


Attitudes towards FCTC Article 5.3 among tobacco control stakeholders in Thailand and their relationship with awareness of tobacco industry tactics

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ABSTRACT

Background Article 5.3 of the WHO Framework Convention on Tobacco Control (FCTC) was developed to protect public health policies from tobacco industry interference. The guiding principles of Article 5.3 emphasise a fundamental conflict between the tobacco industry's interests and public health interests (principle 1) and recommend that the government be accountable and transparent (principle 2), demand accountability and transparency from the industry (principle 3), and refrain from providing incentives to the industry (principle 4). This study quantitatively explored attitudes towards Article 5.3's guiding principles and recommendations among Thai tobacco control stakeholders and whether they were associated with awareness of tobacco industry tactics.

Methods We conducted an online survey of 703 individuals involved in tobacco control in Thailand. We employed multivariable ordinal logistic regression analysis to explore factors associated with attitudes towards Article 5.3's guiding principles and recommendations.

Results 441 participants responded to the survey (response rate 62.7%). Among the Article 5.3 guiding principles, principle 1 received the lowest agreement (83%), whereas the other three principles had an average of 93% agreement. In multivariable ordinal logistic regression, we found awareness of tobacco industry tactics was associated with Article 5.3's guiding principles: principle 1 (adjusted OR (AOR) 1.11; 95% CI 1.07 to 1.15; $p < 0.001$), principle 2 (AOR 1.07; 95% CI 1.02 to 1.12; $p = 0.002$), principle 3 (AOR 1.11; 95% CI 1.06 to 1.15; $p < 0.001$) and principle 4 (AOR 1.14; 95% CI 1.09 to 1.19; $p < 0.001$). In addition to awareness of tobacco industry tactics, age, years of experience in tobacco control, role in tobacco control and smoking by family members and friends were associated with perspectives towards Article 5.3's guidelines.

Conclusions This study provides quantitative evidence of the association between attitudes towards WHO FCTC Article 5.3 and awareness of tobacco industry tactics in Thailand. Denormalisation of the tobacco industry is thus a vital component of successfully implementing and enforcing Article 5.3.

WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ Although Article 5.3 of the WHO Framework Convention on Tobacco Control is widely acknowledged as having foundational importance in protecting public health policies from tobacco industry interference, its implementation is often limited, particularly in low-income and middle-income countries.
- ⇒ The obstacles to implementing Article 5.3 are poor attitudes and lack of awareness among government agencies, policy-makers and the general public, especially those with no health background.

WHAT THIS STUDY ADDS

- ⇒ This study quantifies attitudes towards Article 5.3's guidelines among Thai tobacco control stakeholders and whether they were associated with awareness of tobacco industry tactics.
- ⇒ Participants who were more aware of tobacco industry tactics were more likely to have positive attitudes towards Article 5.3's guidelines.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- ⇒ This study emphasises that the denormalisation of the tobacco industry is essential to successfully implementing and enforcing Article 5.3.
- ⇒ Young people, the tobacco industry's main target, were found to be less aware of Article 5.3; therefore, strengthening youth engagement in tobacco industry denormalisation in Thailand is recommended.

INTRODUCTION

Tobacco use causes more than 8 million deaths each year, including over 1 million from secondhand smoke.¹ In 2003, the WHO Framework Convention on Tobacco Control (WHO FCTC), the first global health treaty, was established in response to the globalisation of the tobacco epidemic.² The WHO identifies the tobacco industry as the most significant barrier to tobacco control since it

is aggressively undermining tobacco control measures, opposes regulations and continues to impede the implementation of the WHO FCTC.³ To safeguard tobacco control policies from the tobacco industry's commercial and other vested interests, the WHO FCTC Article 5.3 was adopted in 2008, with 4 guiding principles, 8 general and 34 specific recommendations.⁴ The fundamental conflict of interest between the tobacco industry and public health is highlighted in Article 5.3's guiding principles (principle 1); thus, the guideline recommends that the government must be accountable and transparent (principle 2), demand accountability and transparency from the industry (principle 3) and refrain from providing incentives to the industry (principle 4).³ WHO recommended that the FCTC Article 5.3 be implemented in all branches of government that might be interested in or able to influence public health policy for tobacco control.³ Furthermore, WHO requires FCTC Parties to provide periodic reports to the Convention Secretariat on their efforts to implement its provisions, including Article 5.3, using a standardised questionnaire.⁵

