


BMJ Open Perception of and legal compliance with the law prohibiting cigarette sales to minors in Thailand following the raising of the minimum selling age to 20 years: a cross-sectional survey

Chakkraphan Phetphum ^{1,2}, Supatana Chomson,¹ Artittaya Wangwonsin,¹ Atchara Prajongjeep,³ Orawan Keeratisiroj¹

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¹Faculty of Public Health, Naresuan University, Phitsanulok, Thailand

²Tobacco Control Research Unit, Naresuan University, Phitsanulok, Thailand

³Department of Community Public Health, Sirindhorn College of Public Health, Phitsanulok, Thailand

Correspondence to

Dr Chakkraphan Phetphum; chakgarphanp@nu.ac.th

ABSTRACT

Objectives The minimum age for cigarette sales in Thailand was increased from 18 to 20 years, as stipulated in the Tobacco Products Control Act B.E. 2017. This study investigated tobacco retailers' perceptions, cigarette sales behaviour and other factors relevant to selling cigarettes to people younger than 20 years in areas surrounding schools in Thailand.

Design Cross-sectional survey.

Setting Tobacco shops within a radius of 500 m of secondary schools across four regions of Thailand. Data collection took place between May and August 2019.

Participants 1440 tobacco retailers (grocery or convenience stores) were sampled via a stratified, two-stage cluster sampling method. 1021 retailers completed the self-administered questionnaire.

Outcome measures Tobacco sales to people younger than 20 years.

Results The prevalence of the retailers' cigarette sales to youth younger than 20 years was 38.20% (95% CI 35.2% to 41.3%). Multivariable logistic regression analysis revealed associations with sale of single cigarettes (adjusted OR (AOR) 23.14, 95% CI 15.13 to 35.39), self-service sale of cigarettes (4.21, 2.59 to 6.86) and display of cigarettes at the point of sale (2.39, 1.47 to 3.89). Cigarette sales to underage youth were higher among retailers located in the northeast region (AOR 2.09, 95% CI 1.20 to 3.64) and among those who did not perceive the prosecution of violators in the past year (1.85, 1.16 to 2.96).

Conclusion A large percentage of cigarette retailers violated the laws related to underage cigarette sales. Measures to minimise retailers' legally non-compliant sales behaviours should be implemented along with improved legal enforcement.

INTRODUCTION

The prevalence of smoking among the youth remains an ongoing public health concern in Thailand. The Global Youth Tobacco Survey,^{1 2} a school-based survey among high school students aged 13–15 years in 2005,

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This was a large-scale survey of tobacco retailers selling in areas surrounding schools across Thailand.
- ⇒ This research collected data on perceptions and legal compliance based on the direct experiences of tobacco retailers.
- ⇒ A notable limitation of this study pertains to the restricted scope of the tobacco retailers surveyed, specifically those in grocery and convenience stores.

2009 and 2015, showed that the smoking prevalence among Thai youth had been steady at approximately 11% throughout all the three survey cycles. Two-thirds of young smokers obtained cigarettes from grocery or convenience stores, shops or flea markets.¹ Noticeably, almost half of these youths were able to access or obtain cigarettes without any considerable obstacles, whereas one in five were able to purchase single cigarettes.¹

The onset of smoking commonly occurs in adolescence.³ A majority of smokers start smoking before they turn 18 years and become regular smokers during their adolescence.^{4 5} It is for this reason that current tobacco control policies focus on preventing and reducing smoking among youth. Legislation prohibiting the sale of cigarettes to minors is one such policy that substantially limits access to commercially available cigarettes. Several countries limit different minimum cigarette sales, ages ranging from 16 to 21 years.⁶ Increased minimum age for cigarette sales has been recognised as a successful method for preventing young people to start smoking.^{5 7–12} The effectiveness of these measures depends on the extent to which tobacco retailers comply with the

law, which itself depends on several factors and circumstances.^{6 13}

Thailand is an internationally recognised upper middle-income country with a consistently declining smoking rate.^{14 15} The Tobacco Products Control Act of 1992, which prohibited the sale of cigarettes to persons under the age of 18 years and the display of cigarettes at retail, is largely responsible for this achievement. Although the overall smoking rate among Thai people has decreased, the response of cigarette retailers to such legal measures remains questionable.

