

## COMPLIANCE WITH THE SMOKE-FREE TOBACCO LEGISLATION IN INDOOR PUBLIC PLACES IN 12 CITIES IN TURKEY

### OBJECTIVE

Turkey enacted smoke-free legislation in 2008 that was extended to hospitality venues in July 2009. In order for legislation to be effective in reducing secondhand smoke exposure, compliance must be high. The objective of this study was to evaluate compliance with the Turkish smoke-free legislation.

### METHODS

We implemented the smoke-free compliance guide<sup>1</sup> in 12 cities, one city in each of the EU NUTS Turkish regions. In each city, the Turkish Institute of Statistics identified 10 central sampling points using a random sampling strategy. We visited universities, schools, hospitals, government buildings, shopping malls, and hospitality venues (restaurants, traditional coffee houses, cafes, and bars/nightclubs) closest to each central sampling point using a standardized protocol.

Fieldworkers also conducted observations during taxi rides taken to and from study venues. The fieldwork was conducted during December 2012 and January 2013 in Istanbul, February 2013 in Ankara and Izmir, and between May and July 2013 in Adana, Balikesir, Bursa, Erzurum, Gaziantep, Kayseri, Samsun, Trabzon, and Van. An authorization letter from the Ministry of Education through the Ministry of Health facilitated access to schools. Indoor and outdoor areas were observed to compare compliance in areas covered and not covered by the law. Hospitals were visited both before 3 pm on weekdays and after 7 pm or on weekends. Restaurants and bars/nightclubs were visited both before and after midnight. In each venue, we observed main entrances, stairwells, bathrooms, dining areas, waiting areas, and others. Fieldworkers used checklists to collect information on the number of people smoking and the presence of cigarette butts, ashtrays, no smoking signs, fines or penalty signs, signage visibility, and cigarette sales. In this report, we focused on overall compliance with the smoke-free legislation defined as the absence of smoking in any indoor public place.

#### **% compliance with smoke-free legislation in indoor public places:**

$(\# \text{ venues with no observed smoking in all indoor locations} / \# \text{ venues observed}) \times 100$

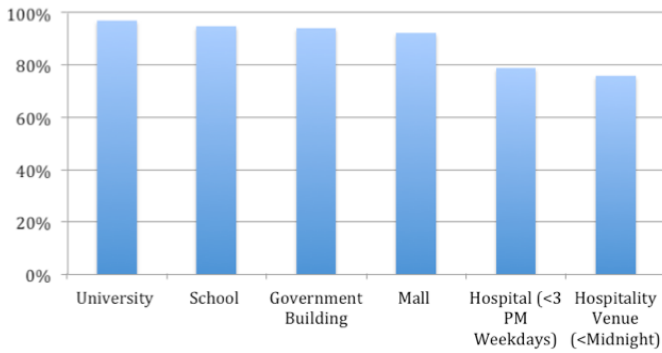
### RESULTS

We observed a total of 898 venues, 4,395 indoor locations (mean five locations/venue), 39,936 people (mean 44 persons/venue) and 356 taxi rides (Appendices 1 and 2). In Istanbul, Ankara, and Izmir, we observed 404 venues, 1,988 indoor locations and 20,120 people. In the nine smaller cities, we observed 494 venues, 2,407 indoor locations and 19,816 people.

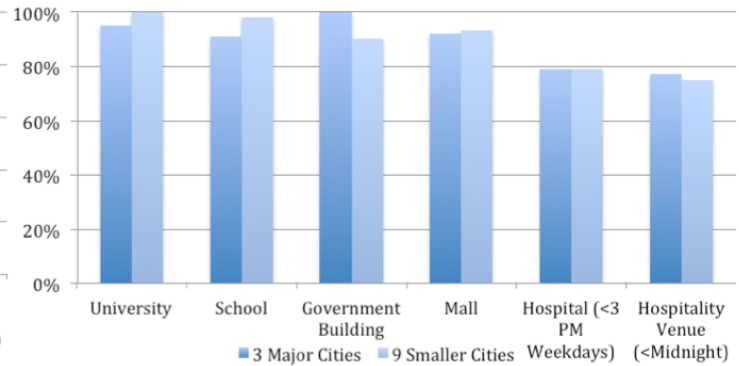
**Compliance overall and by city size.** Overall, the level of compliance with the smoke-free legislation ranged from 97% in universities to 76% in hospitality venues (Figure 1). Compliance was 95% in schools, 94% in government buildings, 92% in malls, and 79% in hospitals before 3 pm (78% after 7 pm and on weekends, not shown in graph). Compared to the three larger cities, compliance in the nine smaller cities was similar for universities, malls, hospitals, and hospitality venues, lower for government buildings (p-value 0.01) and higher in schools (p-value 0.04) (Figure 2). Compliance in taxis, defined as the driver not smoking during each taxi ride, was 95% overall and ranged from 88% in Istanbul to 100% in Adana, Balikesir, Gaziantep, Trabzon, and Van. In Appendix 3 we show the results for each city by type of venue and in Appendix 4 the results for each type of venue by city.