In 2023, WHO reported that over 70% of the parties had adopted at least one measure recommended in the guidelines for Article 5.3 to protect public health policies from tobacco industry interference.⁵ Although the data indicates a notable rise since the guidelines were issued, it was unclear how effectively these were implemented, particularly in low-income and middle-income countries.⁶ For example, WHO has recognised Thailand as a good example of good practice in implementing the Article 5.3 guidelines. After Thailand ratified the WHO FCTC in 2004, it actively implemented several tobacco control policies, remarkably reducing overall smoking rates from 23% in 2004 to 17.4% in 2021.⁷ However, like other countries, the FCTC Article 5.3 is only recognised by the Ministry of Public Health.⁸ Between 2022 and 2023, non-health departments in Thailand were lobbied by a non-government organization linked to the Philip Morris-funded Foundation for a Smoke-Free World to revoke the ban on e-cigarettes.⁹ Therefore, the score for the section on the tobacco industry participation in policy development and implementation increased from 1 in 2021 to 10 in 2023 (the higher the score, the higher the overall level of interference) and Thailand's ranking in the 2023 Global Tobacco Industry Interference Index dropped from 11 to 26.⁹

The obstacles to implementing Article 5.3 differ between nations. A common barrier to implementing Article 5.3 effectively was poor attitude and lack of awareness among government agencies, policy-makers, the general public and tobacco control stakeholders. Studies in Uganda, India, Bangladesh and Ethiopia found that levels of awareness and understanding of Article 5.3 were higher among officials in ministries of health and related health agencies but limited among non-health agencies.^{10 11} In 2018, a study conducted in the European Union (EU) discovered that key policy actors across EU institutions were generally unaware of the FCTC and

Article 5.3.¹² In 2023, a study in India found that individuals participating in tobacco control at the district level did not fully understand Article 5.3 and its guidelines.¹³ These studies explored awareness of Article 5.3 qualitatively but did not fully address all guiding principles and recommendations. Also, no studies have examined attitudes towards Article 5.3 among those involved in tobacco control and their relationship with awareness of tobacco industry tactics. This study explored attitudes towards Article 5.3's guiding principles and recommendations among individuals engaged in tobacco control in Thailand and whether they were associated with awareness of tobacco industry tactics. In addition, we looked into whether different groups in Thai tobacco control held differing views on Article 5.3.

METHODS

A self-administered online survey using Google Forms was conducted among three major groups of participants involved in tobacco control in Thailand: (1) tobacco control advocates supported by the Thai Health Promotion Foundation, (2) appointed experts of the Provincial Tobacco Products Control Committee (established by the Tobacco Products Control Act of 2017 to improve tobacco control at the local level) and (3) provincial tobacco control programme managers at Provincial Public Health Office.

To survey the first group, we obtained a list of current tobacco control projects from the Thai Health Promotion Foundation as of 1 April 2022. We then gathered names and contact information from project leaders, totalling 315 individuals. To identify participants in groups 2 and 3, we received names of active Provincial Tobacco Products Control Committee experts and programme managers from the Ministry of Public Health as of 1 April 2022. This yielded 313 provincial experts and 75 programme managers. Overall, 62.7% of participants responded to the survey. Members of Provincial Tobacco Products Control Committees (47.3%) responded less than tobacco control advocates funded by the Thai Health Promotion Foundation (67.9%) and Provincial Public Health Officials (92.0%).

The survey was deidentified to preserve privacy and encourage participants to report the truth.

Patient and public involvement

Patients or the public were not involved in the design, or conduct, or reporting, or dissemination plans of our research.

Dependent variables

The study's dependent variables are attitudes towards FCTC Article 5.3's guiding principles and recommendations (online supplemental table S1). We asked participants to rate the degree to which they agree or disagree with each of the Article 5.3 guiding principles³ on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). In addition, we developed questions to determine whether

participants agreed or disagreed on a 5-point Likert scale with Article 5.3's recommendations that had not yet been implemented in Thailand. Our studies include recommendations 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.8, 4.10, 4.11, 5.1, 5.2, 5.3, 5.4, 5.5, 7.1 and 7.2 (online supplemental table S1).³ For recommendation 2.1, we also specified whether each government agency (eg, Ministry of Health, Ministry of Commerce, Ministry of Finance) should interact with the tobacco industry only when and to the extent strictly necessary to enable them to regulate it and its products effectively.

