

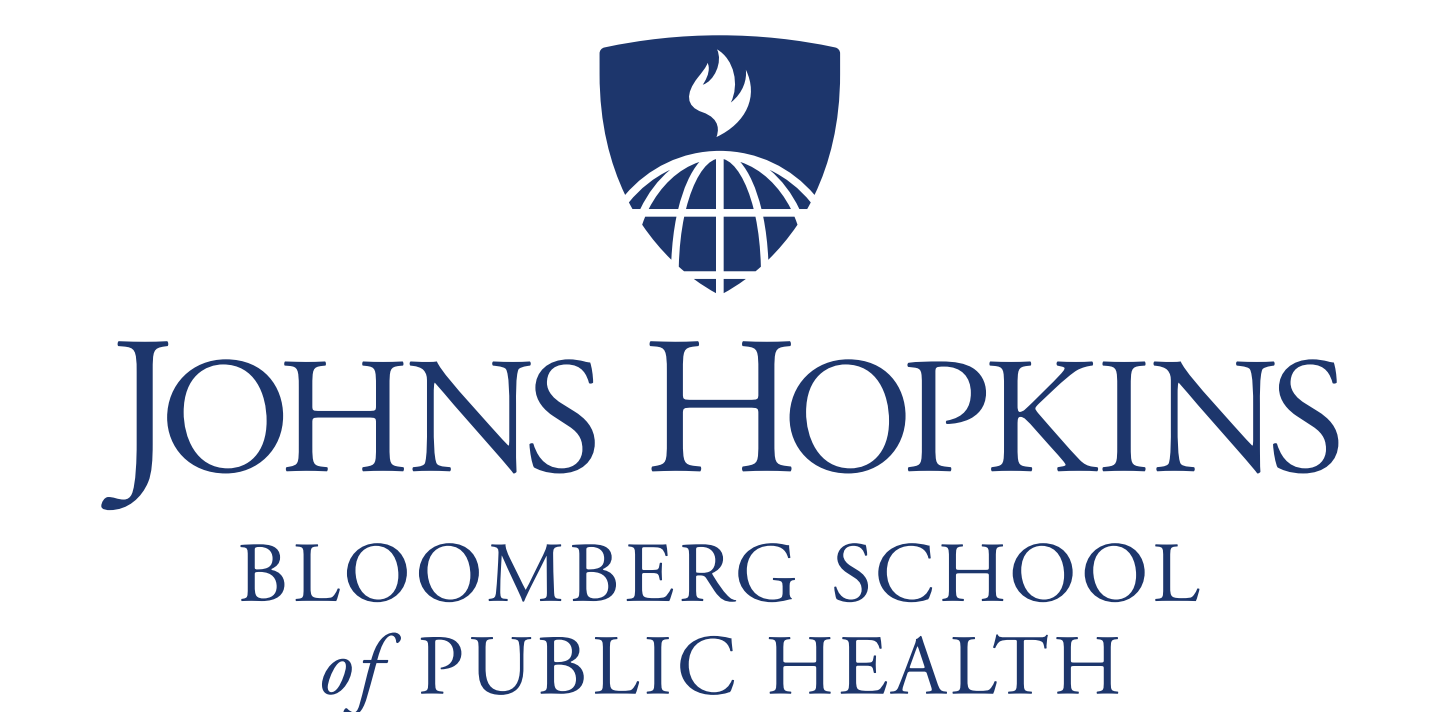
# Implementation of the Cigarettes and Other Tobacco Products Act (COTPA) in India: City population size as a predictor of compliance

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## Background

- In India, 14% of adults currently smoke tobacco products, and 11% are daily smokers.<sup>1</sup>
- To reduce the prevalence of smoking, the Cigarettes and Other Tobacco Products (COTPA) Act, 2003, enacted the following regulations in all **public places**:
  - No smoking indoors
  - Prominent No Smoking signage
  - Ban on the presence of smoking facilitators (e.g., matches, lighters, and ashtrays)

## Objectives

- To examine the extent of the compliance of public places with COTPA provisions related to the ban on indoor smoking.
- To determine if city population size is associated with compliance.

## Methods

- Setting:** 26 urban and rural cities in 5 Indian states—Bihar, Karnataka, Kerala, Maharashtra, Rajasthan
- Sample:** 747 public places randomly sampled from systematically identified locations within each city
- Analysis:** A composite score of overall compliance was computed by summing across venues for three outcomes: indoor smoking, “No Smoking” signage, and presence of smoking facilitators. A hierarchical linear model was run using city size as the independent variable, adjusting for city- and state-level random intercepts.

## Results

- Across the 26 cities, the average overall compliance score was 11.6, ranging from 3 to 21.
- City size was associated with compliance,  $F(3, 25) = 4.10$ ,  $p = 0.017$ .

## Results



Left image: presence of hookahs in a restaurant. 2<sup>nd</sup> image from left: No Smoking sign posted outside of a hotel. 2 right images: smoking in train stations

### Descriptive statistics

Table 1. Characteristics of public places, N (%)

	Public Places
<b>Total Public Places</b>	747
<b>States</b>	
Bihar	141 (18.9)
Karnataka	126 (16.9)
Kerala	202 (27.0)
Maharashtra	139 (18.6)
Rajasthan	139 (18.6)
<b>Size of City/Town</b>	
Rural (n=10)	156 (20.9)
Tier 3 (<half million, n=5)	176 (23.5)
Tier 2 (half mill to <2 mill, n=6)	227 (30.4)
Tier 1 (≥2 mill, n=5)	188 (25.2)
<b>Type of Public Place</b>	
Cinema	66 (8.8)
Government office	96 (12.8)
Hotel	102 (13.7)
Restaurant	458 (61.3)
Train station	25 (3.4)

### Findings, adjusted for random intercepts

Table 2. Hierarchical linear regression of public places' compliance with 3 no smoking provisions. Positive coefficient = greater compliance

	$\beta$	Standard Error	p-value
<b>City size</b>			
Rural	REF	--	--
Tier 3	-0.02	0.30	0.957
Tier 2	0.86	0.28	<b>0.002</b>
Tier 1	0.71	0.29	<b>0.016</b>

## Conclusions

- Overall compliance needs to be improved across the cities.
- Smaller cities appear to have a more difficult time with compliance.
- Educational and enforcement efforts should be intensified to ensure compliance with COTPA in these five states in India.

Reference:

1. World Health Organization (2013). WHO Report on the Global Tobacco Epidemic. Country Profile: India. Retrieved from [http://www.who.int/tobacco/surveillance/policy/country\\_profile/ind.pdf](http://www.who.int/tobacco/surveillance/policy/country_profile/ind.pdf).