

## ORIGINAL ARTICLE

# Factors Associated with The Compliance of Tobacco Advertisement, Promotion and Sponsorship (TAPS) Ban in Bali, Indonesia

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## ABSTRACT

**Introduction:** Indonesia is one of the countries with the highest number of tobacco advertisements, promotion, and sponsorship (TAPS) across the globe, which play a significant role in increasing smoking prevalence. Since 2019, Klungkung District has adopted a TAPS ban at point of sale (PoS). Accordingly, this study aims to evaluate compliance with the total TAPS ban at PoS in Klungkung and the factors associated. **Methods:** This cross-sectional study was conducted in the Klungkung district from August to October 2021. The survey involved 200 samples of PoS and also the managers, which selected using stratified simple random sampling for registered PoS and a walking protocol for unregistered PoS. Data was collected through observation using a checklist and interview using a structured questionnaire by eight well-trained enumerators. Data were analyzed using SPSS. **Results:** The study successfully observed 200 PoS and also interviewed 200 PoS managers. The result showed the compliance was 72.5%. Of 9 factors analyzed using regression analysis, it was found that factors associated with the compliance were knowledge and attitude PoS manager toward TAPS ban (OR=11.3; CI:1.233-103.414; p=0.008), perceived of socio-economic impact factor (OR=8.1; CI:3.584-18.400; p<0.01), and tobacco industry interference (OR=2.8; CI:1.441-5.594; p=0,003). **Conclusions:** Compliance with the TAPS ban at PoS remain sufficient, even though it has not reached the target. Factors mainly associated with the compliance were the attitude of PoS manager, and tobacco industry interference. Hence, socialization and enforcement should be improved and sustained.

*Malaysian Journal of Medicine and Health Sciences* (2023) 19(6):157-163. doi:10.47836/mjmhs.19.6.21

**Keywords:** Compliance, Klungkung, Point of sale, TAPS ban

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## INTRODUCTION

Smoking behavior is one of the significant challenges in public health, exacerbated by the massive tobacco industry that promotes and sells products that have been proven to kill almost half of its long-term users (1). The health burden of tobacco use is carried more heavily in certain countries or regions partly because of its higher prevalence, e.g., in Indonesia. Indonesia has the fourth-largest number of smokers globally after China, Russia, and the United States (2).

Indonesian Basic Health Research (Riskesmas) in 2018 showed that the prevalence of smokers in Indonesia was at 28.8%. Moreover, smoking among adolescents increased from 7.2% to 9.1%, deviating from the national target to 5.4%. Meanwhile, the prevalence

of smokers in Bali Province is lower than the national average of 23.5%. The capital city of Bali Province, Denpasar, has the highest smoking prevalence (27.4%), while the district with the lowest smoking prevalence is Klungkung District, with a smoking prevalence of 17.5% (3). The increasing prevalence, mainly among adolescents, was partly due to the massive tobacco advertising, promotion, and sponsorship. Many studies stated that Indonesia is the home of cigarette advertising across the globe.

Indonesia has yet to ratify the Framework Convention on Tobacco Control (WHO-FCTC). However, there is ongoing progress on tobacco control, including adopting the TAPS ban, which aims to reduce the prevalence of smokers and prevent the emergence of novice smokers. Article 13 of the WHO- FCTC requires a comprehensive ban on all TAPS, including displaying tobacco products at the point of sale (PoS) (4). A total TAPS ban including at point of sales (PoS) has been proven to be the most effective policy in reducing tobacco consumption (5) (6) (7).

