the question: “Which of the following best describes the rules about smoking in air-conditioned places such as restaurants, coffee shops, and karaoke lounges where people go to socialize?” Response choices were: (1) smoking is not allowed in any indoor areas; (2) smoking is allowed only in some indoor areas; and (3) no rules or restrictions. Don’t know/unsure of the rules was permitted and coded by the interviewer as a separate response. Respondents were also asked if they visited such venues in the last 6 months. Of those who did, they were asked whether they visited these places at least weekly or less often. Compliance was assessed by asking if they smoked indoors in these places during their last visit.

Policy support was assessed by asking respondents whether smoking should be allowed in “all indoor areas, in some indoor areas, or not allowed indoors at all” in air-conditioned restaurants and other air-conditioned places. A similar question was also asked for non-air conditioned restaurants and other public eating areas. Respondents were also asked about how often they thought about the danger their smoking might be doing to other people (not at all to very often) and also whether they believed smoking causes lung cancer in nonsmokers from secondhand smoke (Yes/No). Respondents were also asked to indicate the number of cigarettes they smoked each day (recoded into categories of 1–5, 6–10, 11–20 and 21+ cigarettes per day).

In addition to the above, demographic variables including age, sex, educational attainment, and income levels were also collected. Income and education were recoded into three levels

that are only roughly comparable across the two countries due to differences in education systems and problems of equating incomes.

Statistical analysis—The data were analysed using Stata SE 10.1. Percentages reported in this paper were weighted unless otherwise specified. All bivariate and multivariate analyses were conducted on weighted data. Chi-square tests were used to examine country differences for categorical variables; whereas t-tests were used to compare means across countries for continuous measures of interest. Logistic regressions were conducted to determine variables associated with support for smoke-free policy in air-conditioned restaurants and public eating places. For these analyses, support measures were recoded into a binary variable: support total ban versus other. Level of smoking restriction measure was also recoded into: total ban versus other. Logistic regression analyses were also conducted to determine associates of reported compliance with smoke-free policy in air-conditioned restaurants and eating places among those who reported visiting the venues in the last 6 months and where there was a total ban in the venues. A cross-product term between country and each of the covariates in the regression model was used to examine for any by country interaction.

RESULTS

Sample characteristics, levels of restrictions and support

As shown in Table 1, the Thai smokers were generally older, more likely to be from rural areas, and of lower income and educational background than their Malaysian counterparts. The Thai smokers were more likely to be a lighter smoker than the Malaysian smokers but there were more Thais who smoked 21 or more cigarettes per day. The Thai smokers were also more likely to think about the harm of smoking to others and also more likely to believe that smoking causes lung cancer in nonsmokers from secondhand smoke than their Malaysian counterparts.

Overall, more Thai smokers reported visiting air-conditioned hospitality venues in the past 6 months than their Malaysian counterparts (60% vs 32%, $p<.001$) but the frequency of visits was similar (33% vs 39%, $p=.21$) (see Table 2). Among those attending venues, reported level of total bans was significantly higher in Thailand than in Malaysia (57% vs 39%). Significantly more Malaysian smokers were smoking indoors in these venues during their last visit compared to Thai smokers and this was true for both the reported presence and absence of a total ban in the venue visited (for both $p<.001$, see Table 2). Support for smoke-free policy in air-conditioned hospitality venues was significantly higher in Thailand than in Malaysia (90% vs 82%, $p<.05$) among those who reported being subjected to a total ban in the venues but the reverse was the case among those who reported not being subjected to a total ban in the venues (53% vs 76%, $p<.001$). In both Malaysia and Thailand, support for the policy was high among those who reported being compliant with the laws during their last visit to the venues (82% vs 76%, $p=0.14$). However, support was considerably higher in Malaysia than in Thailand among those who did not comply with the law in their last visit (73% vs 40%, respectively, $p<.01$).

Of the total sample, about one in five smokers from both countries were supportive of smoke-free policy in non-air conditioned hospitality venues and no country differences were found (Malaysia= 24% vs Thailand=23%, p=0.85). However, among Thai smokers only, a positive association was found between reported smoking restrictions in air-conditioned venues and support for smoke-free policy in non-air conditioned venues with those who reported being subjected to a total ban in air-conditioned venues being more likely to support a smoke-free policy in non-air conditioned venues (p<.001).

