

# Assessment of Compliance with Smoke-free Tobacco Control Policies in Yogyakarta, Central Java, Indonesia

## Technical Report



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## EXECUTIVE SUMMARY

The Institute for Global Tobacco Control (IGTC) at the Johns Hopkins School of Public Health (JHSPH), in collaboration with the International Union Against Tuberculosis and Lung Disease (The Union), assessed compliance with smoke-free tobacco control policies in Yogyakarta, Indonesia. Yogyakarta passed Regional Regulation Number 2 in 2017, a policy which introduced smoke-free requirements for public places and workplaces including government buildings, places of worship, hospitality settings and shopping centers.

This technical report describes where observations were conducted to assess compliance with the city's smoke-free policy, the methods used, and the results of this assessment. This report also includes recommendations on how to improve compliance with the smoke-free policy in Yogyakarta.

Data collectors from Yogyakarta were hired by the University of Udayana and were trained in February 2019. Training was conducted by IGTC faculty and staff, Union staff, and project staff from Udayana University. Training took place in Depok and Bogor (West Java). Observations to assess compliance with the smoke-free policy were conducted in Yogyakarta during February and March 2019.

*Smoke-free observations:* A total of 790 venues were observed by data collectors. Venue types included hospitality settings (billiard halls, coffee shops, hotels, internet cafés/game rooms, karaoke lounges, restaurants - both licensed and unlicensed), government buildings, places of worship (churches, monasteries, mosques, pagodas, and temples), and shopping centers.

Data collectors conducted observations on a smartphone using a data collection application called KoBo Toolbox. Data collectors followed an observation checklist that included measures for smoke-free compliance (observed smoking, the presence of cigarette litter, the presence of ashtrays or other instruments used to hold cigarette ash, and the presence and placement of smoke-free signage). Compliance with smoke-free regulations varied by venue type, however, compliance was generally low. Compliance was highest among government buildings, where less than half (39%) of all buildings observed were compliant with smoke-free regulations. Less than one quarter of all hospitality venues (9%), places of worship (16%), and shopping centers (17%) were compliant with smoke-free regulations. Some hospitality venues, including karaoke lounges, unlicensed restaurants, and billiard halls, had 0% compliance with smoke-free regulations.

When observing evidence of smoking, the majority of places of worship (62%) were 100% smoke-free however less than one third (28%) of all hospitality venues were 100% smoke-free. The majority of government buildings (85%) had smoke-free signage posted; approximately one quarter of hospitality venues (24%) and places of worship (24%) had smoke-free signage posted. Designated smoking rooms/areas which were observed during this study were all in violation of the city's smoke-free policy.

*Recommendations:* In Yogyakarta, all venue types can improve their compliance with the city's smoke-free policy. Interventions to support compliance, particularly in hospitality venues, could reduce the public's and workers' exposure to secondhand smoke. In accordance with Article 17

of Yogyakarta's Regional Regulation No. 2/2017, persons in charge of smoke-free venues should ensure no-smoking signs are posted and ashtrays are removed from the premises. In accordance with Article 16 of Yogyakarta's Regional Regulation No. 2/2017, regional authorities must ensure that routine monitoring and evaluation of smoke-free implementation is being carried out across the city. Implementing Yogyakarta's smoke-free regulations uniformly across all venues, including improved enforcement mechanisms, may substantially improve compliance.

Experience from other jurisdictions provides insight into interventions that may support the implementation of smoke-free policies. Structured training and education campaigns which are aimed at ensuring venue owners/managers fully understand local smoke-free tobacco policies is encouraged.<sup>1</sup> If possible, education campaigns should be tailored to specific venues such that they address relevant issues. For example, providing hospitality venue staff with training and tips on how to deal with customers who are smoking.<sup>1</sup> Educating the general public on the importance of smoke-free policies to reduce exposure to secondhand smoke and improve health outcomes for smokers and non-smokers is also crucial.<sup>1-2</sup>

## I. INTRODUCTION

The prevalence of tobacco use in Indonesia is among the highest in the world; approximately 64.9% of male adults (aged 15+) and 2.1% of female adults (aged 15+) use cigarettes.<sup>3</sup>

According to the Global Adult Tobacco Survey for Indonesia (2011), smoking is more prevalent in rural areas compared to urban areas.<sup>4</sup>

Indonesia is not a party to the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC); however, a national law restricts smoking in numerous workplaces and public places including healthcare facilities, educational settings, places of worship and public transportation.<sup>3,5</sup> In Indonesia, the national smoke-free law requires the passage and implementation of local laws by sub-national governments.<sup>3</sup> Two sub-national jurisdictions in Java, Yogyakarta and Depok, have enacted and implemented smoke-free regulations. These smoke-free regulations further restrict smoking in other important settings including government buildings, restaurants, and shopping centers.

This report summarizes the results from the observational study that was conducted in Yogyakarta to assess compliance with this smoke-free policy. The work was led by the Institute for Global Tobacco Control (IGTC) at the Johns Hopkins School of Public Health (JHSPH) in collaboration with the International Union Against Tuberculosis and Lung Disease (The Union). Data collection was overseen by researchers from Udayana University who hired local data collectors.

## II. METHODS

### *Sampling Approach*

**Smoke-free Assessment:** We collected observational data to understand smoke-free compliance in a variety of venue types including: 1) hospitality venues (billiard halls, coffee shops, hotels, internet cafés/game rooms, karaoke lounges, restaurants - both licensed and unlicensed), 2) government buildings, 3) places of worship (churches, monasteries, mosques, pagodas, and temples), and 4) shopping centers.

Comprehensive lists of venues in the city were available from the municipality or from Google queries. For most venue types, all identified venues were included in the sample (census) except for restaurants and mosques. A comprehensive list of all mosques (n=504) was identified from the municipality and a random sample of 272 was generated and included in the list of venues to be observed. The municipality also provided a comprehensive list of all licensed restaurants in the city (n=233); a random sample of 200 licensed restaurants was to be identified for the study however only 183 licensed restaurants were open and functioning. There is no comprehensive list of unlicensed restaurants, nor are these venues easily identified through searches or internet queries. Therefore, these venues were identified by following a walking protocol. Data collectors were instructed to follow a specific walking pattern starting from a city government office until a quota of 50 unlicensed restaurants had been identified.

Further details about the sample are included in Table 1.

**Table 1: Methods used to select venues for sample**

Venue Type	Method
Hospitality venues: billiard halls, coffee shops, hotels, internet cafés/game rooms, karaoke lounges	List of venues identified from municipality and from Google query; sample included a census of all venues.
Hospitality venues: licensed restaurants	List of licensed restaurants provided by the municipality (n=233); sample included 183 licensed restaurants .
Hospitality venue: unlicensed restaurants	Walking protocol followed from city government offices. Sample quota set at 50 venues.
Government buildings	List of venues provided from municipality; sample included a census of all venues.
Places of worship: mosques	List of mosques provided from municipality (n=504); list was randomized to identify a sample of 272 mosques.
Places of worship: other (church, monastery, pagoda, temple)	List of other places of worship provided by municipality; sample included a census of all other places of worship.
Shopping centers	List provided by municipality; sample included a census of all shopping centers.

### ***Training***

Classroom based training was held for two days in February 2019 in Depok. Data collection training was done in Depok and Bogor. The team consisted of ten data collectors from Yogyakarta. The training introduced the team of data collectors to Yogyakarta's smoke-free policy. Data collectors were trained to follow the data collection protocols for each venue type and were instructed on how to use the walking protocol to identify unlicensed restaurants. Data collectors practiced conducting observations in each venue type. The data collectors were instructed to behave as customers or visitors in hospitality venues (e.g. restaurants), making small purchases when appropriate. For government buildings, data collectors had a letter describing the study to facilitate getting access to areas in the offices to conduct observations.

### ***Observations***

Data collection took place between February and March 2019. Data were collected through direct observation in venues using a checklist that had been uploaded to a mobile data collection application called KoBo Toolbox (Appendix A - Observation Form). The *smoke-free observation form* included questions regarding the presence/absence of smoker(s); presence/absence of cigarette butts; presence/absence of ashtrays (or other instruments used to hold cigarette ash), and presence and placement of smoke-free signage. In addition, questions regarding the presence of designated smoking areas or rooms were also included. Data collectors were instructed to spend approximately 30 minutes in each venue (a minimum of 20 minutes) unless smoking was observed, in which case data collectors could leave once all aspects of the checklist had been completed. Data collectors also took pictures using the smartphone when appropriate.

