

WHO
South-East Asia
Journal of
Public Health



WHO South-East Asia Journal of Public Health

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Volume 1, Issue 4, October–December 2012, 359-486

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Compliance of off-premise alcohol retailers with the minimum purchase age law

Areekul Puangsuwan^a, Kannapon Phakdeesettakun^a, Thaksaphon Thamarangsi^a, Surasak Chaiyasong^{a,b}

Background: In Thailand, the 2008 Alcoholic Beverages Control Act set the minimum purchase age (MPA) at 20 years old in order to limit new drinkers as part of the overall alcohol control effort. This study aims to assess the compliance of off-premise alcohol retailers with MPA restrictions and to identify factors affecting sales to adolescents.

Methods: A decoy protocol was used to quantify compliance of 417 alcohol retailers from three categories, namely grocers, modern minimarts and department stores. Multi-stage sampling was applied to obtain the samples in four provinces: Bangkok, Nakorn Sawan, Songkhla and Surin. Each alcohol retailer was visited twice by 17–19 year-old male and female adolescents who tried to buy alcohol. Information collected from focus groups and in-depth interviews with vendors and management officers were analysed for the qualitative methodology.

Results: Of all 834 buying attempts undertaken by the underage adolescent, 98.7% were successful in buying alcohol. Only 0.9% were asked for age and 0.1% were requested to show an ID card. Age and ID verifications were statistically significant to buying success as well as province, while number of vendors, gender and age of vendors and buyers, type of outlet, law cautions and advertisement signs in the outlet demonstrated no significant association.

Conclusions: The results showed that vendors fail to comply with the law despite the fact that they know the law. Enforcement needs to be strengthened to effectively limit new drinkers.

Key words: sting or decoy operation, alcohol purchase survey, law compliance, minimum purchase age (MPA).

Introduction

Alcohol consumption has become more common and accepted in Thailand. The most worrisome trend is the rise in the number of new drinkers. A study in 2008 revealed

that Thailand has approximately 260 000 new drinkers each year.¹ Among the 12.8% of adolescents aged 15–19 years who have become regular drinkers, 21.6% are binge

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drinkers and 40.4% are intoxicated youth drinkers.² These figures have drawn the attention of concerned parties as drinking among adolescents leads to many related problems other than health, such as drug use, premature sexual intercourse, low educational performance, crime and suicide.¹

The Alcoholic Beverages Control Act, in effect since 2008, attempts to deter youths from drinking by restricting the minimum purchase age (MPA) to 20 years.³ The law does not impose penalties on purchasers but instead on vendors. In fact, the responsible government authorities have been trying to promote the law and its enforcement, and civil society has increasingly launched special campaigns to emphasize its enforcement in parallel to their usual educational and awareness-raising campaigns. However, in a number of recent surveys, vendors in many provinces reported that 17–31% of their customers in the three months prior to being surveyed seemed to be underage^{1,4,5} and more than 50% of the general public had witnessed sales made to underage customers.⁶ This led to research questions about whether vendors consciously sell alcoholic beverages to underage customers and whether there are any factors that influence such illegal sales. Previous studies that evaluated law enforcement in Thailand through self-report methodologies^{4,5} are not able to answer these questions due to methodological limitations. An unobtrusive test purchase methodology, which has been applied in studies in other countries,^{7–13} is an alternative research methodology available. This study used test purchases to assess the compliance of off-premise alcohol vendors on MPA restrictions in naturalistic settings.

Methods

This study applied mixed methods of both quantitative and qualitative methodologies.

To represent the population of 579 413 outlet licensees in Thailand in 2009,¹⁴ a sample size of 385 was calculated based on the assumption that 50% of retailers do sell alcohol to adolescents (95% confidence and 5% precision levels). The sample size was then increased by approximately 10% for any missing or incomplete cases, resulting in an adjusted sample size of 428. Multi-stage sampling was used to obtain the samples in four provinces. In the first-stage sampling, four provinces were purposively selected with different geographical locations and density of alcohol licensees per capita: Nakorn Sawan (northern) and Surin (north-east), with a high density of licensees per capita; and Bangkok (central) and Songkhla (south), with a low to middle density. The samples were distributed proportionally according to the number of licences registered in each province. In the second stage of sampling, main streets or business areas of these four provinces were purposively selected to increase the likelihood of achieving the specified number of samples and for feasibility of the survey.