Associates of support for smoke-free air-conditioned restaurants & eating places

Preliminary analyses revealed that the predictive model examining variables associated with support for smoke-free policy in air-conditioned hospitality venues differed by country and thus, results were presented in Table 3 separately by country. As expected, Malaysian smokers who reported a total ban in air-conditioned hospitality venues were more likely to support a smoke-free policy in these venues. Those who chose not to smoke during their last visit were also more likely to be supportive of the policy than those who chose to smoke and this was also the case for those who did not visit such venues. Similar results were found among Thai smokers but the effects were considerably stronger (see Table 3). In addition to these, Thai smokers who were older, who smoked less and who thought often about the harm their smoking might be doing to other people were also positively associated with increased support for the policy. Curiously, Malaysian smokers who did not provide an income were more likely to not support a smoke-free policy in air-conditioned venues when compared to the low income group.

Associates of compliance in air-conditioned venues

As predicted and shown in Table 4, those from both countries who were supportive of smoke-free policy in air-conditioned venues were more likely to be compliant with the smoke-free law in these venues (Malaysia: OR=4.17, 95%CI: 1.03–16.95, p<.05; Thailand: OR=5.02, 95%CI: 2.32–10.86, p<.001). There was a curious negative relationship between believing smoking causes lung cancer in nonsmokers and compliance in Malaysia (OR=0.13, 95%CI: 0.02–0.89, p<.05) but the trend was in the expected direction for Thailand where those who endorsed such belief were more likely to be not smoking during their last visit to an air-conditioned venue (OR=4.54, 95%CI: 0.85–24.33, p=.075).

DISCUSSION

The findings from this study revealed that the reported compliance with smoking bans in air-conditioned restaurants and other public eating places was considerably higher in Thailand than in Malaysia. Smoke-free law came into effect in Thailand in November 2002 slightly more than two years before our baseline ITC-SEA survey was conducted whereas the law was introduced in Malaysia only in September 2004, about four months prior to our survey. The lower reported prevalence of smoke-free restaurants and other eating places among Malaysian respondents may reflect the fact that some establishments in Malaysia were still in the process of implementing the law at the time of our survey or that some patrons were still ignorant of the new law as suggested by the 4% who said they did not know or were unsure of the rules in the venues they visited. The higher prevalence in Thailand may also

reflect the comprehensiveness of the Thai smoke-free law where unlike Malaysia, there was no provision for a designated smoking area/room in air-conditioned venues like restaurants. Perception of whether there was a total ban might also be affected by the type of establishment. Air-conditioned establishments where a restaurant also has a bar are likely to be perceived as having a partial ban as the law only applies to the restaurant area. Given that Malaysia is an Islamic country and majority of our Malaysian respondents are Muslims, one would expect a lot more of these kinds of establishments in Thailand than in Malaysia. If so, then the reported prevalence of total ban venues might be underestimated in Thailand.

Consistent with other studies conducted in the West, support for smoking bans in air-conditioned venues was high in both Malaysia and Thailand among those who reported being subject to a total ban in the venues. Of the two countries, support was marginally higher in Thailand consistent with the longer period that smoke-free law has been in place compared to Malaysia. This finding suggests that smokers do come to accept the law more with the passage of time. However, where there was no total ban in venues, a reverse trend was observed. Support was still relatively high among Malaysian smokers but considerably lower among Thai smokers. A plausible explanation for this is that more of the Malaysian smokers were dissatisfied with the lack of a smoke-free environment in the air-conditioned venues they visited. This is consistent with the data showing that a substantial number of venues in Malaysia were reported as being without any smoking restriction whereas few existed in Thailand (14.1% vs 2.4%, respectively). The greater dissatisfaction among Malaysian respondents might also arise from the presence of designated smoking areas within air-conditioned restaurants with approved ventilation system where patrons are likely to be still exposed to SHS. In contrast, designated smoking rooms were allowed only in non-air conditioned venues in Thailand. Previous research has shown conclusively that ventilation system does not adequately protect patrons from SHS.[16,17] The only effective way to provide protection is to make all indoor environments completely smoke-free.