Several cities in Indonesia have adopted a TAPS ban policy, either a total ban or a partial ban (only outdoor tobacco advertisement). However, studies showed many violations that remain to occur caused by multifactorial. Hence the compliance remains low. A survey in Banyuwangi city showed that after one year of implementation, the compliance was low due to the lack of public awareness and lack of facilities for monitoring and enforcement (8). A study in Surabaya city also confirmed that many medium-sized to large cigarette billboards were indeed placed nearby or visible from educational facilities targeting children and adolescents as their future customers (9). Meanwhile, the TAPS ban policy at the point of sale (PoS) is still few in Indonesia. A study in Bogor showed that the compliance assessed from four indicators, i.e., the absence of cigarette displays, advertisements, promotions, and sponsorship at PoS, was high at 83% (10). However, most studies conducted abroad, which performed a more detailed evaluation, showed an increasing violation due to the lack of sustainable enforcement and tobacco industry interference by exploiting loopholes in existing policies (11-13).

The government of Bali Province has also adopted the TAPS ban through a circular letter of the regional secretary of Bali province (14), which was then followed by several districts in Bali, including the Klungkung district. Furthermore, Klungkung has adopted an outdoor tobacco advertisement (OTA) ban policy through Regent Regulation No. 5 of 2016 (15). Moreover, Klungkung has also adopted the TAPS ban at PoS in a Circular Letter of the Regent of Klungkung District No. 510/242/DISKOP of 2019 concerning the TAPS and placement of cigarettes in traditional markets, supermarket and shopping centers (16). Thus, Klungkung District has adopted a comprehensive TAPS ban policy referring to article 13 of the WHO-FCTC. However, this policy would be effective for public health if the compliance is high (target of 80%). Hence, this study evaluates compliance with the total TAPS ban at PoS in Klungkung district, Bali Province.

## MATERIALS AND METHODS

This study was a cross-sectional which located in the Klungkung district (Figure 1). Klungkung remains the smallest district in Bali province, with 315 km<sup>2</sup> and 215,852 inhabitants. About one-third of its region is located in Bali Island, while two-thirds are archipelagos consisting of 4 sub-districts and 53 villages (17). Data were collected within two months, from October to November 2021. The population of this study was TAPS at PoS, and managers of PoS. The survey was conducted to assess compliance and factors associated with compliance at PoS through observation and interviewing the manager of PoS. This study has gained the ethical clearance No. 2495/UN14.2.2.VII.14/LT/2021 from The Ethical Committee of the Faculty of Medicine,



**Figure 1: Location of Study in Klungkung District, Bali Province, Indonesia**

Universitas Udayana, Indonesia.

The sample size was determined based on a formula, i.e., hypothesis test for two population proportions (one-sided test) (18). Based on this formula calculation, a minimum sample size of 185 was obtained. Anticipating the drop out, 10% was added and a total of 200 samples involved. Samples were then selected in two ways, i.e., sample with available sampling frame was selected using stratified simple random sampling with total number of sample at 67, while the others were selected using walking protocol with total number of sample at 133. The walking protocol started by determining the starting points, which were usually a government office or other prominent public places, then the enumerator walked in a particular direction consistently for all starting points for a maximum of 5 to 10 minutes to find the target PoS. Data were collected by eight well-trained enumerators through observation using a checklist which adapted from the article 13 of the WHO- FCTC. The observation checklist containing compliance indicators, including cigarette displays, advertisements, promotions, and sponsorships at PoS which collected using the KoBoToolBox application then analyzed descriptively using SPSS to determine proportion of compliance. While, data of compliance factors were collected through interview using a structured questionnaire which adapted from previous studies then tested to 30 samples outside the sample selected. Data then analyzed in stages, started with a descriptive analysis, bivariable analysis using chi-square and ended with a step by step multivariable analysis using logistic regression.

## RESULTS

We successfully observed 200 PoS as well as interviewed 200 PoS managers across four sub-districts in Klungkung. Of the 200 respondents, the majority were female (71,5%) with an average age of 41,25 years, and 59% had high school education levels. Furthermore, based on the type of PoS owned, 77% of them were unregistered PoS and primarily had been operating for more than five years (Table I).