Following several surveys conducted to enumerate and develop a map of the physical locations of the retailers, a total of 417 samples were used in this study. These were broken down as follows: Bangkok, 163 (39.2%); Nakorn Sawan, 63 (15%); Songkhla, 74 (17.8%) and Surin, 117 (28%). Alcohol retailers were classified into three categories, namely grocers, modern mini-marts and department stores. Temporary or canvas outlets, mobile sales units, restaurants and pharmacies that sold alcohol were excluded.

Independent variables in this study included province, gender of buyer and vendor, age of buyer and vendor, number of vendors, age check, ID card check, type of outlet, law caution and advertisement signs. The dependent variable was the result of a purchase attempt.

For the qualitative methodology, 29 key informants who were vendors or owners, including management staff from all outlet categories, were selected purposively from all provinces for focus groups ($n=26$, 13 vendors or owners and 13 management staff) and in-depth interviews ($n=3$, 2 vendors or owners and 1 management staff).

Purchase protocol

A purchase protocol was designed based on guidance from the Pacific Institute for Research and Evaluation¹⁵ and a data collection form was also developed. Both the protocol and the form were tested and adjusted prior to the actual purchase survey.

Recruitment of the adolescent volunteers, purchase procedure, particular brand and type of alcoholic beverage, timing of purchase and conversation dialogue were strategically and purposely planned. A total of 40 adolescents – 20 male and 20 female – who met the selection criteria were recruited. The adolescents were 17–19 years old with an appearance that matched their age. Their racial and/or ethnic characteristics were also harmonious with those of the local residents in the purchase survey sites. The adolescents received permission from their parents or guardians and submitted written consent for participation in the survey. The minimum number of adolescents participating in the survey was four males and four females and the total number varied according to the sample size in each province. A local partner organization facilitated the recruitment of the adolescents, except in Bangkok where the adolescents were recruited by the researchers. The adolescents and adult volunteers or assistant researchers were trained to note the information required for the data collection form and undertook role-play rehearsals to become acquainted with purchase procedures and dialogue before they undertook the fieldwork.

Each adolescent had a different code and was paired with an adult volunteer or assistant researcher. The adolescent volunteer was assigned to buy a particular beer brand from a particular number of alcohol outlets appearing on the map. The adult volunteer was instructed to enter the outlet before the adolescent to help observe the protocol and necessary information required for the data collection form, record the conversation between vendors and the adolescent and for security purposes. The adolescents were trained to tell the truth when challenged about their age, to carry their ID cards and to show them if requested. When the vendor sold alcohol to the adolescent, even with age or ID card verification, that purchase attempt was considered successful. If the vendor did not sell alcohol, even if they had asked for age or ID, that purchase attempt was considered unsuccessful. The adolescents were instructed to leave without complaint. Each adult/adolescent pair had to complete the data collection form immediately after each purchase attempt, in a place far from the vendor's sight and from that of the next outlet on the list. Each outlet was visited twice by different gender adolescent volunteers.

Ethical considerations

The covert test purchase of alcohol and use of underage adolescents raised some significant ethical issues. The rights of the vendors were well respected although advance survey notice was not provided. The results of the study would have been invalid or distorted without the use of underage adolescents in a natural setting. This principle is in line with the International Ethical Guidelines for Biomedical Research Involving Human Subjects.¹⁶ Prosecution was not brought against vendors who sold alcohol to underage customers. To allay the concerns of researchers that the survey might encourage the test purchasing

adolescents to initiate future alcohol use, orientation and training were provided. In addition to permission from their parents or guardians and their written consent, the adolescents could withdraw their participation at any time. The names of all volunteers, alcohol retailers, vendors, and key informants remain confidential. This study was approved by the Ethical Committee of the Institute for the Development of Human Research Protections, Ministry of Public Health.