Cigarette retailers are widely distributed throughout Thailand. It is estimated that 800 000 retailers are legally registered with local excise agencies¹⁶; however, there have been few studies on these sellers.^{16–18} Moreover, tobacco retailers in Thailand are generally presumptive about responding to tobacco companies' strategies and frequently violate law.¹⁷ A recent regional survey in Thailand¹⁶ showed that 58.7% of tobacco retailers sold cigarettes to underage customers. Factors such as not verifying the age of customers or checking their identification cards before selling cigarettes, selling single cigarettes, offering self-service sale of cigarettes and displaying cigarettes at the point of sale significantly correlated with and predicted the behaviour of retailers selling cigarettes to adolescents.

Additionally, a dense concentration of retailers was located within 500 m of schools, and most of these retailers deliberately sold cigarettes to young people.¹⁸

In 2017, Thailand revised its Tobacco Products Control Act in response to tobacco companies' strategies targeting more youth¹⁷ by raising the minimum selling age for cigarettes from 18 to 20 years. As part of the effort to prevent young people from easily accessing cigarettes, this measure was amended along with other restrictions, including prohibiting cigarettes from being displayed at the point of sale, selling them to anyone under 18 years of age and selling them as a single piece.¹⁹ Since the law for raising the minimum selling age from 18 to 20 years was enacted, there has been little empirical evidence that assesses perceptions of the content and enforcement of the law based on direct experiences of tobacco retailers, which may have an effect on compliance with the law. Therefore, this study aimed to examine the perceptions and sales of cigarettes to youths under the age of 20 years by retailers surrounding schools in Thailand, along with its related factors.

METHODS

Study design and participants

This cross-sectional survey was conducted between May and August 2019. This survey collected data from tobacco shops surrounding 120 public and private secondary schools located in 12 provinces across four regions of Thailand. The sample consisted of tobacco retailers who operated permanent convenience or grocery stores within a radius of 500 m of secondary schools.¹⁸ The

sample size was estimated by using an infinite population proportion, with $p=0.587$ (based on a previous survey in which 58.7% of the tobacco retailers sold cigarettes to underage youth)¹⁶ and $\delta=0.029$ (5% of p values, $\alpha=0.05$, $Z(0.975)=1.96$ and design effect=1.2). The calculated sample size was increased by 5% to account for non-response and incomplete responses. The final sample size was 1400.

A two-stage stratified cluster sampling was performed. First, four regions of Thailand were sampled using stratified random sampling: north, central, northeast and south. Second, random cluster sampling (lottery method) was used to select three representative provinces from each region. Third, cluster random sampling (a lottery method) was used to draw 10 schools from each selected province, totalling 120 schools. Finally, tobacco shops near all 120 targeted schools (12 shops per school) were purposively selected within a 500-metre radius of each school. Shops located closest to each school were primarily considered, and the selection was expanded to a radius of 500 m until the sample size was reached. To obtain the most accurate data, the distance from each school to the shops was measured as the mileage on local roads.

Measures

A self-administered questionnaire (in Thai language) was developed based on previous studies and translated into English, as shown in the online supplemental file 1.^{16 18} The content validity of the questionnaire was verified by three experts in the fields of behavioural science and tobacco control. Each expert rated each question-and-answer choice in terms of its ability to measure accurate and comprehensive data relevant to the objectives, based on scores ranging from -1 to $+1$ ($+1$ =congruent; 0 =questionable and -1 =incongruent). The index of item-objective congruence was calculated using the experts' final scores. Question items with scores greater than or equal to 0.5 were retained, while those with less than 0.5 were amended in consideration of expert suggestions. The questionnaire was then tested with 30 retailers outside the study sample to ensure the language clarity and comprehensibility of the items.

Independent variable

The questionnaire to measure the independent variables consisted of three parts:

Part 1

The general characteristics of the retailers, five checklists and one open-ended question were used to assess: (1) sex (male/female), (2) age (years), (3) region (north, south, northeast or central), (4) educational level (below or equal to elementary school/higher than elementary school), (5) type of store (grocery store/convenience store) and (6) current tobacco licence (yes/no).

Part 2

Three multiple choice questions were used to assess perceptions of law enforcement in the past year: (1) Did you perceive the enforcement of the revised tobacco product control law prohibiting the sale of cigarettes to persons under 20 years of age in the past year? (yes/no); (2) Were you inspected for compliance with the law prohibiting the sale of cigarettes to persons under 20 years of age in the past year? (yes/no); and (3) Did you perceive other shops being prosecuted for selling cigarettes to persons under 20 years of age in the past year? (yes/no).