<sup>1</sup> Available at <http://globaltobaccocontrol.org/smokefreecompliance>.

**Figure 1.** Compliance with smoke-free legislation in indoor public places in Turkey - Overall

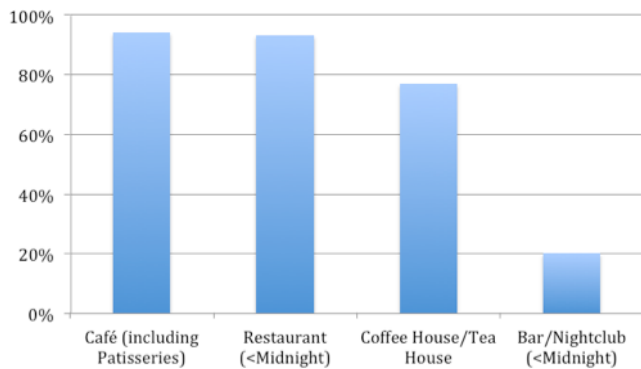


**Figure 2.** Compliance with smoke-free legislation in indoor public places in Turkey – comparing the 3 major cities to the 9 smaller cities

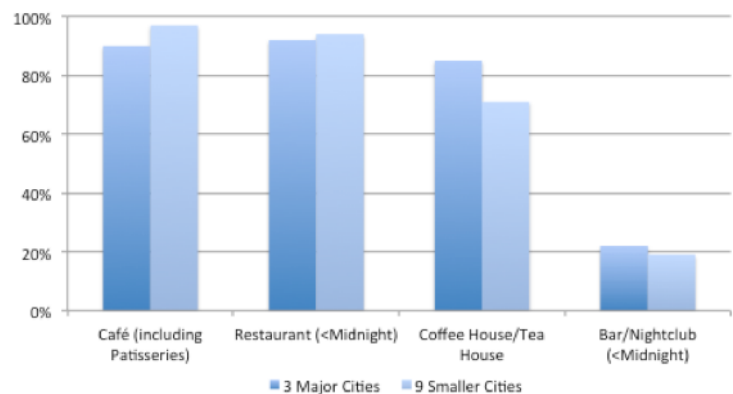


**Compliance by type of hospitality venue.** There were large differences in the level of compliance with the smoke-free legislation by hospitality venue type. Compliance was 94% in cafes, 93% in restaurants (31% after midnight, not shown in the graph), 78% in traditional coffee/tea houses, and 20% in bars or nightclubs (15% after midnight, not shown in graph) (Figure 3). There were no statistically significant differences by hospitality venue comparing small and large cities (Figure 4). Compliance in bars/nightclubs was 0% in Balikesir, Erzurum, Gaziantep and Trabzon (see Appendix 4).

**Figure 3.** Compliance with smoke-free legislation in hospitality venues in Turkey - Overall



**Figure 4.** Compliance with smoke-free legislation in hospitality venues in Turkey– comparing the 3 major cities to the 9 smaller cities



**Compliance by location within venues.**

- Universities: smoking was only observed in 1 (3%) cafeteria.
- Schools: smoking was observed in 2 (2%) main entrances, 2 (2%) bathrooms, 2 (3%) cafeterias, 1 (<1%) office, 1 (<1%) teachers' lounge, and 1 (100%) fire escape.
- Government buildings: smoking was observed in 5 (22%) cafeterias, 2 (2%) stairwells, and 1 (1%) main entrance.
- Malls: smoking was observed in 1 (2%) main entrance, 1 (2%) walkway, 1 (3%) stairwell, 1 (2%) bathroom, 1 (2%) store, and 1 (50%) fire escape.
- Hospitals: smoking was observed in 18 (22%) cafeterias and 1 (1%) waiting area.
- Hospitality venues: smoking was observed in 76 (22%) completely indoor dining areas (6 walls counting floor), 36 (58%) bar areas, 26 (16%) main entrances, 18 (22%) semi-indoor dining areas (3-5 walls counting floor), 4 (27%) dancing areas, 3 (<1%) bathrooms, and 1 (100%) water pipe smoking area.