Observations were conducted in venues at times appropriate for data collection. For example, data collectors were instructed to visit restaurants during lunch or dinner hours. Data collectors worked in pairs and each team received a list of venue types with names and addresses they were to visit during each day of data collection. A backup list of venues was also provided in case the locations to be visited were closed or otherwise unavailable. Once the data collectors entered the premises, the data collectors followed the study protocol (Appendix B – Data Collection Protocol) which outlined specific areas to observe. The recorded observations included the start and end time of data collection, thus indicating how much time the data collector spent at each venue.

Data were uploaded daily to a cloud-based server. Data quality checks were conducted throughout the data collection period by both, the team at Udayana University and IGTC.

### III. RESULTS

#### Sample

Observations were conducted at 790 venues; the number of observations conducted in each venue type is detailed in Table 2.

**Table 2: Sample by venue type**

Venue	n	%
Government buildings	104	13
Hospitality	363	46
Places of worship	300	38
Shopping centers	23	3
Total	790	100

#### Results by specific venue types

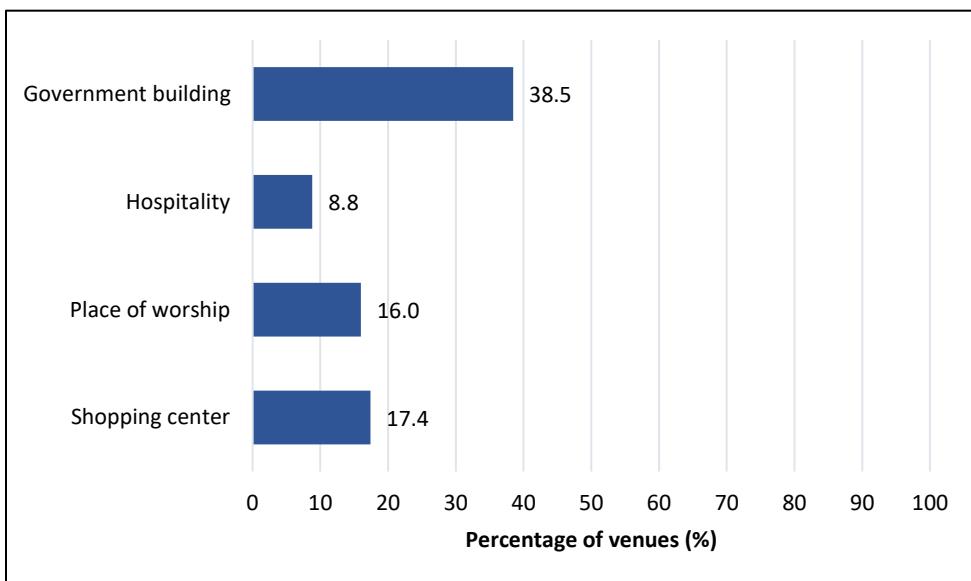
This section presents compliance for all venue types combined.

#### Compliance with smoke-free regulations in all venues

A venue was classified as compliant with smoke-free regulations if each of the following criteria were met: 1) there was no observed smoking during the period of data collection, 2) no cigarette butt litter was found, 3) no ashtrays or other instruments used to hold cigarette ash were found, and 4) smoke-free signage was observed. If any of these criteria were not met, the venue was categorized as non-compliant.

Compliance with smoke-free regulations is presented in Figure 1. The percentage of venues that were compliant with the city's smoke-free regulations was approximately 39% in government buildings, 17% in shopping centers, 16% in places of worship, and 9% in hospitality venues.

**Figure 1: Compliance with smoke-free regulations by venue type**

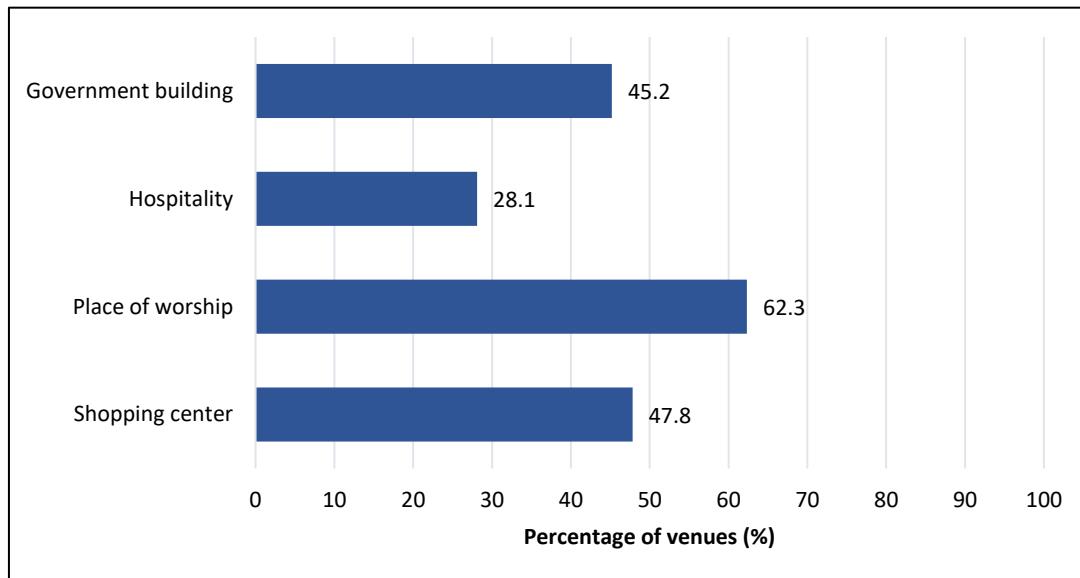


#### **Compliance with composite indicator assessing evidence of smoking in all venues**

A venue was classified as compliant with the composite indicator assessing evidence of smoking if each of the following criteria were met: 1) there was no observed smoking during the period of data collection, 2) no cigarette butt litter was found, and 3) no ashtrays or other instruments used to hold cigarette ash were found. If all of these criteria were met, the venue was categorized as 100% smoke-free.

Compliance with the composite indicator assessing evidence of smoking by venue type is reported in Figure 2. The percentage of venues that were 100% smoke-free was approximately 62% in places of worship, 48% in shopping centers, 45% in government buildings, and 28% in hospitality venues.

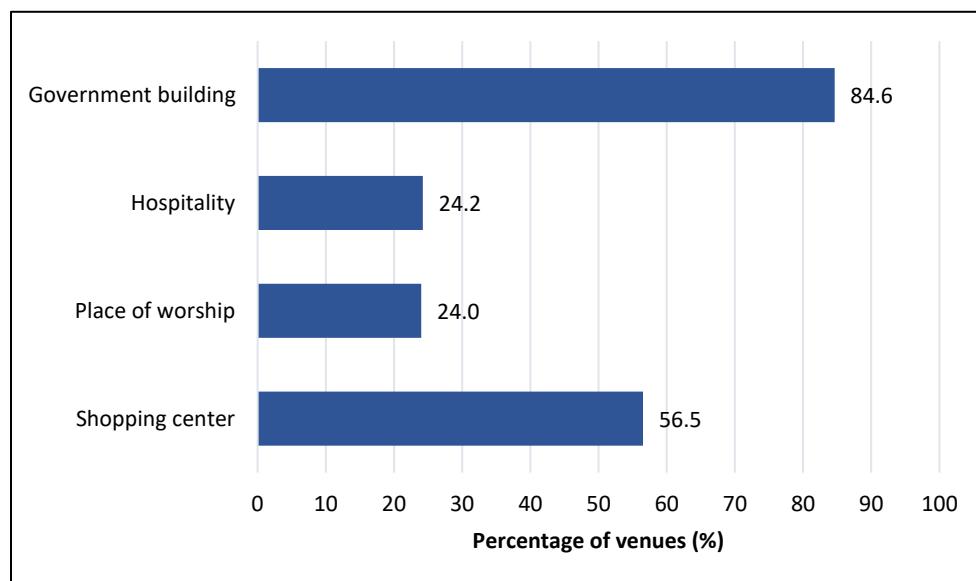
**Figure 2: Compliance with composite indicator assessing evidence of smoking by venue type**



#### **Compliance with smoke-free signage regulations in all venues**

Compliance with smoke-free signage regulations by venue type is depicted in Figure 3. The percentage of venues that were compliant with signage regulations was approximately 85% in government buildings, 57% in shopping centers, and 24% in places of worship and hospitality venues respectively.