Part 3

Law compliance was assessed through behaviours related to cigarette sales in the past 30 days, addressed by four binary questions: (1) Did you display tobacco products at the point of sale in the past 30 days? (yes/no); (2) Did you sell single cigarettes in the past 30 days? (yes/no); (3) Did you offer a self-service sale of cigarettes in the past 30 days? (yes/no); and (4) Did you verify customers' ages by checking their ID cards before selling cigarettes to them in the past 30 days? (yes/no).

Dependent variable

We used a single question to measure the outcome variable: Did you sell cigarettes to people under 20 years of age in the past 30 days? (yes/no).

Data collection

Participants who provided informed consent completed the questionnaire voluntarily and anonymously. Trained research assistants collected data from the tobacco retailers at the target retail stores. Each questionnaire took approximately 30 min to complete. The researchers were present to assist and address any participant concerns as needed. Confidentiality was ensured by using an anonymous questionnaire and the responses were not exposed to anyone but the researchers. The questionnaire was distributed to 1440 tobacco retailers and 1021 of them completed it, indicating a response rate of 70.9%.

Statistical analysis

Data were analysed using SPSS (V.17.0). The participant characteristics were described using frequency, percentage and 95% CI. Univariate logistic regression was used to examine the raw relationship between each independent variable (characteristics, law enforcement perceptions, cigarette display at the point of sale, sale of single cigarettes, self-service tobacco sales and verification of identity before cigarette sale) and the dependent variable (tobacco sales to persons under 20 years of age). To identify predictors of the sale of cigarettes to persons under the age of 20 years, a multivariable logistic regression model was used with the backward (Wald) method to control for the effect of the relationships among the independent variables until the adjusted OR (AOR) was obtained. Results are presented as AOR versus crude ORs with 95% CI.

Patient and public involvement

None.

RESULTS

As shown in [table 1](#), the majority of the participants (67.3%) were female. Their average age was 48.9±11.9 years, ranging from 20 to 90 years. The samples from the four regions were similar in number between 221 and 286. Most retailers (94.2%) owned the grocery stores, and 86.1% of the tobacco shops had current legal cigarette licences. In addition, 90% of the tobacco retailers perceived enforcement of the revised tobacco control law, 71.7% had been inspected for compliance and 75.1% perceived that other shops had been prosecuted for selling cigarettes to persons under the age of 20 years in the past year. Additionally, the study showed that 34.0% of the tobacco retailers displayed cigarettes at the point of sale within 30 days, 46.4% sold single cigarettes, 33.8% offered self-service sales of cigarettes, 38.7% did not verify the age of young consumers before selling cigarettes and 38.2% sold cigarettes to youths under 20 years.

As shown in [table 2](#), three participant characteristics were significantly associated with the sale of cigarettes to youth under 20 years of age: location (the south region (OR 2.02, 95% CI 1.40 to 2.92), northeast region (OR 2.51, 95% CI 1.78 to 3.55), central region (OR 0.68, 95% CI 0.46 to 0.99)); type of shop (grocery store owners (OR 2.25, 95% CI 1.20 to 4.24)) and tobacco retailers without a tobacco sales licence (OR 2.45, 95% CI 1.69 to 3.53). There was a significant relationship between all three perceived law enforcement variables and the sale of cigarettes to youth under 20 years of age: lack of perception of the revised law (OR 2.49, 95% CI 1.80 to 3.45), lack of inspection for compliance last year (OR 2.68, 95% CI 1.53 to 4.71) and lack of perception that other shops that violated laws were legally punished (OR 4.04, 95% CI 2.90 to 5.64). Regarding behavioural compliance aspects, all four observed compliance behaviours were significantly associated with the sale of cigarettes to persons under 20 years of age: displaying cigarettes at the point of sale (OR 9.81, 95% CI 7.27 to 13.24), selling single cigarettes (OR 38.7, 95% CI 26.20 to 57.00), offering cigarette self-service (OR 13.51, 95% CI 9.88 to 18.48) and the lack of age verification before selling cigarettes (OR 2.99, 95% CI 2.26 to 3.96).

The multivariable logistic regression analysis ([table 3](#)) indicated the likelihood of those who sold single cigarettes (AOR 23.14, 95% CI 15.13 to 35.39), those who offered self-service sale of cigarettes (AOR 4.21, 95% CI 2.59 to 6.86) and those who displayed cigarettes at the point of sale (AOR 2.39, 95% CI 1.47 to 3.89) in the past 30 days. Cigarette sales to underage youth were higher among retailers located in the northeast region (AOR 2.09, 95% CI 1.20 to 3.64) and those who did not perceive the prosecution of violators in the past year (AOR 1.85, 95% CI 1.16 to 2.96).