**Table I: Characteristics of Socio-demographic Respondents**

Characteristic (n=200)	n (%)
Age (year) mean ± SD	
>45 years	82 (41,0)
26-45 years	86 (43,0)
18-25 years	29 (14,5)
<18 years	3 (1,5)
Sex	
Female	143 (71,5)
Male	57 (28,5)
Education level	
University	35 (17,5)
Senior High School	118 (59,0)
Junior High School	21 (10,5)
Elementary School	24 (12,0)
None	2 (1,0)
Type of PoS	
Registered	46 (23,0)
Unregistered	154 (77,0)
Operating period	
>5 years	126 (63,0)
1-5 years	59 (29,5)
<1 year	15 (7,5)

The compliance results at PoS showed that most of the PoS complied with the TAPS ban (72,5%). The compliance was measured by observing the presence of TAPS at PoS. In addition, after observing, we also informed the PoS managers regarding the implementation of the TAPS Ban policy and then asked them again regarding compliance in the future. However, only 47% of PoS managers stated that they will not display any type of TAPS in the future (Table II).

Moreover, the results showed that of 9 factors analyzed. Five factors affected the compliance with the TAPS ban, i.e., level of education, knowledge regarding the TAPS ban, attitudes towards the TAPS ban, socioeconomic impact, and tobacco industry interference. Education level showed affected the compliance with a p-value of 0.056. Meanwhile, respondents' knowledge regarding the TAPS bans affected the compliance significantly with OR 2.1, where managers with sound knowledge had an odd of 2.1 times to comply with the TAPS ban. Likewise, the attitude of respondents towards the TAPS ban also significantly affected compliance with OR

**Table II: Compliance with TAPS Ban at PoS in Klungkung**

Variable	Comply	Not Comply
	n (%)	n (%)
Compliance (observed)	145 (72.5)	55 (27.5)
Compliance (in the future)	94 (47.0)	106 (53.0)

11.3; hence managers who are supportive of the TAPS ban have an odd of 11.3 times of complying with the TAPS Ban. Furthermore, the socioeconomic impact factor affected the compliance with OR of 8.1. Finally, the last factor that significantly affected compliance with the TAPS ban was the tobacco industry interference. The result showed that managers who perceived no tobacco industry interference had an odd of 2.8 times to comply with the TAPS Ban (Table III).

Based on the results of the regression analysis, it was found that the factors related to compliance with the TAPS Ban in Klungkung were attitudes toward the ban and socio-economic impacts. Managers who have a supportive attitude towards the TAPS ban policy have an odds of 18 times to comply. While, managers who feel no socio-economic impact have an odds of 9.17 times to comply with the TAPS Ban policy. The complete results are presented in Table IV.

**DISCUSSION**

The compliance analysis with the total TAPS bans at PoS in this study is regulated through the Circular Letter of the Klungkung Regent Number 510/242/DISKOP of 2019 concerning the placement of cigarettes in traditional markets, shopping centers, and supermarkets (16). The results showed that compliance with the TAPS ban at PoS remained high, even though it hasn't reached the target yet (80%). Hence, the improvement of TAPS ban implementation is essential through a routine and better enforcement and supervision particularly to venue managers and other stakeholders including the community members (19). Better supervision and enforcement mean that enforcement team which lead by civil police (Satpol PP) should supervise and enforced regularly. Moreover, the enforcement not only through taking down the TAPS but also imposing a fine, similar like the enforcement of the smoke-free law. Imposing fine is important since the tobacco industry always try to approach the PoS manager to violence the law through offering some benefits including money, like what we found in this study.