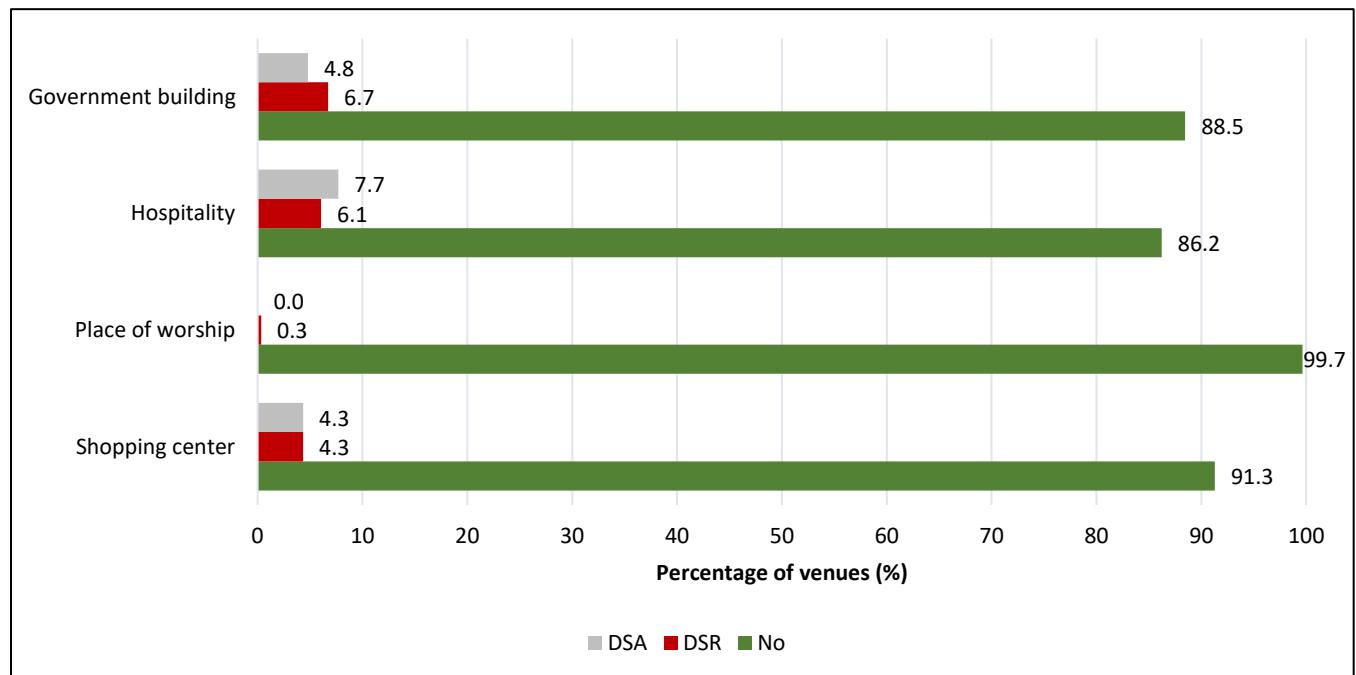
**Figure 3: Compliance with smoke-free signage regulations by venue type**



## **Presence of designated smoking rooms or designated smoking areas within smoke-free venues**

The percentage of venues with a designated smoking room (DSR) or a designated smoking area (DSA) is presented in Figure 4. All designated smoking rooms or areas observed were non-compliant and in violation of the city's smoke-free policy.

**Figure 4: Presence of designated smoking rooms or designated smoking areas by venue type**



## **Results by specific venue types**

This section presents compliance for each specific venue type.

### **Hospitality venues**

The sample included 363 hospitality venues; the number of specific venue types is presented in Table 3. Approximately one half (50%) of all hospitality venues observed were licensed restaurants.

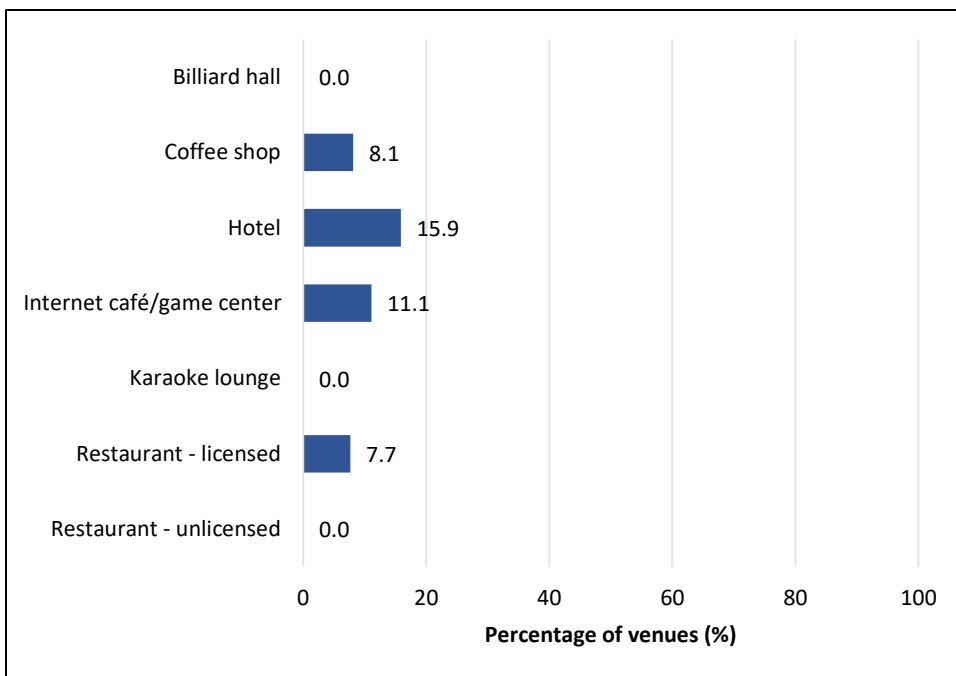
**Table 3: Sample of hospitality venues**

<b>Hospitality</b>	<b>n</b>	<b>%</b>
Billiard halls	2	1
Coffee shops	37	10
Hotels	82	23
Internet café/game rooms	18	5
Karaoke lounges	5	1
Licensed restaurants	183	50
Unlicensed restaurants	36	10
Total	363	100

### **Compliance with smoke-free regulations in hospitality venues**

Compliance with smoke-free regulations in hospitality venues is presented in Figure 5. The percentage of hospitality venues that were compliant with the city's smoke-free regulations ranged from 0% in billiard halls, karaoke lounges, and unlicensed restaurants, to 16% in hotels.

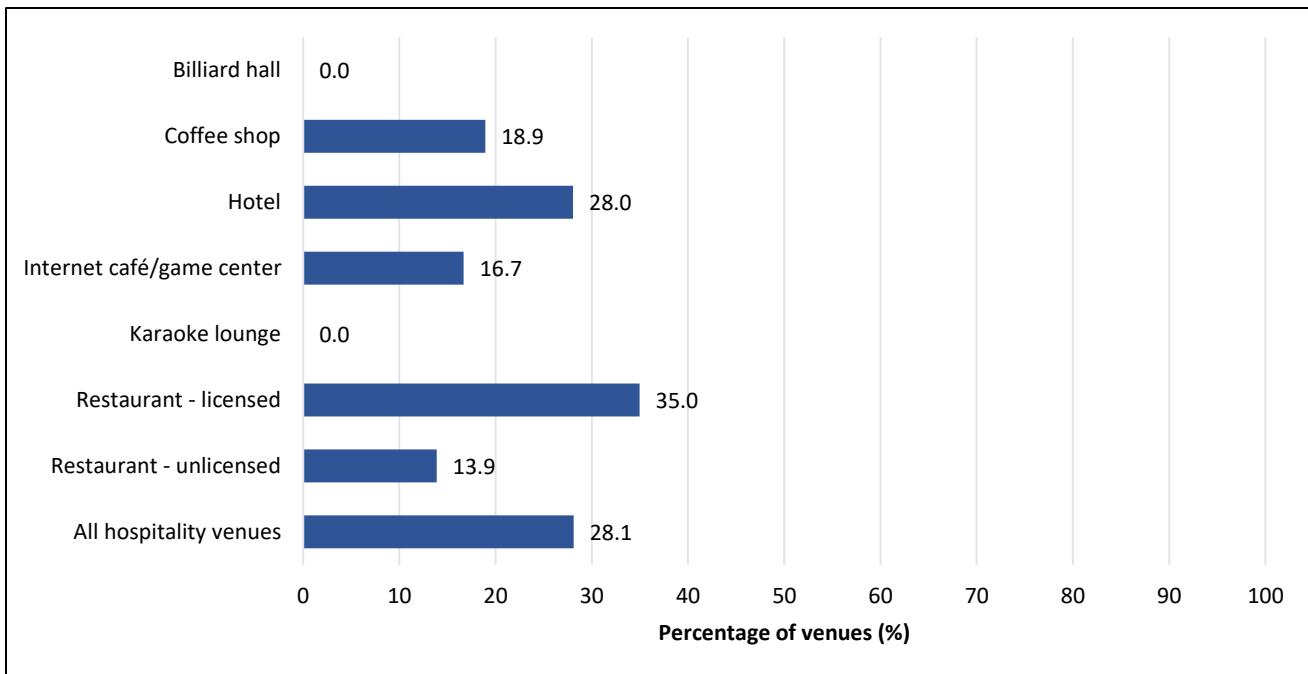
**Figure 5: Compliance with smoke-free regulations by hospitality venue type**