**Table 1** Participant characteristics, law enforcement perceptions and legal compliance of cigarette retailers surrounding secondary schools in Thailand, in 2019

Variable		N	%	95% CI	
Sex (n=1013)	Male	331	32.7	29.6	35.6
	Female	682	67.3	64.4	70.4
Age (n=1010)	Mean±SD	1010	48.9±11.9	48.30	49.64
Region (n=1039)	North	286	27.5	24.8	30.3
	South	221	21.3	18.7	23.7
	Northeast	264	25.4	22.8	28.0
	Central	268	25.8	23.3	28.5
Education level (n=1014)	Elementary school or lower	388	38.3	35.4	41.0
	Higher than elementary school	626	61.7	59.0	64.6
Shop type (n=990)	Grocery store	933	94.2	92.7	95.7
	Convenience store	57	5.8	4.3	7.3
Tobacco sale licence (n=984)		847	86.1	84.0	88.3
Perceived enforcement of the revised law (n=1018)		937	92.0	90.3	93.6
Being inspected for compliance with the law (n=1018)		724	71.1	68.5	74.0
Perceived prosecution against legal non-compliance (n=1018)		765	75.1	72.4	77.9
Cigarette display at the point of sale (n=1020)		347	34.0	31.0	36.9
Sale of single cigarettes (n=1021)		474	46.4	43.4	49.4
Self-service sale of cigarettes (n=1021)		345	33.8	31.0	36.6
Identification verification (n=1021)		395	38.7	35.7	42.0
Cigarette sale to youth under 20 years of age (n=1021)		390	38.2	35.2	41.3

DISCUSSION

This study is one of the first preliminary evaluations of the Thailand Tobacco Products Control Act of 2017, which is the latest update on tobacco product control legislation in Thailand. The study focused on the raising of the minimum age for cigarette access from 18 years in the previous Act to 20 years in the current Act.¹⁹ The enhancement of legal perceptions of tobacco retailers and primary stakeholders of law enforcement seems to have worked during the implementation of the new Act until the evaluation of this study, since nine-tenths of tobacco retailers knew about the new law enforcement, and three-quarters were aware of the prosecution of legally non-compliant shops. The current study also suggested that the random inspection rate for legal compliance has significantly increased from 39.7%¹⁶ under the previous Act to 71.1% under the current Act. It is evident that local authorities, including public health, excise agency control and the police, effectively communicated and monitored retailer violations.

However, one-tenth of the tobacco shops did not have the tobacco sales licence (authorised by the excise agency control). These unlicensed stores are likely to no longer be targeted for providing necessary information and monitoring compliance with laws. Cigarette sales licences are crucial for regulating retail outlets and ensuring that retailers comply with state laws.²⁰ Effective enforcement

must be implemented to prevent retailers from selling tobacco without licence.²¹

Only 2 years after the new Act was enforced did its implementation improve dramatically. The results of this study indicate that violations of the new Act have decreased among retailers surrounding secondary schools in all areas compared with the survey conducted while the previous Act was in effect.^{16 18} For example, displaying cigarettes at the point of sale decreased from 73.7% to 34.0%, selling single cigarettes declined from 67.2% to 46.5%, self-service selling of cigarettes decreased from 52.1% to 33.8% and selling cigarettes to underage youths declined from 58.7% to 38.2%. Despite the limitations and random sampling approaches of these surveys, the improvements can be considered a positive step forward. Furthermore, no cigarette sellers under 18 years of age (age restricted by the revised law) were observed in the current survey. This is in line with the WHO Framework Convention on Tobacco Control guidelines for prohibiting youth cigarette purchasers and sellers (table 4).²²

Overall, compliance with the amended Act appears to have improved, but age verification before selling cigarettes remains challenging at approximately 39%¹⁶ in both surveys. Checking customers' actual ages on ID cards is an effective measure to limit youth access to cigarettes from commercial sources.^{23 24} In addition, the results of this survey confirmed that law violation by retailers

Table 2 Participant characteristics, perceptions of law enforcement and legal compliance according to cigarette sales to youth under 20 years of age among tobacco retailers surrounding secondary schools in Thailand, in 2019