Independent variables

We asked participants whether they were aware of the following fifteen tobacco industry tactics in Thailand (online supplemental table S2), as described by WHO: influencer marketing, international treaties, smuggling, lobbying, funding research, political funding, youth smoking prevention and education programmes, forging front groups and alliances, intimidation, involvement in public policy, revolving door, intimidation, public relations, corporate social responsibility and impeding law enforcement.¹⁴ Responses were scored 1 for 'yes' and 0 for 'no' or 'unsure'. We summed the scores of the 15 tactics to obtain an overall score of 0–15, where higher scores implied better awareness.

Other independent variables included in this study were participants' sex (male or female), age (years), tobacco control experience (years), tobacco control groups (tobacco control advocates supported by the Thai Health Promotion Foundation, appointed experts of the Provincial Tobacco Products Control Committee or provincial tobacco control programme managers at Provincial Public Health Office), smoking status (never or ever smoking), family or friends smoke (had family members, close friends or colleagues who smoke) and family or friends use e-cigarettes.

Statistical analysis

We used descriptive statistics to describe the data, including means, SDs and percentages. We used χ^2 statistics to compare categorical variables. We chose ordinal logistic regression for our analyses because we use a 5-point Likert scale to determine attitudes towards the FCTC Article 5.3's guiding principles and recommendations. In each model, we adjusted for awareness of tobacco industry tactics, tobacco control groups, age, sex, experience in tobacco control, history of smoking, and family or friends' smoking and vaping. The models exploring attitudes towards FCTC Article 5.3's recommendations were reported in online supplemental tables. The statistical analysis was conducted using Stata V.17, with $p < 0.05$ considered statistically significant.

RESULTS

Characteristics of the study's participants

441 participants completed the survey. **Table 1** describes the characteristics of the study's participants. The survey

Table 1 Background characteristics of study participants (N=441)

Characteristics of participants	% (n)
Sex	
Male	52.2 (230)
Female	47.8 (211)
Age, mean (SD)	48.1 (12.7)
<40	25.9 (114)
40 to <50	23.1 (102)
50 to <60	32.7 (144)
60 and up	18.4 (81)
Working experience in tobacco control: years, mean (SD)	6.6 (6.1)
Employment	
Funded by Thai Health	49.9 (220)
Provincial Public Health Official	15.2 (67)
Provincial Tobacco Products Control Committee	34.9 (154)
Smoking or vaping experience	
Ever smoking	13.4 (59)
Family or friends smoke	54.7 (241)
Family or friends use e-cigarettes	23.4 (103)
Aware of tobacco industry tactics	
0 tactics	11.3 (50)
1–3 tactics	16.1 (71)
4–7 tactics	21.3 (94)
8–11 tactics	22.7 (100)
12–14 tactics	17.5 (77)
15 tactics	11.1 (49)

included 230 (52.2%) males and 211 (47.8%) females, with a mean age of 48 years and a 7-year average experience working in tobacco control. Of the participants, 67 (15.2%) were provincial public health officials, 154 (34.9%) were Provincial Tobacco Products Control Committee experts, and 220 (49.9%) were tobacco control advocates who worked under ThaiHealth-funded projects. Among the participants, 13.4% had a history of smoking, 23.4% said they had friends and family who used e-cigarettes and 54.7% said they had friends and family who smoked. Of the 15 tobacco industry tactics asked in the survey, 50 participants (11.3%) had never heard of any, while 215 participants (48.7%) knew less than half of them.

Attitudes towards FCTC Article 5.3 guiding principles and recommendations

Among the four FCTC Article 5.3's guiding principles, 83% of participants believed (agree or strongly agree) that there was a fundamental and irreconcilable conflict between the tobacco industry's and public health policy interests (principle 1), 94.1% agreed that when

government agencies dealing with the tobacco industry, should be accountable and transparent (principle 2), 93% agreed that government agencies should require the tobacco industry to operate transparently (principle 3) and 93% thought the tobacco industry should not be granted incentives to establish or run their businesses (principle 4) (table 2).

Overall, 87.5% of participants agreed (agree or strongly agree) that all branches of government should avoid interacting, contacting or meeting with the tobacco industry except to enforce tobacco control regulations (recommendation 2.1). The agreements on recommendation 2.1 ranged from 89.6% (Ministry of Education) and 89.3% (Ministry of Public Health) to 84.6% (Ministry of Commerce); however, they were not statistically significant by the ministry ($p=0.502$) (online supplemental table S3).