As evident in other research conducted in wealthier Western nations (e.g., Borland et al.[4]), a major predictor of support for smoke-free policy in air-conditioned hospitality venues in the current study is whether smokers were subject to a total ban in the venues they visited. Those being imposed with a total ban were more likely to be supportive of a smoke-free policy in air-conditioned venues compared to those who were not. In both Malaysia and Thailand, smokers who reported being compliant with the laws during their last visit to venues were also more likely to be supportive of a smoke-free policy compared to those who were non-compliant. This finding suggests that some smokers might be choosing which venues to attend depending on their attitudes towards smoke-free policy with those less supportive choosing places where they could easily flout the law. Younger smokers in Thailand were less likely to be supportive presumably because they were less likely to frequent such venues compared to older people. In addition, heavier smokers in Thailand were less likely to be supportive as would be expected as the only way they could smoke was to leave the venue, which could be quite inconvenient.

The finding of an association between the reported presence of a smoke-free policy in air-conditioned venues and support for such a policy in non-air conditioned venues particularly in Thailand lends some support for the social contagion model.[13] This finding suggests that

those who have experienced the benefits of a smoke-free environment in one context are more likely to support law that provides similar experiences in another context.

There is also evidence to suggest that compliance with smoke-free law is very high among the Thai smokers but very low among the Malaysian smokers. The high level of noncompliance in Malaysia could be due to poor enforcement. The availability of cigarettes for purchase at most restaurants, sending mixed messages to patrons, may be another contributing factor. Where there was no total bans being imposed on smokers, incidence of smoking was still very low among Thai smokers similar to when there was a total ban. This finding lends further support for the social contagion model[13] and suggests that the higher prevalence of smoking bans in Thailand in hospitality venues is having a positive effect on smokers attitudes and behaviour by allowing them to experience the benefits of a smoke-free environment and thus, encouraging them to continue not to smoke even in venues where there is no total ban.

It remains unclear why Malaysian smokers who believed that smoking might cause lung cancer in nonsmokers from secondhand smoke were less rather than more likely to be complying with smoke-free law as was the case with the Thai smokers. If this effect were real, then it suggests that education about the harm of secondhand smoke alone may not be enough to increase support and compliance with smoke-free laws among smokers in Malaysia. A renewed effort in enforcing the smoke-free law coupled with a law against the sale of cigarettes in hospitality venues may be the key to increase compliance.

In interpreting the findings of this study, several limitations warrant a mention. Firstly, smoking restrictions in venues were based entirely on self-report and this makes it difficult to know what exactly smokers were subject to. The current legislation in Malaysia allows for a designated smoking area/room within a smoke-free venue, which could easily confuse patrons into thinking that the venue does not have a total ban on smoking. Also, confusion could arise from poor implementation of the law by the proprietor and/or poor enforcement within a particular jurisdiction. Secondly, the findings here were based on smokers and their perception. They may not generalize to that of nonsmokers. Previous studies have indicated that support for smoke-free policy is stronger among nonsmokers.[8,18,19] Thirdly, the cross-sectional data does not allow us to determine definitively that smoke-free policy once implemented leads to increase support for such restriction. However, there is now strong evidence that support for smoke-free policies in many kinds of venues, including workplaces and restaurants, increases following their implementation (see Borland & Davey[2] for a review). We await data from subsequent waves of the ITC-SEA survey to allow us to examine this more conclusively.

Policy implications

The high level of support of smoke-free laws from smokers in both of these two countries should reassure their governments that they have done the right thing in banning smoking in air-conditioned hospitality venues. However, much more can be done. The Thai government should be applauded for their recent move to make all pubs, clubs and bars smoke-free effective from February, 2008.[20] For Malaysia, the next step should be to extend smoke-free laws to cover other areas including removing any exemption clauses in the laws and

disallowing designated smoking areas within smoke-free venues. As smoking becomes less normative in Malaysia, enforcement should no longer be as critical as demonstrated in Western countries where bans are largely self-enforcing once implemented.