Data analysis

Categorical variables were descriptively analysed using simple frequencies and percentages for general information obtained from the survey such as purchase success, age and ID card verifications, category of alcohol outlet, gender, age and number of vendors. To examine associations among categorical variables, chi-square and Fisher's exact tests were performed. Statistical significance was assessed at $p < 0.05$. SPSS version 15 and STATA version 10 for Windows were used for the analysis. Content analysis of the qualitative findings of the focus groups and in-depth interviews were conducted.

Results

Characteristics of alcohol retailers

When classified into the three different outlet categories, there were 253 (60.7%) conventional grocers, 17 (4.0%) department stores and 147 (35.3%) mini-marts. At the time of purchase, 68% of the alcohol outlets had only one vendor, 32% had two or more vendors, and 67% of all vendors were female. The estimated age of a third of vendors (35%) from observation was under 30 years old. In 0.8% ($n=7$) of the purchase attempts the volunteers were asked for their age and only

0.1% ($n=1$) were asked to show an ID card. 27.1% of the alcohol retailers placed alcoholic beverages in front of the outlet, 33.1% at the side, 16.5% at the back and 23.3% in other areas. The majority of the alcohol outlets did not display relevant law cautions and advertisement signs (Table 1).

Overall results of the purchase survey

Overall, 98.7% ($n=808$) of purchase attempts were successful. While three provinces had a very small proportion of sales refusals, 100% of purchase attempts in Songkhla province were successful. The proportion of successful attempts made in different outlet categories, outlets with a different number of vendors and outlets displaying law cautions and advertisement signs presented similar results (Figure 1).

Association between variables and purchase success

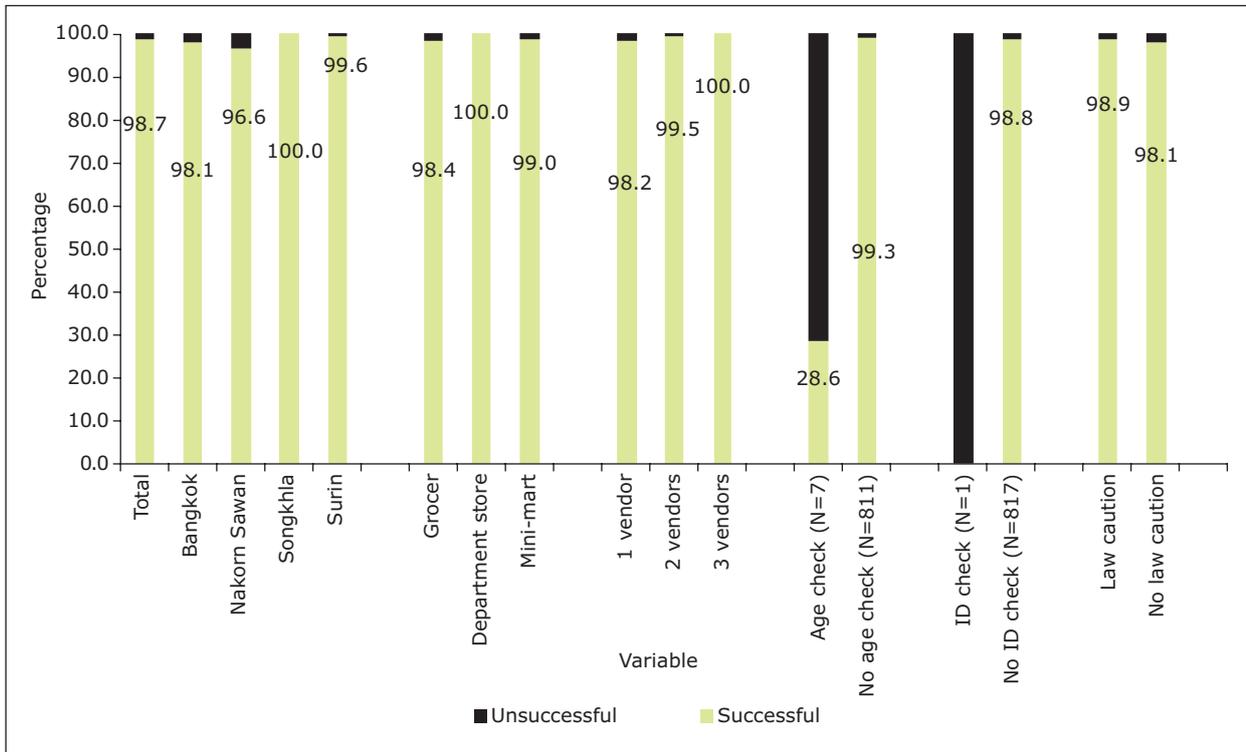
The study results demonstrated that the proportion of successful and unsuccessful purchases in the four provinces were statistically different. When vendors checked the age of the adolescent, the proportion of successful purchases dropped significantly from 99.3% to 28.6%. The purchase attempt was unsuccessful (0%) when the volunteer's ID card was verified. As a consequence, the verification of age and ID card had a statistically strong association with purchase success (Table 2).