When government agencies needed to interact with the tobacco industry, 98.2% of participants thought the government's action should be transparent and open to the public, such as holding a public hearing and having a report recorded as evidence that the public could examine (recommendation 2.2).

Participants' perspectives regarding recommendation 3 elicited mixed responses; 90.2% believed that government agencies should not accept, support, or endorse any agreements or arrangements with the tobacco industry and individuals working to benefit the industry, whereas 80.7% believed government agencies should not recognise, support or endorse tobacco industry-sponsored youth education programmes.

Online supplemental table S4 describes participants' attitudes towards FCTC Article 5.3's recommendations. There were broad agreements on the issues raised about potential conflicts of interest for government officials and staff involved in tobacco control (recommendation 4), requirements for the accuracy and transparency of data supplied by the tobacco industry (recommendation 5), incentives, privileges or benefits given to the tobacco industry in establishing or operating a business (recommendation 7) and investment in the state's tobacco industry to comply with the WHO FCTC (recommendation 8).

For example, 96.8% of participants thought government agencies should require officials, employees, consultants and contractors involved in tobacco control policy and enforcement to declare conflicts of interest, and 95% believed that employees of the tobacco industry or organisation promoting its interests should not be permitted to hold a position on any committee or advisory group that develops or carries out public health or tobacco control policy.

Additionally, 95.9% of participants thought that government agencies should establish rules to disclose or develop a registration system for tobacco industry operators, affiliated organisations and agents, including lobbyists acting on behalf of the tobacco industry. Also, 95.9%

of participants believed the tobacco industry should not be given any incentives, privileges or benefits to establish or operate a business, and 97.5% considered that the government should ensure that investments in the state's tobacco business did not violate the WHO FCTC (online supplemental table S4).

Factors associated with attitudes towards FCTC Article 5.3 guiding principles and recommendations

The ordered logistic regression revealed that awareness of tobacco industry tactics was significantly associated with FCTC Article 5.3's guiding principles (table 3): principle 1 (OR 1.11; 95% CI 1.07 to 1.15; $p<0.001$), principle 2 (OR 1.07; 95% CI 1.02 to 1.11; $p=0.002$), principle 3 (OR 1.10; 95% CI 1.05 to 1.14; $p<0.001$) and principle 4 (OR 1.13; 95% CI 1.09 to 1.18; $p<0.001$). After controlling for sociodemographic characteristics and risk factors, these associations remained statistically significant: principle 1 (adjusted OR (AOR) 1.11; 95% CI 1.07 to 1.15; $p<0.001$), principle 2 (AOR 1.07; 95% CI 1.02 to 1.21; $p=0.002$), principle 3 (AOR 1.11; 95% CI 1.06 to 1.15; $p<0.001$) and principle 4 (AOR 1.14; 95% CI 1.09 to 1.19; $p<0.001$). Similarly, higher awareness of tobacco industry tactics was associated with greater agreement with Article 5.3's recommendations (online supplemental table S5–7).

Other factors significantly associated with greater agreements towards FCTC 5.3's guiding principles included age and working experience in tobacco control (table 3). Older participants were more likely to agree with principle 1 (OR 1.03; 95% CI 1.02 to 1.04; $p<0.001$), principle 3 (OR 1.03; 95% CI 1.01 to 1.04; $p=0.003$) and principle 4 (OR 1.02; 95% CI 1.01 to 1.03; $p=0.023$). These associations remained significant after controlling for sociodemographic characteristics and risk factors: principle 1 (AOR 1.03; 95% CI 1.01 to 1.05; $p=0.001$), principle 3 (AOR 1.03; 95% CI 1.01 to 1.05; $p=0.003$) and principle 4 (AOR 1.03; 95% CI 1.01 to 1.05; $p=0.014$). The relationship between age and principle 2 was statistically significant after controlling for sociodemographic characteristics and risk factors (AOR 1.03; 95% CI 1.01 to 1.05; $p=0.029$).

Furthermore, participants with more years of working experience in tobacco control were likely to agree with principle 1 (OR 1.04; 95% CI 1.01 to 1.07; $p=0.020$). However, the association was insignificant after controlling for sociodemographic characteristics and risk factors (AOR 1.00; 95% CI 0.97 to 1.04; $p=0.899$).