**LIMITATIONS**

Fieldworkers were unable to observe areas in government buildings, hospitals, and universities that are not accessible to the public. Compliance in these areas remains unknown. For taxis, we only observed smoking by the driver and compliance is possibly underestimated.

**CONCLUSIONS**

Compliance with the smoke-free legislation was generally high across all cities in Turkey, although compliance remains below 100%. Compliance was above 90% except in hospitals and hospitality venues. In hospitals, schools and government buildings, the major problem with compliance was in cafeterias and dining areas. Traditional coffee houses had low compliance, and bars/nightclubs had the lowest compliance of hospitality venues. We observed a similar level of

compliance before and after midnight in bars/nightclubs, whereas compliance was much lower in restaurants after midnight. There were no major differences by cities, although some cities had lower compliance in some venues.

#### **NEXT STEPS**

Greater emphasis should be placed on enforcing compliance in hospitality venues, especially bars/nightclubs, in taxi cabs, and in locations within universities, schools, government buildings, malls, and hospitals where smoking was observed, especially dining areas. In future analyses, we will evaluate the presence of cigarette butts, ashtrays, no smoking signs, fines or penalty signs, signage visibility, additional data on smoking in taxi cabs, and cigarette sales. In the next phase of the study, we will conduct key informant interviews with representatives in hospitals, schools, universities, government buildings, malls, and hospitality venues.

#### **STUDY TEAM**

The study was conducted as a collaboration between investigators at the Johns Hopkins Bloomberg School of Public Health (Ana Navas-Acien, Joanna Cohen, Jolie Susan, Katherine Moon, Jonathan Pollak, and Hoda Magid), Kadir Has University (Asli Carkoglu), Hacettepe University (Mutlu Hayran) and Izmir Dokuz Eylul School of Medicine (Gül Ergor). Additional advice was provided by Toker Ergüder and Kristina Mauer-Stender (WHO), Banu Ayer and Bekir Kaplan (Turkish Ministry of Health) and the Bloomberg Initiative to Reduce Tobacco Use (Kelly Larson). A company specializing in clinical, social and epidemiological research, OMEGA CRO, conducted the fieldwork

	12 Cities			3 Major Cities			9 Smaller Cities		
	Venues	Locations	People	Venues	Locations	People	Venues	Locations	People
Overall*	898	4,395	39,936	404	1,988	20,120	494	2,407	19,816
Hospitals (<3pm weekdays)	89	513	7,297	42	249	3,860	47	264	3,437
Hospitals (>7pm/weekend)	85	463	3,067	37	203	1,636	48	260	1,431
Schools	134	960	7,192	54	419	3,743	80	541	3,449
Universities	37	262	1,816	21	153	1,102	16	109	714
Government Buildings	135	660	4,972	56	265	2,198	79	395	2,774
Malls	52	273	5,187	25	135	2,354	27	138	2,833
Hospitality Venues*	447	1,264	10,405	203	564	5,227	244	700	5,178
Restaurants (<midnight)	171	393	2,789	73	182	1,233	98	211	1,556
Restaurants (>midnight)	13	34	135	5	18	61	5	16	74
Coffee/Tea Houses	120	180	2,004	55	80	1,194	65	100	810
Cafés/Patisseries	67	154	799	31	77	371	36	77	428
Bars/Clubs (<midnight)	79	266	2,595	36	111	1,406	43	155	1,189
Bars/Clubs (>midnight)	69	237	2,083	24	96	962	26	141	1,121
Taxis	356	--	--	172	--	--	184	--	--

**Appendix 1: Number of venues, locations and people observed across indoor public places in Turkey**

\* Some hospitals, restaurants, and bars/nightclubs were visited twice at different times of the day/week. Therefore, overall numbers are not the sum of the individual venues.