Variable		No sale to underage individuals (n=631) n (%)	Sale to underage individuals (n=390) n (%)	Crude OR	
				OR (95% CI)	P value
Sex	Female	191 (57.7)	140 (42.3)	1	
	Male	433 (63.5)	249 (36.5)	1.28 (0.98 to 1.67)	0.076
Age	Mean±SD	48.2±11.6	49.2±12.2	0.99 (0.98 to 1.00)	0.184
Region	North	193 (68.9)	87 (31.1)	1	
	South	111 (52.4)	101 (47.6)	2.02 (1.40 to 2.92)	<0.001
	Northeast	124 (47.0)	140 (53.0)	2.51 (1.78 to 3.55)	<0.001
	Central	203 (76.6)	62 (23.4)	0.68 (0.46 to 0.99)	0.045
Educational level	Higher than elementary school	398 (63.6)	228 (36.4)	1	
	Elementary school or lower	227 (58.5)	161 (41.5)	1.24 (0.96 to 1.61)	0.107
Shop type	Convenience store	44 (77.2)	13 (22.8)	1	
	Grocery store	560 (60.0)	373 (40.0)	2.25 (1.20 to 4.24)	0.012*
Tobacco sales licence	Yes	544 (64.2)	303 (35.8)	1	
	No	58 (42.3)	79 (57.7)	2.45 (1.69 to 3.53)	<0.001*
Perceived enforcement of the revised law	Yes	194 (76.7)	59 (23.3)	1	
	No	435 (56.9)	330 (43.1)	2.49 (1.80 to 3.45)	<0.001*
Being inspected for compliance with the law	Yes	65 (80.2)	16 (19.8)	1	
	No	565 (60.2)	373 (39.8)	2.68 (1.53 to 4.71)	0.001*
Perceived prosecution against legal non-compliance	Yes	242 (82.3)	52 (17.7)	1	
	No	388 (53.5)	337 (46.5)	4.04 (2.90 to 5.64)	<0.001*
Displaying cigarettes at the point of sale	No	533 (79.2)	140 (20.8)	1	
	Yes	97 (28.0)	250 (72.0)	9.81 (7.27 to 13.24)	<0.001*
Selling single cigarettes	No	509 (93.1)	38 (6.9)	1	
	Yes	122 (25.7)	352 (74.3)	38.7 (26.20 to 57.00)	<0.001*
Offering self-service sale of cigarettes	No	548 (81.1)	128 (18.9)	1	
	Yes	83 (24.1)	262 (75.9)	13.51 (9.88 to 18.48)	<0.001*
Identification verification	Yes	303 (76.7)	92 (23.3)	1	
	No	328 (52.4)	298 (47.6)	2.99 (2.26 to 3.96)	<0.001*

*P<0.05.

was an ongoing issue around schools. Law enforcement surveillance and monitoring measures among retailers surrounding schools are necessary and must continue to be undertaken to prevent new underage smoking.

Understanding the factors that shape legal compliance with the prohibition of cigarette sales to underage youths would enhance law enforcement efforts to improve compliance rates among retailers, limit youth access to cigarettes and reduce smoking among youths.¹³ These findings could contribute to the knowledge about the perceptions of law enforcement and behaviours related to cigarette sales. Tobacco retailers who did not perceive prosecution for illegal sales were almost twice as likely to violate the law concerning the minimum age for cigarette sales as those who perceived such a punishment. This could be because

this perception implies strong enforcement of the law by punishing retailers who violate it in concrete ways.

The results of behavioural factors related to cigarette sales to youths under 20 years of age are relatively consistent with previous findings.^{16 18} The findings support the use of these strategies to minimise the accessibility of cigarettes among young people; displaying cigarettes at the point of sale could increase awareness of availability, while selling single cigarettes could increase affordability. Additionally, tobacco companies may be facilitating access to commercial cigarettes among youth who are likely to become new customers in the future through these retailer tactics.¹⁷ Therefore, preventing and reducing such sales behaviours could decrease youth access to commercial cigarettes, in addition to strong law

Table 3 Crude OR (COR) and adjusted OR (AOR) of factors associated with cigarette sales to youth under 20 years of age among cigarette retailers surrounding secondary schools in Thailand, in 2019 (n=1021)