Participants were likely to disagree with principle 4 (OR 0.67; 95% CI 0.45 to 0.99; $p=0.048$) if they had family members, close friends or colleagues who smoked. However, the association was insignificant after controlling for sociodemographic characteristics and risk factors (AOR 0.81; 95% CI 0.51 to 1.27; $p=0.359$).

Additionally, provincial public health officials were less likely to agree with principle 2 than tobacco control advocates who received funds from the Thai Health Promotion Foundation (OR 0.49; 95% CI 0.28

Table 2 Participants' attitudes towards FCTC Article 5.3's guiding principles

FCTC 5.3 guiding principles	Strongly disagree-disagree, n (%)			Neither agree nor disagree, n (%)			Agree-strongly agree, n (%)		
	Tobacco control advocates working under ThaiHealth -funded projects	Provincial public health officials	Provincial tobacco products control committee experts	Tobacco control advocates working under ThaiHealth- funded projects	Provincial public health officials	Provincial tobacco products control committee experts	Tobacco control advocates working under ThaiHealth- funded projects	Provincial public health officials	Provincial tobacco products control committee experts
All	21 (9.5%)	10 (14.9%)	13 (8.4%)	19 (8.6%)	6 (9.0%)	6 (3.9%)	180 (81.8%)	51 (76.1%)	135 (87.7%)
All	44 (10.0%)	31 (7.0%)	31 (7.0%)	31 (7.0%)	31 (7.0%)	31 (7.0%)	366 (83.0%)	366 (83.0%)	366 (83.0%)
Principle 1: There is a fundamental and irreconcilable conflict between the tobacco industry's interests and public health policy interests	21 (9.5%)	10 (14.9%)	13 (8.4%)	19 (8.6%)	6 (9.0%)	6 (3.9%)	180 (81.8%)	51 (76.1%)	135 (87.7%)
Principle 2: Parties, when dealing with the tobacco industry or those working to further its interests, should be accountable and transparent.	6 (2.7%)	2 (3.0%)	0	9 (4.1%)	6 (9.0%)	3 (1.9%)	205 (93.2%)	59 (88.1%)	151 (98.1%)
All	8 (1.8%)	2 (3.0%)	0	18 (4.1%)	6 (9.0%)	3 (1.9%)	415 (94.1%)	415 (94.1%)	415 (94.1%)
Principle 3: Parties should require the tobacco industry and those working to further its interests to operate and act in a manner that is accountable and transparent.	21 (5.5%)	0	0	10 (4.5%)	5 (7.5%)	4 (2.6%)	198 (90.0%)	62 (92.5%)	150 (97.4%)
All	12 (2.7%)	0	0	19 (4.3%)	5 (7.5%)	4 (2.6%)	410 (93.0%)	62 (92.5%)	150 (97.4%)

Continued

Table 2 Continued

FCTC 5.3 guiding principles	Strongly disagree-disagree, n (%)			Neither agree nor disagree, n (%)			Agree-strongly agree, n (%)		
	Tobacco control advocates working under ThaiHealth-funded projects	Provincial public health officials	Provincial tobacco products control committee experts	Tobacco control advocates working under ThaiHealth-funded projects	Provincial public health officials	Provincial tobacco products control committee experts	Tobacco control advocates working under ThaiHealth-funded projects	Provincial public health officials	Provincial tobacco products control committee experts
Principle 4: Because their products are lethal, the tobacco industry should not be granted incentives to establish or run their businesses.	5 (2.3%)	1 (1.5%)	5 (3.2%)	9 (4.1%)	5 (7.5%)	6 (3.9%)	206 (93.6%)	61 (91.0%)	143 (92.9%)
All	11 (2.5%)	1 (1.5%)	5 (3.2%)	20 (4.5%)	20 (4.5%)	6 (3.9%)	410 (93.0%)	61 (91.0%)	143 (92.9%)

FCTC, Framework Convention on Tobacco Control.

to 0.87; $p=0.014$). The association remained significant after controlling for sociodemographic characteristics and risk factors (AOR 0.48; 95% CI 0.27 to 0.85; $p=0.012$). Sex and history of smoking were not associated with agreements towards FCTC 5.3's guiding principles (table 3).