**Appendix 2: Number of venues (number of locations) observed across indoor public places in Turkey**

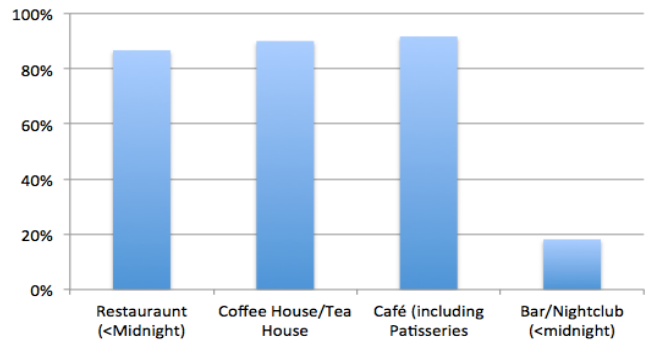
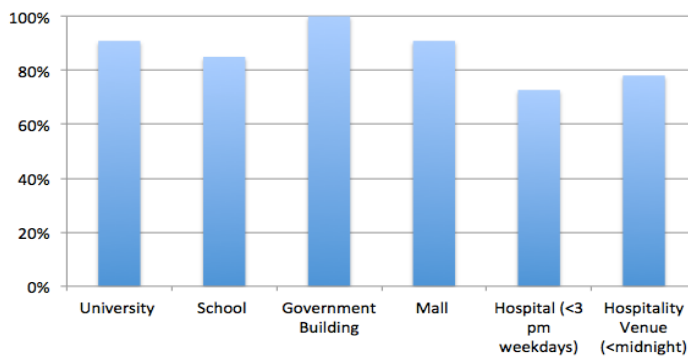
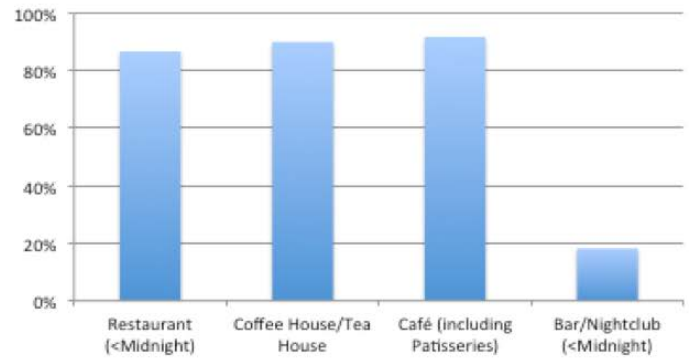
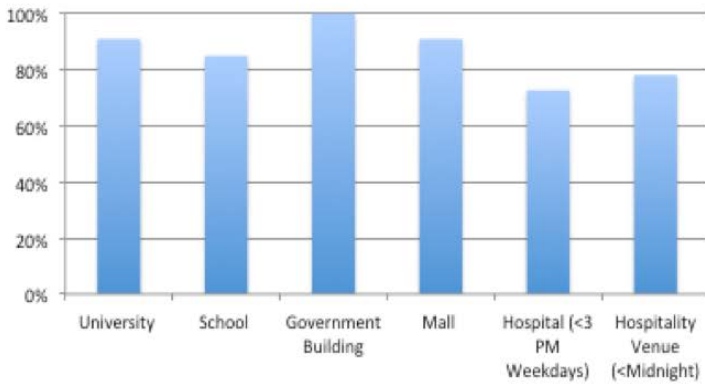
	3 Major Cities			9 Smaller Cities								
	Istanbul	Ankara	Izmir	Adana	Balikesir	Bursa	Erzurum	Gaziantep	Kayseri	Samsun	Trabzon	Van
Overall*	167 (832)	119 (598)	118 (558)	54 (253)	52 (234)	53 (247)	53 (265)	53 (253)	55 (286)	65 (343)	57 (274)	52 (252)
Hospitals(<3pm weekdays)	22 (130)	10 (61)	10 (58)	5 (30)	5 (29)	5 (29)	4 (23)	5 (27)	6 (31)	7 (38)	5 (28)	5 (29)
Hospitals(>7pm/weekend)	17 (85)	10 (61)	10 (57)	5 (30)	5 (28)	5 (28)	5 (27)	5 (26)	6 (29)	7 (38)	5 (26)	5 (28)
Schools	20 (158)	16 (125)	18 (136)	11 (63)	8 (51)	8 (43)	8 (58)	8 (50)	10 (73)	11 (90)	8 (58)	8 (55)
Universities	11 (76)	5 (37)	5 (40)	2 (14)	1 (6)	2 (12)	2 (13)	2 (14)	2 (14)	2 (14)	2 (15)	1 (7)
Government Buildings	20 (105)	20 (95)	16 (65)	8 (37)	9 (37)	8 (44)	9 (39)	8 (47)	8 (45)	12 (58)	9 (43)	8 (45)
Malls	11 (59)	8 (45)	6 (31)	3 (12)	3 (15)	3 (16)	3 (13)	3 (14)	3 (19)	3 (17)	3 (17)	3 (15)
Hospitality Venues*	81 (219)	60 (174)	62 (171)	25 (67)	26 (68)	27 (75)	26 (92)	27 (75)	26 (75)	30 (88)	30 (87)	27 (73)
Restaurants (<midnight)	30 (83)	22 (50)	21 (49)	11 (21)	11 (19)	9 (20)	11 (27)	12 (23)	11 (29)	12 (24)	10 (24)	11 (24)
Restaurants (>midnight)	7 (18)	--	--	2 (4)	1 (2)	--	2 (6)	--	--	--	--	1 (4)
Coffee/Tea Houses	20 (25)	16 (23)	19 (32)	5 (7)	7 (7)	7 (9)	6 (11)	8 (14)	6 (11)	10 (17)	10 (15)	6 (9)
Cafés/Patisseries	12 (33)	9 (22)	10 (22)	4 (7)	4 (8)	6 (10)	4 (12)	3 (6)	5 (12)	4 (5)	4 (8)	4 (9)
Bars/Clubs (<midnight)	11 (35)	13 (42)	12 (34)	4 (14)	4 (16)	5 (18)	4 (18)	5 (16)	4 (15)	5 (21)	6 (20)	6 (17)
Bars/Clubs (>midnight)	7 (25)	11 (37)	12 (34)	4 (14)	4 (16)	5 (18)	4 (18)	5 (16)	2 (8)	5 (21)	6 (20)	4 (10)
Taxis	49	58	65	20	20	20	20	21	19	23	20	21