Variable	COR		AOR†	
	COR (95% CI)	P value	AOR (95% CI)	P value
Region				
North	1		1	
South	2.02 (1.40 to 2.92)	<0.001	1.40 (0.80 to 2.46)	0.240
Northeast	2.51 (1.78 to 3.55)	<0.001	2.09 (1.20 to 3.64)	0.010
Central	0.68 (0.46 to 0.99)	0.045	1.67 (0.95 to 2.93)	0.076
Perceived prosecution against legal non-compliance in the past year				
Yes	1		1	
No	4.04 (2.90 to 5.64)	<0.001*	2.00 (1.21 to 3.31)	0.007
Being inspected for compliance with the law				
Yes	1		1	
No	2.68 (1.53 to 4.71)	0.001*	1.38 (0.76 to 2.50)	0.291
Displaying cigarettes at the point of sale				
No	1		1	
Yes	9.81 (7.27 to 13.24)	<0.001*	2.44 (1.48 to 4.01)	<0.001*
Selling single cigarettes				
No	1		1	
Yes	38.7 (26.20 to 57.00)	<0.001*	24.00 (15.52 to 37.12)	<0.001*
Offering self-service sale of cigarettes				
No	1		1	
Yes	13.51 (9.88 to 18.48)	<0.001*	4.30 (2.64 to 7.00)	<0.001*
Hosmer-Lemeshow test, step 5, $X^2=14.817$, $df=8$, $p=0.063$.				
*P<0.05.				
†Adjusted for all variables listed.				

enforcement which is the primary method for ensuring the success of legislative measures.^{6 13 25–27}

Furthermore, involving students in the development of strategies and innovations to restrict access to cigarettes from retail outlets surrounding their schools is an effective strategy. This is supported by previous research^{18 28} suggesting that student participation contributes to the stimulation of law enforcement mechanisms in a community, knowledge dissemination for students and awareness raising for shops around schools, which reduces the number of law violations

such as displaying cigarettes at the point of sale, selling single cigarettes and selling cigarettes to underage people. A previous study^{18 28} also showed that participation in such programmes improves young people's attitudes toward law enforcement, enhances their potential for leadership based on actual experience and fosters a sense of belonging to the community.

There are several limitations of this research. First, this study was limited by a low response rate of 70.9%. There is a high probability that retailers selling illegal cigarettes would

Table 4 Comparison of cigarette selling behaviours under the previous and new Tobacco Control Act

Cigarette selling behaviours	The previous Act ¹⁶ (minimum age for cigarette sales: 18 years) (n=675)	New Act* (minimum age for cigarette sales: 20 years) (n=1021)
Identification verification for age	38.6	38.7
Sale of single cigarettes	67.2	46.4
Cigarette display at the point of sale	73.7	34.0
Self-service sale of cigarettes	52.1	33.8
Cigarette sale to underage	58.7	38.2
*These data are from the present study.		

have refused to participate in this study, and the rate of violation of the law may be underestimated. However, considering the actual percentage of this survey ($p=0.382$) and the actual sample size ($n=1021$), the margin of error was approximately 9%, which falls within an acceptable range. Second, data on retail operators' legal compliance behaviours were collected using a self-administered questionnaire. Some respondents were still likely to be concerned about negative consequences, such as stigmatisation and legal sanctions, which may have led to inaccurate responses despite the researchers' efforts to safeguard their privacy. Thus, evaluating retailers' behaviours in relation to selling cigarettes to young people is likely to be more accurate when considering young people's temptation to buy cigarettes.²⁹ However, implementing this approach in Thailand remains a challenge. Third, this research was a cross-sectional survey in which the independent and dependent variables were collected simultaneously, thereby limiting the explanation of causal relationships. Therefore, long-term studies are required to confirm causality. Finally, this study only surveyed tobacco retailers from grocery and convenience stores, although the youth can access commercial cigarettes from other community sources such as flea markets and nightlife venues such as pubs and bars. Therefore, assessments should be conducted in the same manner in these places.

CONCLUSION

This study is one of the few studies to evaluate the enforcement of the revised Tobacco Products Control Act in Thailand. Although improvements in compliance with the law have been observed, legal violations among retailers surrounding secondary schools are an ongoing issue. Strategies involving young people in limiting youth access would reduce their involvement in accessing age-restricted products. Public communication about the current restrictions and penalties targeted at tobacco retailers should be improved to increase the perceptions of law enforcement and reduce illegal tobacco sales. Strengthening enforcement by competent officials is a primary measure to reduce the violation rate among retailers and ultimately prevent youth from smoking.

Twitter Chakkrapan Phetphum @cphetphum

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ORCID ID

Chakkrapan Phetphum <http://orcid.org/0000-0002-2410-9524>

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