The need for a 100% smoke-free environment for both of these two countries cannot be overstated as smoke-free laws are a highly cost-effective health intervention when they are introduced in combination with other tobacco measures.[21] It is estimated that in Southeast Asian countries like Thailand, comprehensive smoke-free laws prevent death and disease at a cost of US$0.25 per person, compared with US$7.71 per person for nicotine replacement therapy to stop smoking.[22] Local restaurant smoking bans have been shown previously to stimulate quit attempts among smokers[23] and may help to prevent youth smoking.[24] Recent evidence also shows that indoor particle concentrations in countries that have implemented comprehensive smoke-free regulations are on average 87% lower than in countries without comprehensive regulations.[25]

In conclusion, this study provides strong evidence to show that once implemented, support for smoke-free policies in air-conditioned hospitality venues are high and that compliance is also high where the policy has been well-enforced. Having experienced the benefits of a smoke-free environment, support for similar policy will likely extend to other places where there is currently no smoking ban.

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Table 1

Sample characteristics, cigarette consumption and smoking related thoughts by country

Variables	Malaysia N= 1969	Thailand N= 1998	By country differences
Age			
18–24	15.0	7.0	
25–39	33.1	24.3	P<0.001
40–54	32.6	41.2	
55+	19.3	27.4	
Sex (% male)	95.7	92.3	P<0.001
Locality (% rural)	39.9	73.9	P<0.05
Income (%)			
Low	32.6	37.5	
Medium	28.7	33.2	P<0.01
High	30.6	28.9	
Not provided	8.2	0.3	
Education (%)			
No school-lower elementary	27.1	75.1	
Upper elementary-Upper Secondary	61.4	17.5	P<0.001
Tertiary	11.5	7.5	
Cigarette per day			
1–5	16.5	22.0	
6–10	29.9	33.8	
11–20	48.2	36.9	P<0.01
21+	5.4	7.4	
Think about harm of smoking to others M (SE)	2.21 (0.05)	2.58 (0.05)	P<0.001
Believe smoking causes lung cancer in nonsmokers from SHS (%)			
Yes	80.3	90.1	
No	8.9	6.5	P<0.001
Don’t know	10.7	3.4	

NB. Percentages are weighted except for age and sex.

Table 2

Variables related to smoking bans in air-conditioned (AC) restaurants and other public eating venues among those who attended by country (n=1797)

Air-conditioned restaurants, coffee shops and karaoke lounges	Malaysia N=588	Thailand N=1209	By country differences
Frequency of visits to AC venues (%)			
At least weekly	38.8	33.1	P=0.21
Less often	61.2	66.9	
Reported smoking indoors during last visit (%)			
Total ban reported	49.2	4.9	P<0.001
No total ban reported	53.4	6.0	P<0.001
Support for smoke-free policy in AC venues (%)			
Total ban reported	82.2	90.2	P<0.05
No total ban reported	75.4	53.2	P<0.001
Smoked during last visit to venues	73.1	39.7	P<0.01
Not smoked last visit to venues	82.4	76.2	P=0.14
Reported level of bans in AC venues (%)			
Total ban in all indoor area	39.4	56.9	
Some indoor area	42.1	40.3	P<0.001
No restrictions at all	14.4	2.4	
Don’t Know/Unsure of the rules	4.1	0.3	

Table 3

Logistic regression predicting support for smoke-free policy in air-conditioned restaurants and other eating places for Malaysia and Thailand.