DISCUSSION

This study found that FCTC Article 5.3's guiding principles and recommendations were widely supported among Thai tobacco control stakeholders, although the level of acceptance slightly differed according to the participants' characteristics. Among the four guiding principles of Article 5.3, the fundamental concept presented in principle 1, which asserts that the interests of the tobacco industry and the benefits of public health policy are irreconcilable, garnered the least support, especially among younger, less experienced and unaware of tobacco industry tactics. On the one hand, the brief and unclear statement of this principle in the questionnaire may confuse those with less experience in tobacco control. On the other hand, the statement of this principle might be too harsh for individuals who are less aware of the tobacco industry's deceitful tactics. This basic principle must be promoted as a norm¹¹ to raise awareness about tobacco industry interference. The norm should be clearly illustrated that tobacco companies are motivated to promote their products and attract new users to become addicted, which is contrary to public health policy.

Most participants agreed that all government agencies should limit interaction with the tobacco industry except to enforce tobacco control regulations regardless of whether the agencies worked with farmers and tobacco companies. This finding may differ from perspectives of non-health sectors in several countries, especially those from trade and finance agencies, which view tobacco companies as stakeholders, collaborators or major players in the country's economy rather than interference.¹¹ The high level of agreement across all government entities could be used to expand the implementation of the FCTC Article 5.3 guidelines beyond the Ministry of Health in Thailand.⁸

Since 2017, the tobacco industry and its front groups have lobbied the Thai government and politicians to revoke the ban on e-cigarettes.¹⁵ At least three Committees in the House of Representatives have been formed to discuss the legalisation of e-cigarettes.^{16 17} Controversially, these committees appointed people with ties to the tobacco industry to advisory boards or committee members, which violated FCTC Article 5.3.¹⁸ Thai tobacco control advocates submitted letters to the President of the Parliament to revoke these people from the committee due to the violation of Article 5.3, but there has been no response.^{18 19} Although this practice contradicts the survey result that 95% of respondents thought the tobacco industry's representatives should not be permitted to hold a position on any committee or



Table 3 Association between awareness of tobacco industry tactics and attitude towards FCTC Article 5.3's guiding principles (ORs from ordinal logistic regression)

Covariates	FCTC 5.3 guiding principle 1		FCTC 5.3 guiding principle 2		FCTC 5.3 guiding principle 3		FCTC 5.3 guiding principle 4	
	Unadjusted OR (95%CI)	Adjusted OR (95%CI)	Unadjusted OR (95%CI)	Adjusted OR (95%CI)	Unadjusted OR (95%CI)	Adjusted OR (95%CI)	Unadjusted OR (95%CI)	Adjusted OR (95%CI)
Awareness of tobacco industry tactics	1.108***	1.107***	1.067***	1.068***	1.095***	1.105***	1.135***	1.137***
	(1.068 to 1.149)	(1.066 to 1.149)	(1.024 to 1.112)	(1.024 to 1.115)	(1.051 to 1.141)	(1.059 to 1.154)	(1.088 to 1.184)	(1.088 to 1.187)
Age	1.029***	1.031***	1.015	1.025**	1.025***	1.033***	1.018**	1.028**
	(1.015 to 1.044)	(1.012 to 1.050)	(0.999 to 1.032)	(1.003 to 1.047)	(1.008 to 1.041)	(1.011 to 1.056)	(1.002 to 1.034)	(1.006 to 1.050)
Sex								
Female	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Male	1.034	1.114	0.722	0.753	0.809	0.795	1.203	1.438
	(0.728 to 1.467)	(0.756 to 1.640)	(0.479 to 1.086)	(0.481 to 1.179)	(0.543 to 1.206)	(0.511 to 1.237)	(0.811 to 1.785)	(0.919 to 2.251)
Employment								
Funded by Thai Health	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Provincial Public health officials	0.625	0.63	0.494**	0.480**	0.898	0.887	0.682	0.693
	(0.376 to 1.037)	(0.373 to 1.065)	(0.281 to 0.867)	(0.270 to 0.852)	(0.515 to 1.568)	(0.499 to 1.576)	(0.390 to 1.192)	(0.385 to 1.245)
Provincial Tobacco Products Control Committee	1.26	0.899	0.966	0.775	1.49	1.164	0.889	0.64
	(0.854 to 1.860)	(0.563 to 1.435)	(0.612 to 1.524)	(0.449 to 1.339)	(0.950 to 2.335)	(0.676 to 2.005)	(0.574 to 1.379)	(0.371 to 1.104)
Working experience in tobacco control (year)	1.037**	1.002	1	0.973	0.997	0.967	1.027	0.99
	(1.006 to 1.069)	(0.970 to 1.035)	(0.968 to 1.032)	(0.939 to 1.007)	(0.966 to 1.029)	(0.934 to 1.002)	(0.991 to 1.063)	(0.954 to 1.026)
Smoking status								
Never smoking	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Ever smoking	0.918	0.797	0.75	0.826	0.808	0.705	0.855	0.724
	(0.551 to 1.531)	(0.449 to 1.416)	(0.425 to 1.321)	(0.438 to 1.557)	(0.459 to 1.423)	(0.373 to 1.336)	(0.486 to 1.503)	(0.380 to 1.380)
Family or friends smoke								
No	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Yes	0.758	1.013	0.714	0.86	1.027	1.384	0.667**	0.808
	(0.533 to 1.079)	(0.679 to 1.510)	(0.473 to 1.077)	(0.542 to 1.363)	(0.689 to 1.530)	(0.875 to 2.189)	(0.446 to 0.997)	(0.512 to 1.274)
Family or friends use e-cigarettes								
No	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Yes	0.752	1.049	0.823	1.068	0.808	0.989	0.776	1.043
	(0.498 to 1.138)	(0.660 to 1.666)	(0.515 to 1.313)	(0.635 to 1.795)	(0.510 to 1.280)	(0.587 to 1.666)	(0.491 to 1.226)	(0.624 to 1.744)
Observations	441	441	441	441	441	441	441	441