The compliance in PoS was assessed based on four indicators, i.e., the presence of cigarette advertisements, promotions, sponsorship, and display of cigarettes in PoS. Of these four indicators, the presence of cigarette display was the most violated. Cigarette displays were placed near the cashier, especially in a Powerwall behind the cashier, and only a few were fully covered. Even the height of these cigarettes display is low enough to be seen by children. If we refer to article 13 of the WHO-FCTC and its guidelines which require a comprehensive ban on all TAPS, the ban on displaying cigarettes is an important indicator (4). Several studies have also confirmed that cigarette displays, especially in small stalls, are closely related to the vulnerability of smoking behavior (20) (21). While on the other hand, the ban

**Table III: Factors Associated with Compliance with The TAPS Ban in Klungkung District**

Variable	Compliance		OR	P-value	aOR	95% CI	p-value
	Comply n (%)	Not Comply n (%)					
Socio-demographic characteristics							
Age							
<18 years	2 (66.7)	1 (33.3)	1.2	0.407	-	-	-
18-25 years	25 (86.2)	4 (13.8)					
26-45 years	51 (59.1)	35 (40.7)					
>45 years	67 (81.7)	15 (18.3)					
Sex							
Male	39 (68.4)	18 (31.6)	0.8	0.415	-	-	-
Female	106 (74.1)	37 (25.9)					
Education level							
No education	2 (100.0)	0 (0.0)	0.7	0.309	-	-	-
Elementary	19 (79.2)	5 (20.8)					
Junior High School	17 (81.0)	4 (19.0)					
Senior High School	86 (72.9)	32 (27.1)					
University	21 (60.0)	14 (40.0)					
Knowledge regarding TAPS ban							
Good	123 (75.5)	40 (24.5)	2.1	0.049*	1.7	0.751-4.032	0.197
Lack	22 (59.5)	15 (40.5)			ref		
Attitude towards TAPS ban							
Supportive	144 (73.8)	51 (26.2)	11.3	0.008*	18.4	1.97 – 170. 23	0.01
Unsupportive	1 (20.0)	4 (80.0)			ref		
Socio-economic impact							
Not impacted	134 (80.2)	33 (19.8)	8.1	<0.01*	9.2	4,01 – 20,98	<0.01
Impacted	11 (33.3)	22 (66.7)			ref		
Socialization, monitoring, and enforcement							
Good	85 (72.0)	33 (28.0)	0.9	0.859	-	-	-
Lack	60 (73.2)	22 (26.8)					
Tobacco Industry interference							
No Interference	71 (83.5)	14 (16.5)	2.8	0.003*	2.0	0.947-4.316	0.069
Interference	74 (64.3)	41 (35.7)			ref		
TAPS ban status							
Sufficient	137 (72.1)	53 (27.9)	0.6	0.586	-	-	-
Not sufficient	8 (80.0)	2 (20.0)					

\*p-value ≤0.25 included in multivariable analysis; OR= odds ratio; aOR=adjusted odds ratio;

**Table IV: Factors Associated with Compliance with The TAPS Ban in Klungkung District**

Variable	aOR^	95%CI	p-value
Attitude towards TAPS ban			
Supportive	18.34	1.97 – 170.23	0.01*
Unsupportive	Ref		
Socio-economic impact			
Not Impacted	9.17	4.01 – 20.98	<0.01*
Impacted	Ref		

^aOR = adjusted odd ratio; \*\*Significant level: p<0.05

on displaying cigarettes in any form has been proven to reduce tobacco sales and consumption, particularly among teenagers or novice smokers (22) (23).

The other factors related to compliance with the TAPS ban in PoS were also identified in this study. However, the manager’s attitude towards implementing the TAPS ban is the most affected factor. To gain support from managers, they must aware about the TAPS ban, which is also shown in this study. Thus, most of them supported this policy. Numerous studies have confirmed the

relationship between knowledge and attitudes, where the higher the knowledge, the higher support gained to the program or policy (24) (25) (26). However, if we look in more detail at questions related to knowledge of the TAPS ban in PoS, most managers were unaware of the cigarette displays in PoS. They unaware that displaying cigarette either traditionally or modern style was against the law. Moreover, the tobacco industry also maintains the display regularly and offering benefits to the PoS manager. Hence, socialization and enforcement regarding the TAPS ban in PoS should be carried out especially related to the cigarette displays.