#### **Compliance with composite indicator assessing evidence of smoking in hospitality venues**

Compliance with the composite indicator assessing evidence of smoking by hospitality venue type is reported in Figure 6. The majority of each hospitality venue type was not 100% smoke-free.

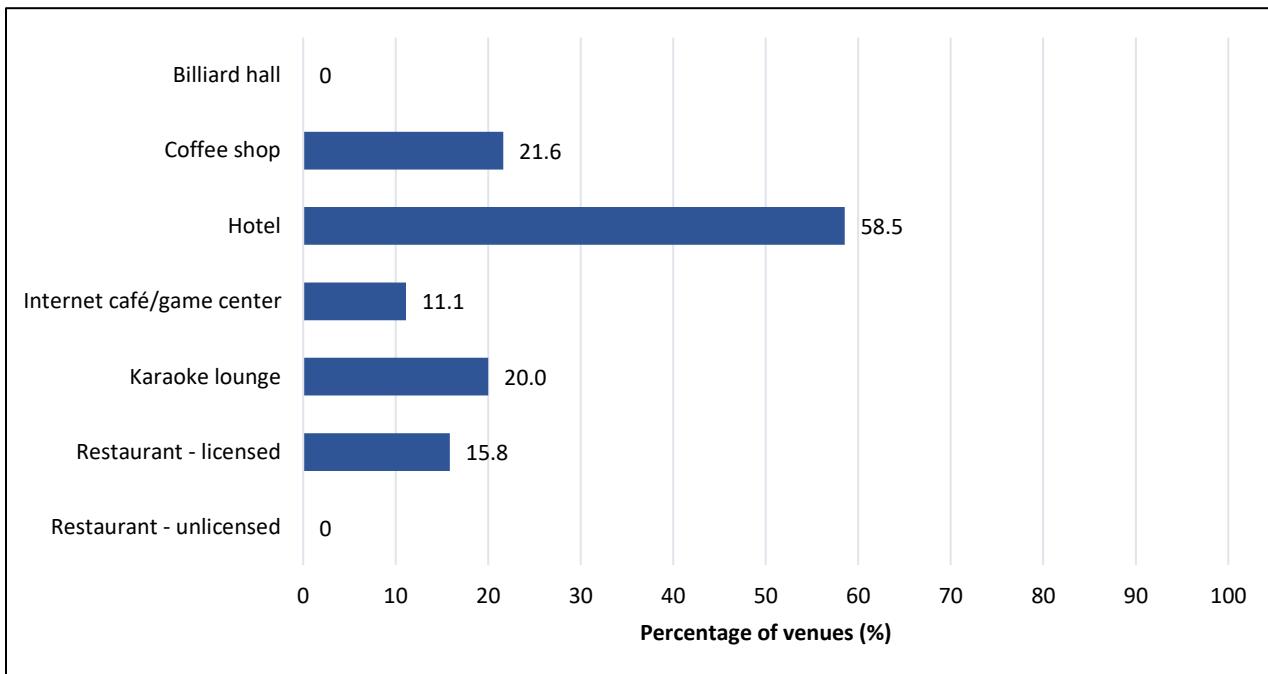
**Figure 6: Compliance with composite indicator assessing evidence of smoking by hospitality venue type**



#### **Compliance with smoke-free signage regulations in hospitality venues**

Compliance with smoke-free signage regulations by hospitality venue type is reported in Figure 7. The majority of hotels (59%) were compliant with smoke-free signage regulations; however, the majority of the remaining venue types were not compliant. None (0%) of the billiard halls and unlicensed restaurants met the requirements for smoke-free signage.

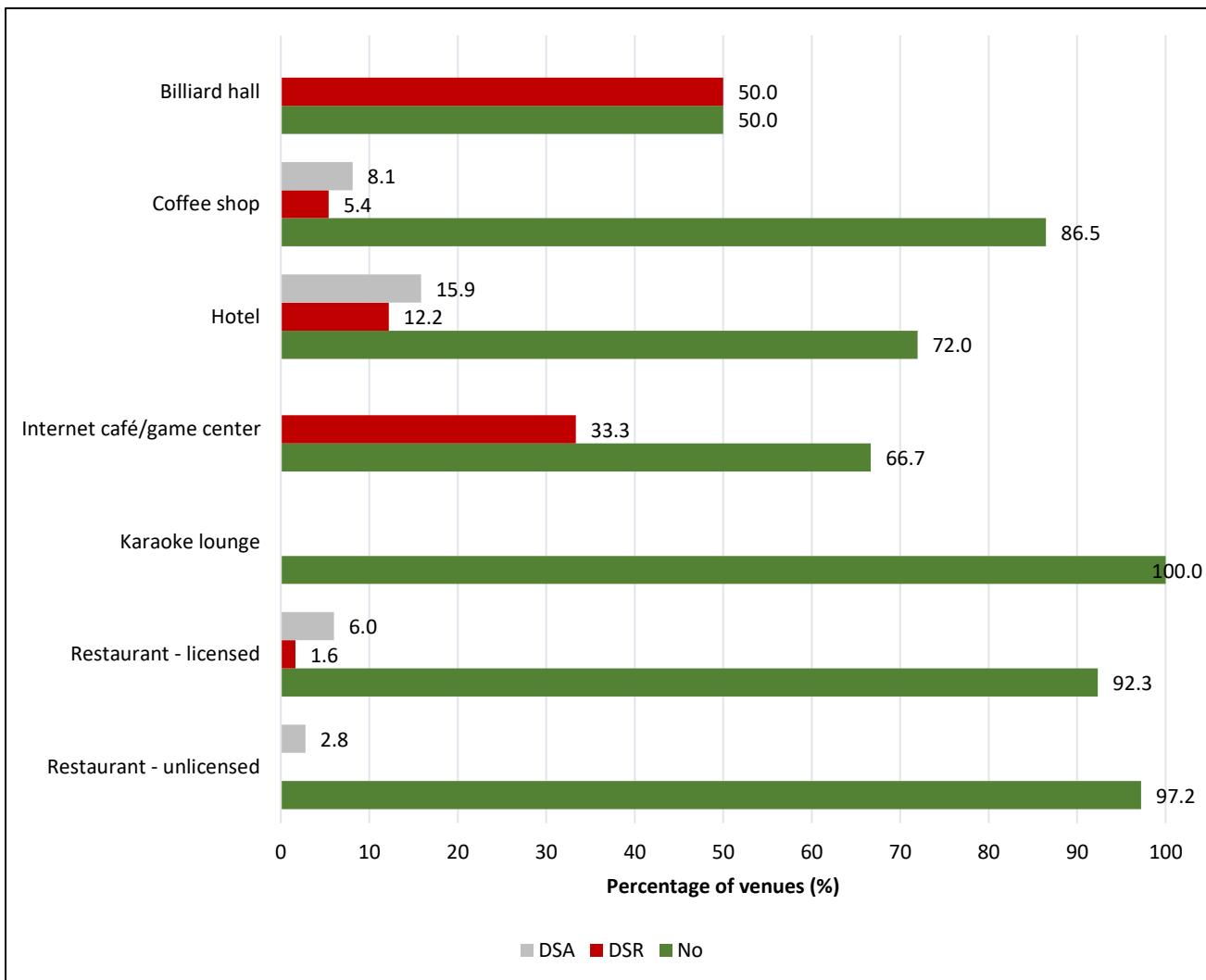
**Figure 7: Compliance with smoke-free signage regulations by hospitality venue type**



#### **Presence of designated smoking rooms or designated smoking areas in hospitality venues**

The percentage of hospitality venues with designated smoking rooms or designated smoking areas is presented in Figure 8.