Variables	Support smoke-free air-conditioned venues	
	Malaysia N=1810	Thailand N=1980
	AOR (95%CI)	AOR (95%CI)
Reported bans in air-conditioned venues		
Total	2.48 (1.41–4.36)**	6.97 (4.37–11.09)***
Other	Ref	Ref
Visited air-conditioned venues last 6 months		
No	2.60 (1.51–4.49)**	4.22 (2.44–7.31)***
Yes & smoked last visit	Ref	Ref
Yes & not smoked	2.07 (1.17–3.66)*	5.06 (3.24–7.89)***
Age (years)		
18–24	Ref	Ref
25–39	0.79 (0.44–1.43)	1.45 (0.90–2.34)
40–54	0.73 (0.38–1.40)	2.06 (1.28–3.30)**
55+	0.60 (0.28–1.28)	3.63 (2.09–6.30)***
Sex – Male	Ref	Ref
Female	1.85 (0.55–6.22)	1.07 (0.59–1.93)
Locality		
Rural	0.57 (0.20–1.65)	0.88 (0.63–1.24)
Urban	Ref	Ref
Education		
Lower elementary	Ref	Ref
Upper secondary	0.73 (0.41–1.29)	0.80 (0.54–1.19)
Tertiary	0.62 (0.29–1.38)	1.18 (0.73–1.90)
Income		
Low	Ref	Ref
Medium	1.15 (0.66–1.98)	1.05 (0.71–1.56)
High	1.49 (0.73–3.03)	0.90 (0.69–1.17)
Not provided[a]	0.50 (0.26–0.98)*	---
Cig per day		
1–5	Ref	Ref
6–10	0.96 (0.62–1.50)	0.82 (0.59–1.13)
11–20	0.92 (0.59–1.43)	0.61 (0.44–0.84)**
21+	1.56 (0.54–4.50)	0.54 (0.36–0.81)**
Think danger to others	0.97 (0.80–1.18)	1.15 (1.00–1.32)*
Believe smoking causes lung cancer – No	Ref	Ref

Variables	Support smoke-free air-conditioned venues	
	Malaysia N=1810	Thailand N=1980
	AOR (95%CI)	AOR (95%CI)
- Yes	1.01 (0.55–1.85)	1.40 (0.96–2.05)
- Don't know	0.89 (0.34–2.38)	1.38 (0.76–2.49)

NB. AOR, adjusted odds ratios; CI, confidence interval;

* p<.05;

** p<.01;

*** p<.001;

[a] This was modelled as a separate category in Malaysia because a large proportion (7.9%) did not provide an income whereas only a small number (0.3%) did not do so in Thailand and was omitted from analyses.

Table 4

Logistic regression predicting compliance with smokefree policy in air-conditioned restaurants and other eating places among those who visited venues in last 6 months by country.

Variables	Not smoking in air-conditioned venues	
	Malaysia N=223	Thailand N=673
	AOR (95%CI)	AOR (95%CI)
Support smokefree air-conditioned venues		
Yes	4.17 (1.03–16.95)*	5.02 (2.32–10.86)***
No	Ref	Ref
Age (years)		
18–24	Ref	Ref
25–39	1.30 (0.29–5.75)	2.06 (0.45–9.42)
40–54	2.29 (0.89–5.91)	2.76 (0.80–9.51)
55+	5.18 (0.56–48.09)	3.71 (0.86–16.13)
Sex – Male	Ref	Ref
Female	1.18 (0.12–11.31)	8.17 (0.97–68.65)
Locality		
Rural	1.09 (0.27–4.51)	0.65 (0.19–2.19)
Urban	Ref	Ref
Education		
Lower elementary	Ref	Ref
Upper secondary	0.49 (0.14–1.72)	0.42 (0.15–1.16)
Tertiary	0.84 (0.19–3.71)	0.28 (0.06–1.29)
Income		
Low	Ref	Ref
Medium	0.81 (0.30–2.21)	0.54 (0.09–2.98)
High	0.76 (0.24–2.39)	0.26 (0.04–1.77)
Not provided	0.25 (0.04–1.69)	---
Cig per day		
1–5	Ref	Ref
6–10	1.18 (0.24–5.76)	0.58 (0.19–1.75)
11–20	0.28 (0.05–1.43)	0.74 (0.24–2.22)
21+	0.31 (0.07–1.35)	2.26 (0.19–26.23)
Think danger to others	0.98 (0.70–1.38)	1.04 (0.76–1.43)
Believe smoking causes lung cancer – No	Ref	Ref
- Yes	0.13 (0.02–0.89)*	4.54 (0.85–24.33)
- Don't know	1.14 (0.18–7.25)	1.30 (0.11–15.29)

NB. AOR, adjusted odds ratios; CI, confidence interval;

* p<.05;

** p<.01