Meanwhile, the economic impact was also related to compliance with the TAPS ban in PoS. Generally, managers said they were not affected economically by the TAPS ban. There was no such decrease in cigarette sales or overall store income. However, one sub-district felt the economic impact, considering that others may not replace the advantages from TAPS since this sub-district is located in an archipelago, with socioeconomic status not as strong as the other subdistricts in Klungkung mainland. Our finding has also been confirmed by a study that shows that compliance with the TAPS ban in PoS is related to the product sales and income received from TAPS and low socioeconomic status in the surrounding environment (27)(28). This sub-district used to rely on marine products as the main driver of its economic sector. However, recently, their economic sector leans on tourism. Hence, many hospitality facilities were built and cigarettes selling becomes more common and spread across this sub-district. The government of Klungkung should be aware of and consider this shift and start preventing the negative impact of the tourism growth in particular increasing sale of cigarette, TAPS and ultimately increasing the prevalence of smoking.

Tobacco industry interference is one of the fundamental challenges in every program and policy related to tobacco control (29) (30). Likewise, the implementation of the TAPS ban in Klungkung showed that PoS managers had provided information regarding the TAPS ban to the tobacco industry. However, most of them disregard this prohibition and take full responsibility if any manager is subjected to sanctions. It proves that the tobacco industry wants to show its power to counter any policies that will hinder its business. The study also emphasized that the tobacco industry applies discursive and instrumental strategies to weaken and delay the implementation of anti-smoking policies at every stage of its implementation (31) (32). The tobacco industry's interference is at the highest policy level and often targets local policies, including the Klungkung district. Some reports in the mass media indicated that the Regent of Klungkung had been subpoenaed by the tobacco industry regarding his tobacco control policies, soon after the Regent flatly rejected their persuasive efforts. Hence, once again, the leadership as exemplified by the Regent of Klungkung is an essential factor in

increasing compliance and ensuring the sustainability of the tobacco control policies.

Nevertheless, a precise strategy is needed to combat the tobacco industry's intervention, considering the change of Regent will be able to change the existing policies immediately. Hence, it is substantial to monitor the tobacco industry strategies and take lessons from other countries since it often uses the same global strategy. Tobacco control advocates should carry out domestic litigation media advocacy and engage directly with legislators, politicians, and other stakeholders to implement strong tobacco control policies (31) (33).

The limitation in this study is that the tobacco advertisement, promotion and sponsorship (TAPS) observed were only the common TAPS such as printing ads, cigarette display, LED ads, and 3-dimensional ads. The uncommon TAPS e.g., cigarette brand stretching or reverse brand stretching were not observed.

## CONCLUSION

Compliance with the TAPS ban at PoS remain sufficient, even though it has not reached the target. Factors associated with the compliance at PoS in Klungkung district were the manager's attitudes towards the ban, economic impact, and tobacco industry interference. Thus, socialization, monitoring, and enforcement at PoS need improvement, especially regarding cigarette displays. The commitment of the Klungkung government, particularly the Regent, in implementing this policy, must be maintained and even increased, considering the tobacco industry threat.

## ACKNOWLEDGEMENTS

The authors sincerely thank Center for NCDs, Tobacco Control and Lung Health, Universitas Udayana (Udayana Central) for the support throughout the project, to all respondents who kindly consented to participate in this study and to all enumerators for their valuable contribution to the study. We also thank the reviewers for their thoughtful review of our paper. The study was funded by Pusat Ekonomi dan Bisnis Syariah Fakultas Ekonomi dan Bisnis Universitas Indonesia (PEBS FEB UI) in collaboration with Johns Hopkins University. KS received a research grant of Indonesian Tobacco Control Research Network (ITCRN) 2021 with contract No. S-332/UN2.F6.D.PBS/PPM.00.03/2021.

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