Adjusted for all variables shown in the table.
 *** p<0.01, ** p<0.05
 FCTC, Framework Convention on Tobacco Control.

advisory group that develops or carries out public health or tobacco control policy, limited awareness and engagement beyond health sectors is a common barrier to implement Article 5.3 in Thailand and other countries.¹⁰

This study supports that tobacco industry denormalisation should be a critical success in effectively implementing Article 5.3. The tobacco industry denormalisation is the strategy of educating people about the deceitful tactics of the tobacco industry.²⁰ It presents the tobacco industry's actions as aberrant and deviant rather than normal in terms of society and the economy.²⁰ According to a study, those who are aware of the tactics used by the tobacco industry are more likely to have negative attitudes towards the tobacco industry.²¹ This study also found that awareness of tobacco industry tactics is positively associated with agreement on Article 5.3's guiding principles and recommendations. It is critical to broaden the scope of Article 5.3 awareness campaigns to include the entire government and the public. Furthermore, due to the level of agreement in Article 5.3's guidelines differing by participants' characteristics, appropriate campaigns or capacity-building programmes should be designed accordingly. For example, this study found that younger respondents were less likely to agree with Article 5.3's guiding principles. Because youths are a primary target of the tobacco industry, it is crucial to increase youth awareness of tobacco industry tactics and encourage them to create innovations and take action against the tobacco industry.²² Moreover, the Ministry of Public Health, which oversees provincial public health officials, should ensure that these officials are regularly trained on tobacco measures and tactics of the tobacco industry, including establishing a network to monitor tobacco industry interference at the provincial and national levels.

Limitations

The results of this cross-sectional study may not demonstrate a causal association between perspectives regarding FCTC Article 5.3 and awareness of tobacco industry tactics. Furthermore, we could not contact several appointed Provincial Tobacco Products Control Committees experts because their term just ended, coordinators did not have contact information and some of the experts did not have computer or mobile response capabilities. Therefore, Provincial Tobacco Products Control Committee members responded to the survey less than tobacco control advocates funded by the Thai Health Promotion Foundation and Provincial Public Health Officials.

Due to the low smoking prevalence among the study's participants, we decided to use a history of smoking (ever smoking) rather than current smoking. Thus, this may underestimate the effect estimates because many studies reveal that smokers hold

relatively less support for tobacco control measures than non-smokers²³ and are more positive towards the tobacco industry than former or never smokers.²⁴

CONCLUSIONS

This study provides quantitative evidence of the association between views towards WHO FCTC Article 5.3 and awareness of tobacco industry tactics in Thailand. Denormalisation of the tobacco industry should, therefore, be a critical component of successfully implementing Article 5.3. This study also revealed that Thai tobacco control stakeholders broadly supported Article 5.3's guiding principles and recommendations; however, a lack of understanding of the core norm of Article 5.3 should be addressed. In addition to awareness of tobacco industry tactics, age, years of experience in tobacco control, role in tobacco control, and smoking by family members and friends were also associated with perspectives towards Article 5.3.

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