Factors that had no significant association with purchase success were the gender and age of the adolescent and the gender, age and number of vendors. The proportion of sales to adolescent girls and boys was almost equal. A similar result was found across the different ages of test-purchasing adolescents. When considering the characteristics of the vendors, the proportion of successful

Table 1: Characteristics of alcohol retailers

Characteristics	No.	%
1. Alcohol retailers by province		
Bangkok	163	39.2
Nakorn Sawan	63	15.0
Songkhla	74	17.8
Surin	117	28.0
Total	417	100.0
2. Alcohol retailers by category		
Department store	17	4.0
Grocer	253	60.7
Mini-mart	147	35.3
Total	417	100.0
3. Number of vendors in the outlet		
1	567	68.0
2	203	24.3
3	64	7.7
Total	834	100.0
4. Gender of vendor		
Female	561	67.3
Male	273	32.7
Total	834	100.0
5. Estimated age of vendor		
< 30 years old	292	35.0
30–45 years old	272	32.6
46–60 years old	189	22.7
> 60 years old	81	9.7
Total	834	100.0
6. Placement of alcohol in the outlet		
Front	226	27.1
Side (left or right)	276	33.1
Back	138	16.5
Other	194	23.3
Total	834	100.0
7. Law caution in the outlet		
Yes	277	33.2
No	557	66.8
Total	834	100.0
8. Content of the law caution		
Restriction on time of sales	106	38.3
Restriction on minimum purchase age	170	61.3
Other	1	0.4
Total	277	100.0
9. Alcohol advertisements in the outlet		
Yes	102	12.2
No	732	87.8
Total	834	100.0

Figure 1: Proportion of purchase successes by variable



purchases from male and female vendors was virtually the same (98.9% vs 98.5%) as was the percentage of sales made by vendors who appeared below 60 years old. Sales occurred in every instance when the underage adolescents bought an alcoholic beverage from vendors who were older than 60. The number of vendors in an outlet was not associated with purchase outcome; neither were the presence of law cautions or advertisement signs at the outlet.

Highlighted findings from the qualitative method

Knowledge of the law

The information collected from focus groups and in-depth interviews with vendors or owners, including management staff of alcohol outlets, revealed that most vendors knew of restrictions on the sale of alcohol, but not of the latest age restriction. Most vendors thought the MPA was still 18 years and were uncertain about

penalties. On the other hand, management staff of department stores and modern mini-mart chains had a more precise knowledge of the law and reported paying serious attention to compliance with the law pertaining to the sale of alcoholic beverages. Their vendor employees were strictly instructed not to sell alcoholic beverages to underage customers.

Reasons for illegal sales and sale refusals

Most vendors reported that they sold alcoholic beverages to underage customers because there was no legal comeback for doing so. One vendor said that he might as well sell it to adolescents because if he didn't, they could easily buy it from another outlet with total impunity. Sometimes, vendors asked for age if they suspected that the customer was underage, but still sold them alcoholic beverages.