**Figure 8: Presence of designated smoking rooms or designated smoking areas by hospitality venue type**



## Government buildings

The sample included 104 government buildings; the number of specific venue types is presented in Table 4.

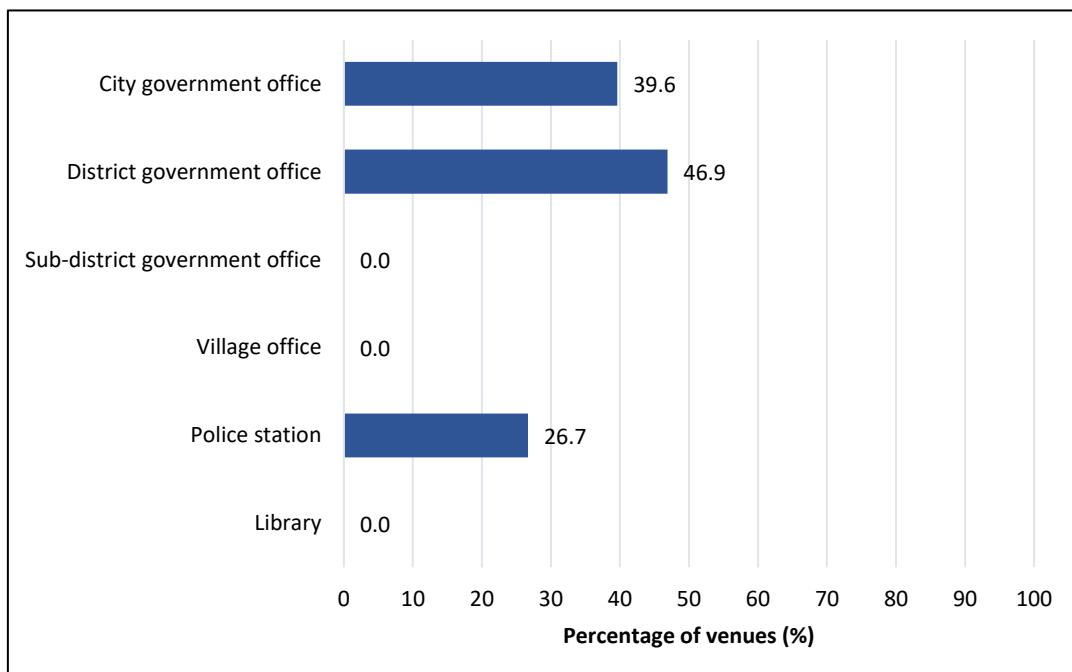
**Table 4: Sample of government buildings**

Government buildings	n	%
City government office	53	51
District government office	32	31
Sub-district government	1	1
Village office	2	2
Police station	15	14
Library	1	1
Total	104	100

## Compliance with smoke-free regulations in government buildings

Compliance with the smoke-free regulations in government buildings is presented in Figure 9. The percentage of government buildings that were compliant with the city's smoke-free regulations was approximately 47% in district government offices, 40% in city government offices, and 27% in police stations. None (0%) of the village offices, and neither one of the sub-district government office or library, were compliant with smoke-free regulations.

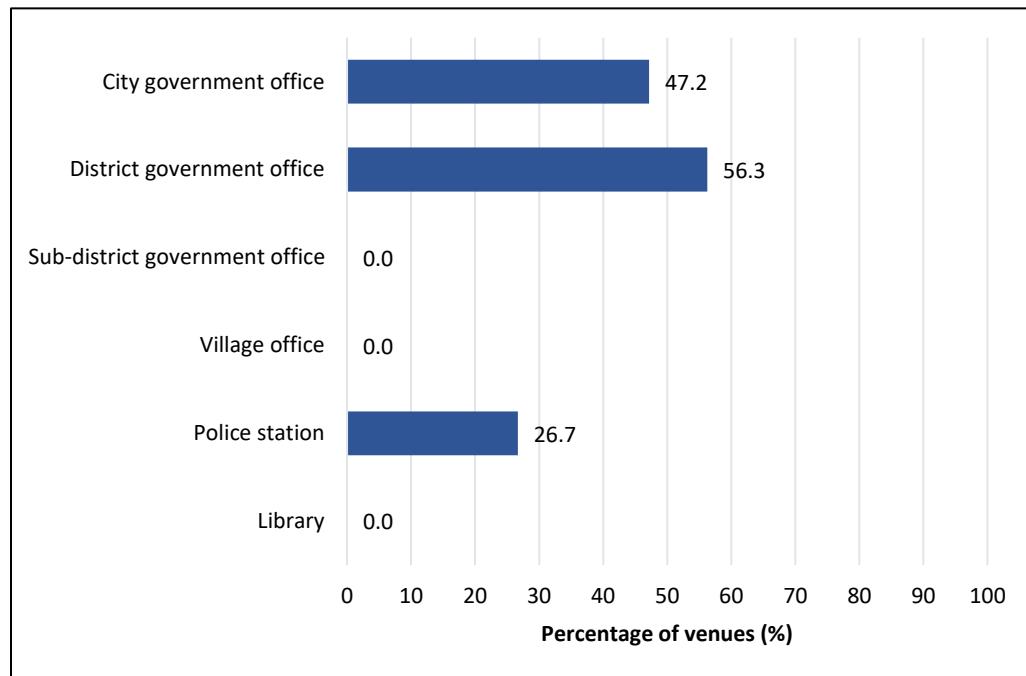
**Figure 9: Compliance with smoke-free regulations by government building type**



### **Compliance with composite indicator assessing evidence of smoking in government buildings**

Compliance with the composite indicator assessing evidence of smoking in government building venues is presented in Figure 10. The percentage of government buildings that were 100% smoke-free was 56% in district government offices, 47% in city government offices, and 27% in police stations. None (0%) of the village offices, and neither one of the sub-district government office or library, were 100% smoke-free.

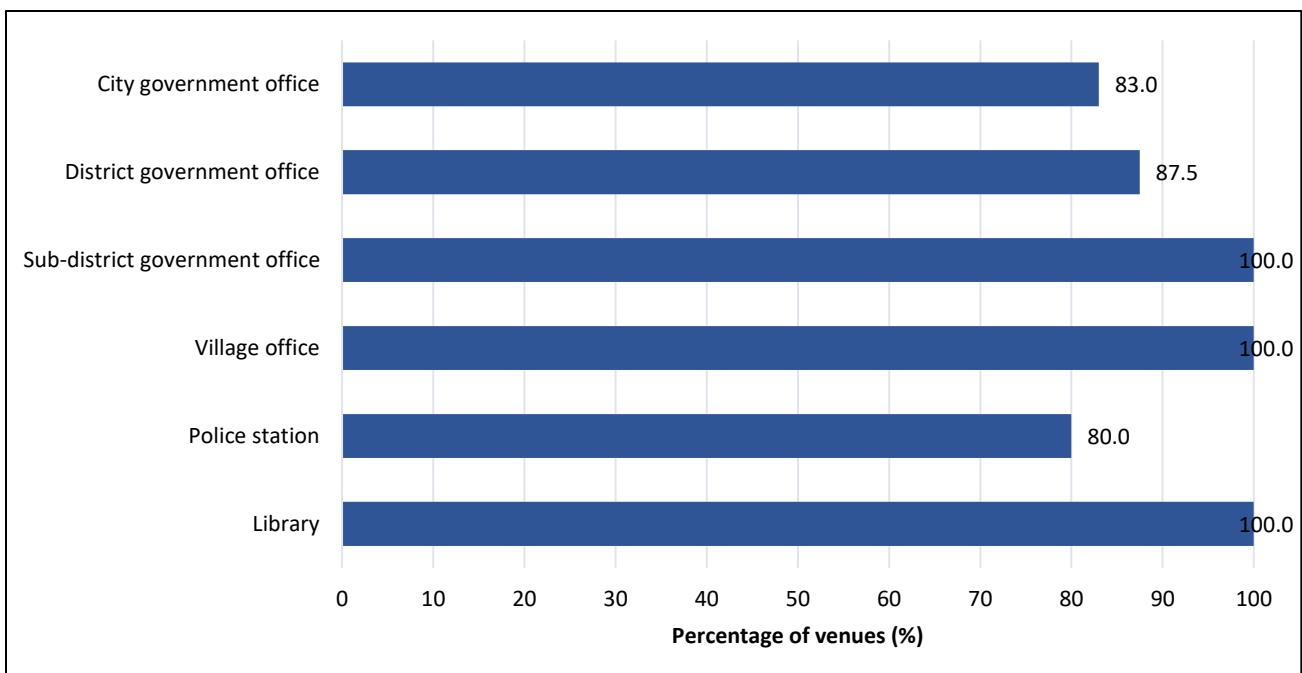
**Figure 10: Compliance with composite indicator assessing evidence of smoking by government building type**