Table 2: Association between variables and purchase success

Variable	Total	Result		P
		Successful	Unsuccessful	
Purchase attempt (%)	819	808 (98.7)	11 (1.3)	
Province				0.042*
Bangkok	320	314 (98.1)	6 (1.9)	
Nakorn Sawan	118	114 (96.6)	4 (3.4)	
Surin	233	232 (99.6)	1 (0.4)	
Songkhla	148	148 (100.0)	0 (0.0)	
Gender of buyer				0.752
Female	408	402 (98.5)	6 (1.5)	
Male	411	406 (98.8)	5 (1.2)	
Age of buyer				0.544
17 years old	83	81 (97.6)	2 (2.4)	
18 years old	282	279 (98.9)	3 (1.1)	
19 years old	454	448 (98.7)	6 (1.3)	
Gender of vendor				1.000
Female	554	546 (98.6)	8 (1.4)	
Male	265	262 (98.9)	3 (1.1)	
Estimated age of vendor				0.768
<30 years old	280	277 (98.9)	3 (1.1)	
30–45 years old	271	266 (98.2)	5 (1.8)	
46–60 years old	188	185 (98.4)	3 (1.6)	
>60 years old	80	80 (100.0)	0 (0.0)	
Number of vendors present				0.386
1	561	551 (98.2)	10 (1.8)	
2	194	193 (99.5)	1 (0.5)	
3	64	64 (100.0)	0 (0.0)	
Age check				<0.001*
Not asked	811	805 (99.3)	6 (0.7)	
Asked	7	2 (28.6)	5 (71.4)	
ID card verification				0.013*
Not asked	817	807 (98.8)	10 (1.2)	
Asked	1	0 (0.00)	1 (100.0)	
Type of outlet				0.084
Department store	32	32 (100.0)	0 (0.0)	
Grocer	501	493 (98.4)	8 (1.6)	
Mini-mart	286	283 (99.0)	3 (1.0)	
Law caution				0.354
None	550	544 (98.9)	6 (1.1)	
Yes	269	264 (98.1)	5 (1.9)	
Advertisement sign				0.633
None	719	710 (98.7)	9 (1.3)	
Yes	100	98 (98.0)	2 (2.0)	

*Statistically significant $P < 0.05$ at 95% confidence level.

It was also found that illegal sales were partially related to culture. Parents or senior staff often instruct their children or subordinates to perform tasks for them, including buying alcoholic beverages. Vendors of local grocers reported that they sold alcoholic beverages to children because they knew the adult drinker, were familiar with their family members, and believed that the alcohol was not intended for the child or adolescent in question.

The main reason cited for refusing a sale was apprehension regarding the law. However, inconsistencies in practice were found for vendors who asked for age and ID. During peak time, age and ID verification was not performed. Almost all vendors believed that the decision to sell was primarily based on the morals of the vendor.

Perspectives on enforcement of the law and suggested measures to prevent illegal sales

Most vendors had a relatively positive attitude toward MPA. They strongly supported law enforcement but felt that awareness of its importance, equity, wider coverage of enforcement and more stringent penalties were necessary. Random checks by authorized entities would encourage compliance. Advertisements and public campaigns run on a regular basis could help stimulate vendors to be cautious when selling alcoholic beverages to young customers.

Vendors did not consider themselves a cause, but rather a consequence of youth drinking. Therefore, they suggested a law against alcohol purchase and possession by adolescents, and reflected that the law should impose penalties on the adolescents, as well as their parents, to prevent illegal purchase. It was also noted that while basic knowledge of the relevant law should be provided, the authorities concerned should work more proactively to ensure that all vendors –

particularly those in remote areas – are aware of this law. This would also facilitate the imposition of penalties.

Discussion

The primary aim of this study was to assess the compliance of alcohol retailers with the law in different outlet categories and in naturalistic situations. As a consequence, the methodology and findings of the study are unique among the limited pool of research into law enforcement and illegal sales to underage customers in Thailand. Our study also provides the results of test purchases in cases when law cautions and advertisements were displayed in the outlet, whereas other studies, both locally and internationally, have not paid attention to these two variables. Thus, there were no comparable data.

The findings of this study have similarities and disparities with other international studies. Generally, the proportion of purchase success is consistent with the results of studies in other countries^{10,17,18} although the figures in Thailand are much higher. The underage adolescents had very little difficulty in obtaining alcoholic beverages, with a very low risk of being challenged for proof of age. This is similar to the results of studies in São Paulo, Brazil, and Washington, DC, United States of America where the proportions of purchase success were as high as 80% and 97% respectively.^{8,10} The findings of the study in Brazil were also consistent with our study in that the age and gender of the adolescent and the type of alcohol outlet did not influence purchase success, while a study in the Netherlands found that underage female adolescents were more successful with alcohol purchases than males.⁹ It would be interesting to study further the effectiveness of MPA in different countries and characteristics of interventions that could promote sustainable enforcement of this particular restriction.

With regards to the age of the adolescent and the vendors, this study did not show any significant relationship of these two variables with purchase success, while the study in Brazil found that vendors older than 30 years were seven times more likely to refuse sales to underage customers. Concerning the number of vendors in the outlet, one study observed that sales to underage customers were more likely when the vendor was alone.⁷ In contrast, this study found that sales were less likely when there was only one vendor in the outlet, although this relationship is not statistically significant.

We also reflected on the unexpected result in Surin. Despite major campaigns and strong networks of civil society organizations working actively for alcohol control at the provincial level, the purchase success in Surin was very high at 99.6%. A preliminary recommendation would be for such campaigns and networks to try to focus on promoting law enforcement, rather than raise public awareness of the harms of alcohol and to change people's attitudes towards drinking alcohol in general. This proposal is in line with a report from an evaluation of the status and direction of alcohol control campaigns in Bangkok during 2010–2011.¹⁹

Limitations of the study

A major difficulty was being able to identify whether or not the samples (alcohol outlets) studied actually held a sales licence. Inclusion and exclusion criteria were clearly established to increase the chance of having a proper sample. Moreover, it was considered that alcohol outlets in certain physical locations would normally hold sales licences. In addition, we could not use the physical addresses of the alcohol outlets officially registered because it could not be proved that they were actually operating at the registered address and in what category. Thus, a map of the physical

locations of alcohol outlets was created, based on an enumeration survey undertaken by the researchers. Lastly, it is quite common for grocers to provide a few tables for their customers, but this is for occasional use and not mainly for on-premise alcohol consumption. These grocers were therefore included in the survey, but were very small in number. Thus, the study limitations were dealt with effectively to reduce any possible influence on the results.

Conclusions and recommendations

The results of our study reflect that law enforcement, in respect of MPA restrictions, still needs to be strengthened despite the fact that the Alcoholic Beverages Control Act has been in effect since 2008. Age and ID card verifications are effective interventions to limit access to alcoholic beverages of underage adolescents. When the vendors asked for age, sales of alcohol to the adolescents dropped to approximately one third, whereas ID card verification led to a complete sales refusal. Alcohol retailers should therefore be encouraged to perform age and ID card verifications when faced with young customers to help prevent youth drinking.²⁰

This study also suggests that many parties concerned with law enforcement should cooperate to reduce sales to adolescents. The potential benefits of enforcement of MPA restrictions are substantial and the costs are low.²¹ The Excise Department could contribute by emphasizing the restriction on sales to underage persons when a licence is granted. A range of practical interventions ranging from simple to complex should be considered, such as enclosure of law caution stickers and leaflets with the licence, brief verbal introductions to the law, guidance on what to do when encountering young customers and

licensee meetings. A short training course as a prerequisite for alcohol sales licenses would also help promote and raise awareness of the law. In addition to the existing penalties under the Alcoholic Beverages Control Act, the licence should be terminated when alcohol retailers infringe the law. Increased monitoring and enforcement activities, such as random visits and warning letters, by enforcement or regulatory-related authorities could also lead to positive changes in age and ID card verification practices.¹⁸ Campaigners, communities, mass media and civil society could also contribute actively to reducing illegal sales to minors. Campaigns specifically addressing the MPA, community-based interventions with multisectoral partnerships, and media advocacy can all be part of the overall effort to prevent underage alcohol sales and related problems.²²

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