### **Compliance with smoke-free signage regulations in government buildings**

Compliance with smoke-free signage regulations by government building type is presented in Figure 11. The percentage of government buildings that were compliant with smoke-free signage regulations was approximately 88% in district government offices, 83% in city government offices, and 80% in police stations. Both of the village offices (100%), and each library and sub-district government office observed, were compliant with smoke-free signage regulations.

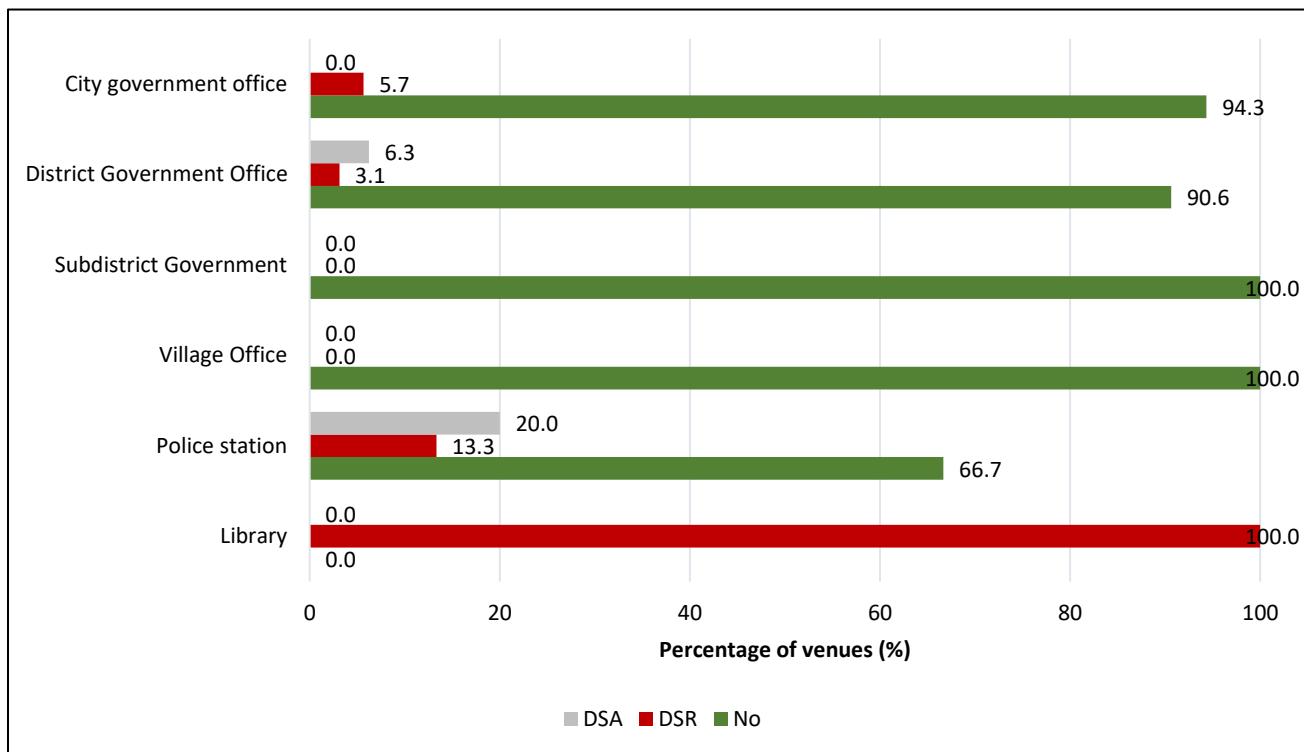
**Figure 11: Compliance with smoke-free signage regulations by government building type**



#### **Presence of designated smoking rooms or designated smoking areas in government buildings**

The presence of designated smoking rooms or designated smoking areas by government building type is presented in Figure 12.

**Figure 12: Presence of designated smoking rooms or designated smoking areas by government building type**



## Places of worship

The sample included 300 places of worship; the number of specific venue types is reported in Table 5. The majority of places of worship observed (91%) were mosques.

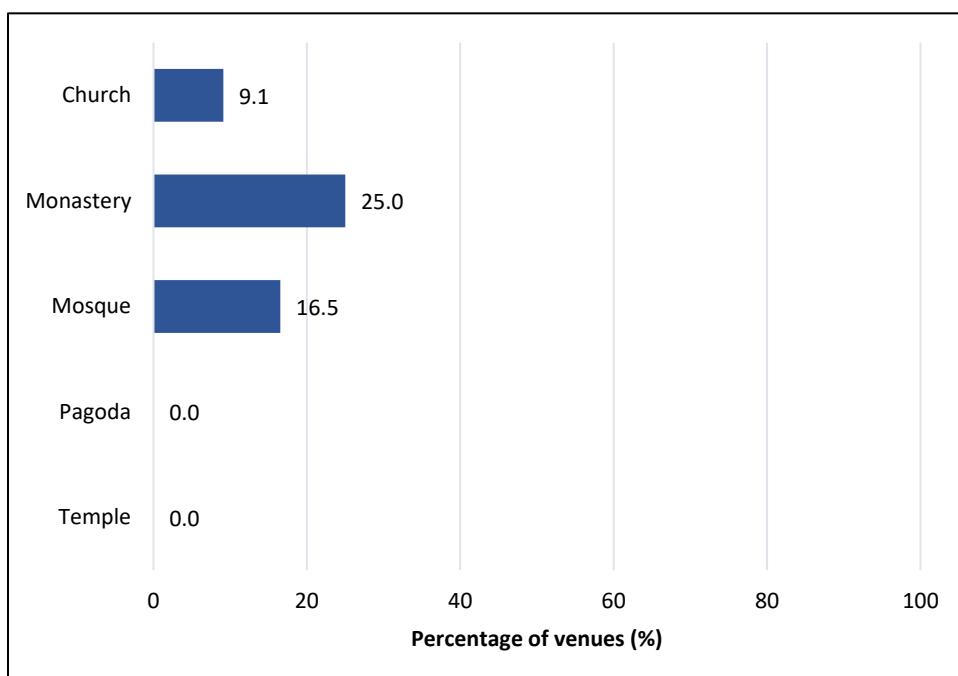
**Table 5: Sample of places of worship**

Places of Worship	n	%
Church	22	7
Monastery	4	1
Mosque	272	91
Pagoda	1	0
Temple	1	0
Total	300	100

## Compliance with smoke-free regulations in places of worship

Compliance with smoke-free regulations in places of worship is presented in Figure 13. The percentage of places of worship which were compliant with smoke-free regulations was approximately 25% in monasteries, 17% in mosques, and 9% in churches. Neither (0%) of the pagodas or temples observed were compliant with smoke-free regulations.

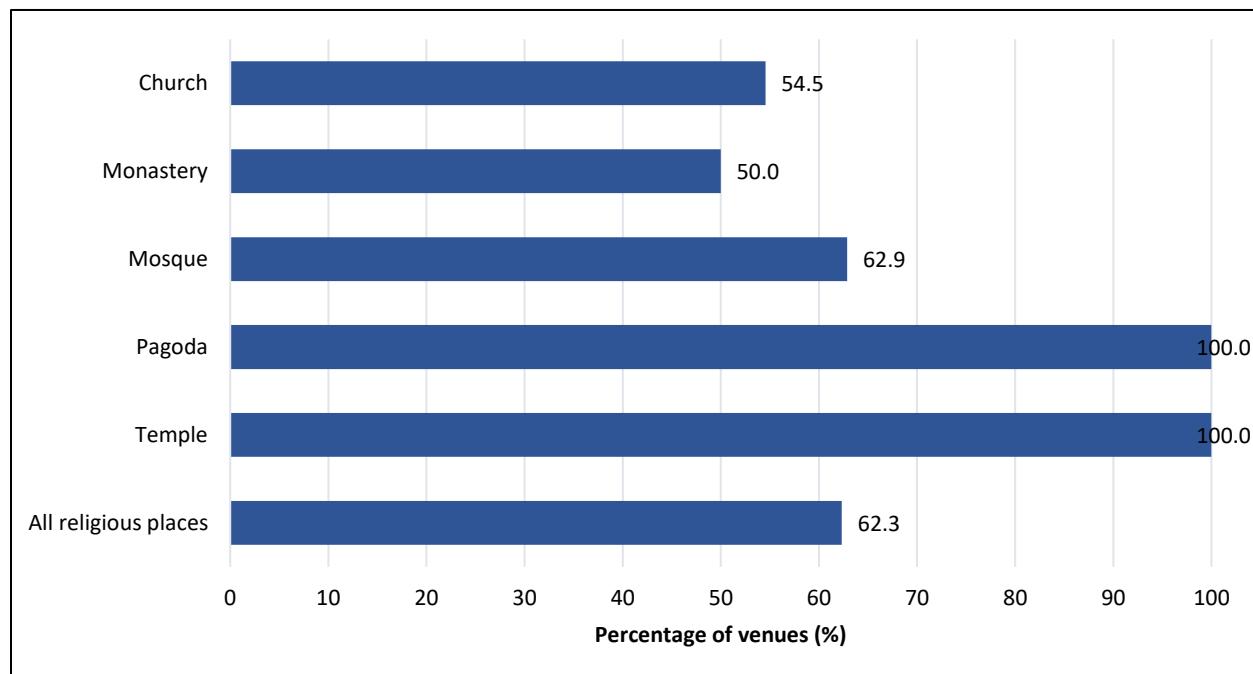
**Figure 13: Compliance with smoke-free regulations in places of worship by venue type**



### **Compliance with composite indicator assessing evidence of smoking in places of worship**

Compliance with the composite indicator assessing evidence of smoking by place of worship is presented in Figure 14. The sample includes one pagoda and one temple, both of which were compliant. Approximately two-thirds of mosques (63%) were compliant.

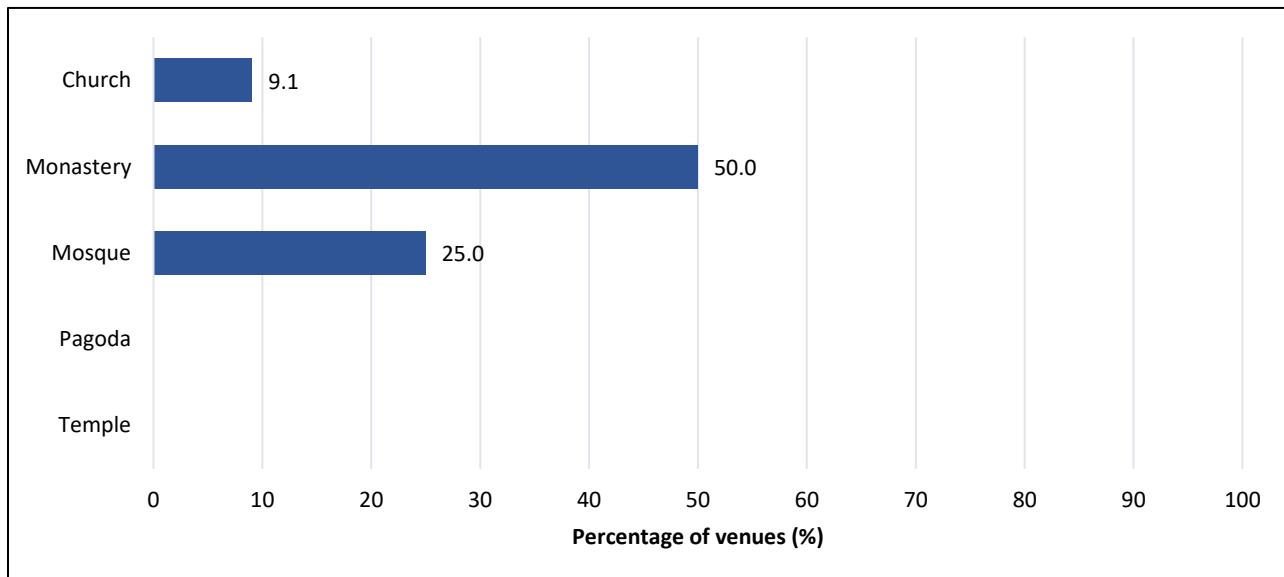
**Figure 14: Compliance with composite indicator assessing evidence of smoking in places of worship by venue type**



### **Compliance with smoke-free signage regulations in places of worship**

Compliance with smoke-free signage regulations in places of worship is presented in Figure 15. Compliance with smoke-free signage regulations was low across all places of worship.

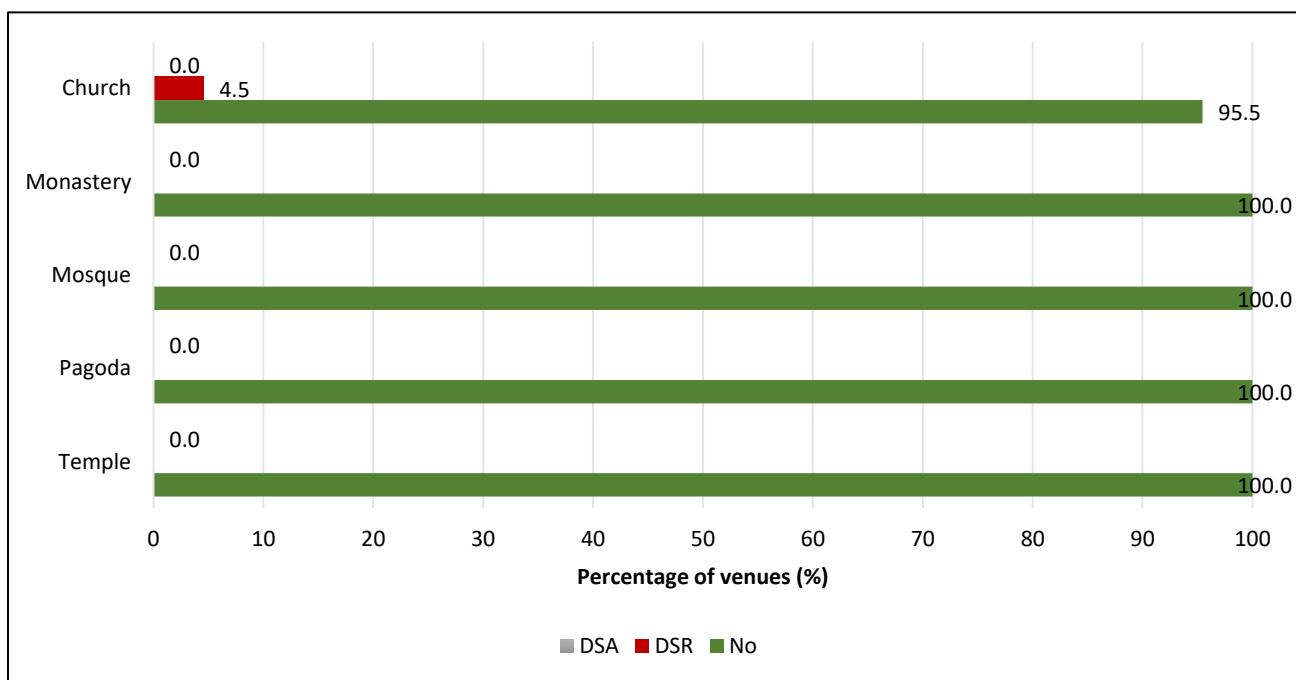
**Figure 15: Compliance with smoke-free signage regulations in places of worship by venue type**



#### Presence of designated smoking rooms or designated smoking areas in places of worship

The presence of designated smoking rooms or designated smoking areas is reported in Figure 16. Across all places of worship, only one church had a designated smoking room.

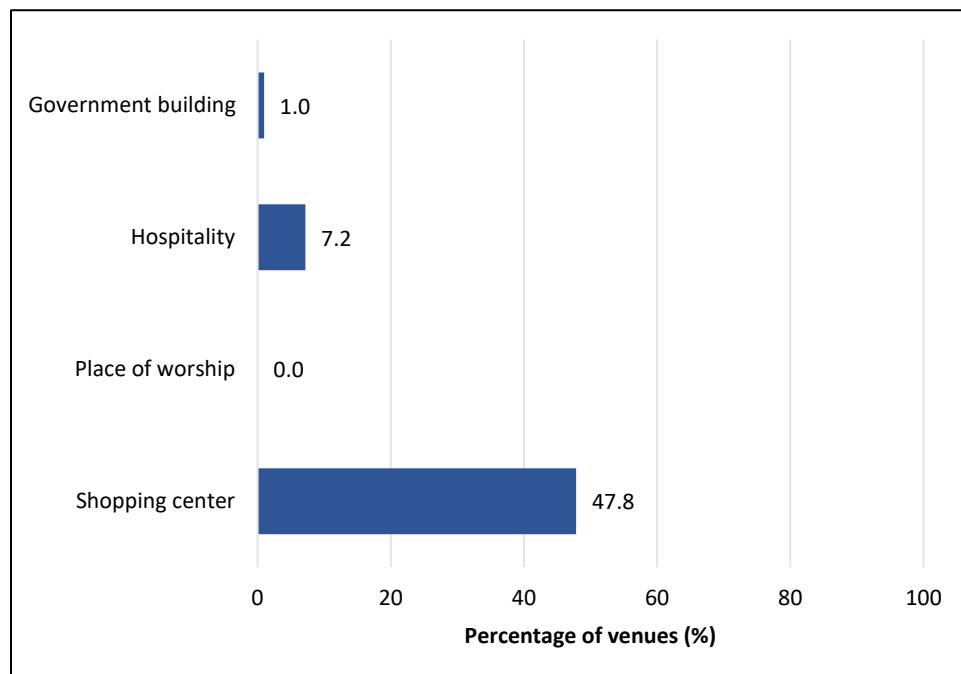
**Figure 16: Presence of designated smoking rooms or designated smoking areas in places of worship by venue type**



### **Compliance with tobacco advertisements inside smoke-free venues**

The percentage of all venues with tobacco advertisements displayed inside the venue is presented in Figure 17. The percentage of smoke-free venues with tobacco advertisements displayed inside was approximately 48% in shopping centers, 7% in hospitality venues, 1% in government buildings, and 0% in places of worship.

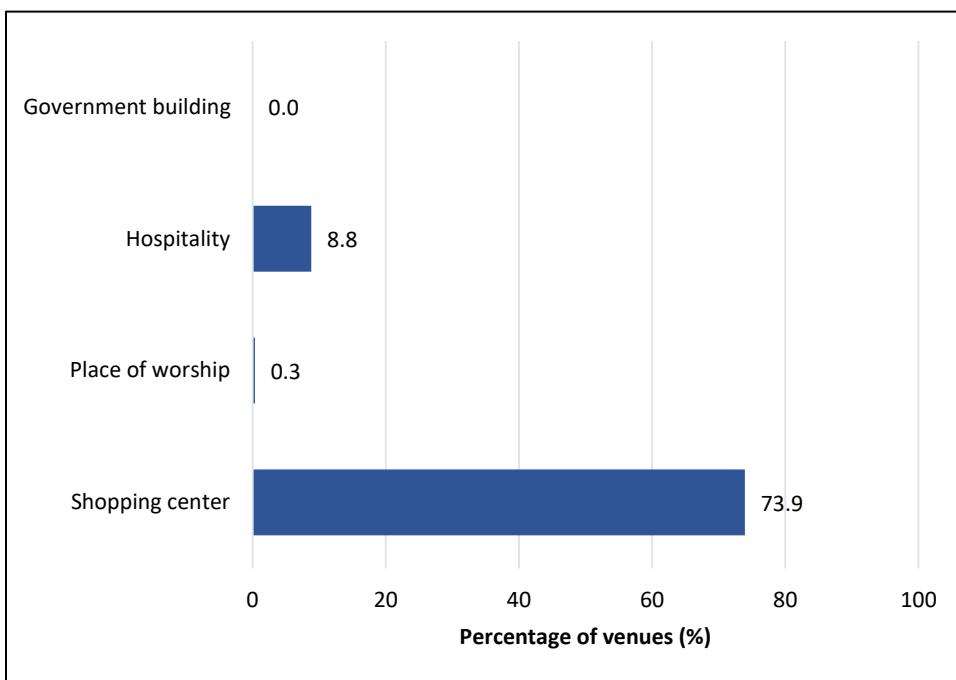
**Figure 17: Presence of tobacco advertisements inside smoke-free venues by venue type**



### **Compliance with tobacco sales regulations inside smoke-free venues**

The percentage of all venues with tobacco sales observed inside the venue is presented in Figure 18. The percentage of smoke-free venues with tobacco products for sale inside the venue was approximately 74% in shopping centers, 9% in hospitality venues, and 0% in government buildings and places of worship.

**Figure 18: Presence of tobacco product sales inside smoke-free venues by venue type**



#### **IV. Limitations**

This study has some limitations. The lists of venues used to construct the sample may have been missing venues, therefore the results do not present a full census of some venue types. The study reports observations collected at a single point in time and is therefore limited in scope. Important measures, such as observed smoking, were only considered during the time the data collectors were present in the venue and therefore may under-report actual smoking behavior.

#### **V. Conclusions**

Compliance with Yogyakarta's smoke-free regulations varied by venue and by smoke-free regulation; however, compliance could be improved in each of the venue types. Effort is needed to improve compliance with smoke-free regulations, including ensuring venues are smoke-free and that all venues have smoke-free signs posted as outlined in the city's smoke-free policy.

#### **VI. Discussion**

The city of Yogyakarta has taken important steps to implement smoke-free measures which go further than federal requirements. Attaining high compliance with the city's smoke-free policy is crucial for public health due to the serious health risks associated with tobacco smoke. The Regional Regulation of Yogyakarta City No. 2/2017 details how implementation could be improved.

In accordance with Article 17 of Regional Regulation No. 2/2017, persons in charge of smoke-free venues (owners, managers) should ensure no-smoking signs are posted and ashtrays are removed from the premises. The display of these signs is important to support changing norms around smoking as they communicate that smoking is not allowed. City government authorities must ensure they are complying with all the responsibilities assigned to them in Article 16 of Regional Regulation No. 2/2017, including educating people on the potential smoking hazards and conducting routine monitoring and evaluation of smoke-free implementation across the city. This type of regular surveillance can help support full implementation, ensuring that all venues regulated by the policy are compliant.

Different strategies can be used to help improve the implementation of Regional Regulation No. 2/2017. For example, education campaigns to support persons in charge of venues, such as owners/managers, can be used to ensure a clear understanding of smoke-free policies and their responsibilities. Experience from other jurisdictions demonstrates that education campaigns should address issues relevant to specific venues, for example, providing hospitality venue owners/managers with training and tips on how to deal with customers who are smoking.<sup>1</sup> Other strategies should support those responsible for the implementation and enforcement of

the city's smoke-free policies. Training can be provided to city employees responsible for conducting inspections to ensure they are fully aware of the provisions of the regulations and the role they play in encouraging compliance through education and/or fines/penalties.<sup>6</sup>

Other interventions include the distribution of standardized no-smoking signs along with specific instructions regarding the placement of these signs.

The national law in Indonesia includes provisions for designated smoking rooms/designated smoking areas in some venues. Providing 100% smoke-free spaces is the gold standard for health and further simplifies the implementation of smoke-free policies. Navigating legal strategies to support 100% smoke-free areas is important for Yogyakarta.

Lastly, interventions that educate the general public on the dangers of tobacco smoke and the importance of smoke-free policies to protect the public's and workers' health should be conveyed through education campaigns.<sup>1-2</sup>

Yogyakarta's leadership on this issue will support other cities and jurisdictions within the country to pass and implement similar policies to protect workers and the public from dangerous tobacco smoke.<sup>7</sup>

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