Notes: Restaurants are venues people go mainly to eat. Coffee/tea houses are traditional coffee houses. Cafes are modern cafeterias, including patisseries. Bars/nightclubs are venues where people go to socialize and frequently serve alcohol.

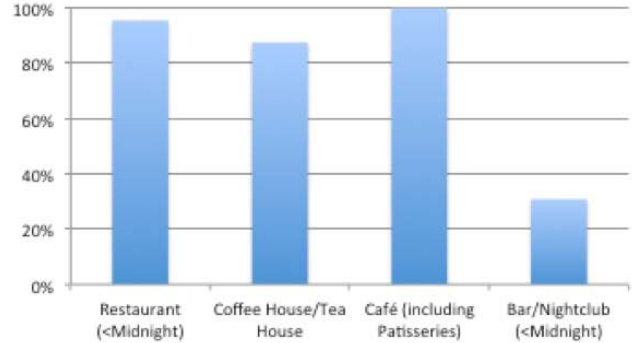
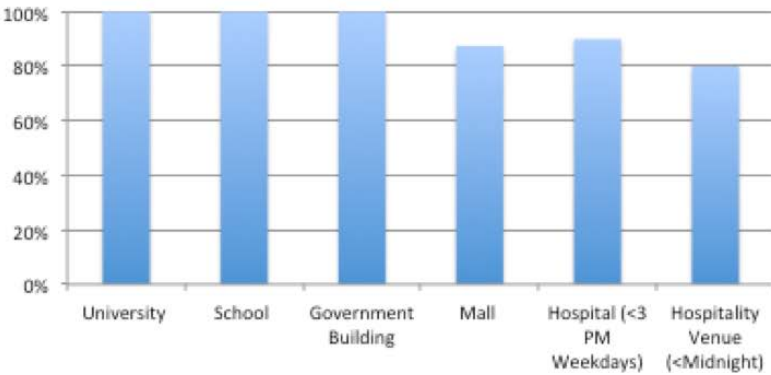
\* Some hospitals, restaurants, and bars/nightclubs were visited twice at different times of the day/week. Therefore, overall numbers are not the sum of the individual venues

**Appendix 3: Compliance with smoke-free legislation in indoor public places by city (the left column represents results by venue type; the right column represents results by specific hospitality venue type)**

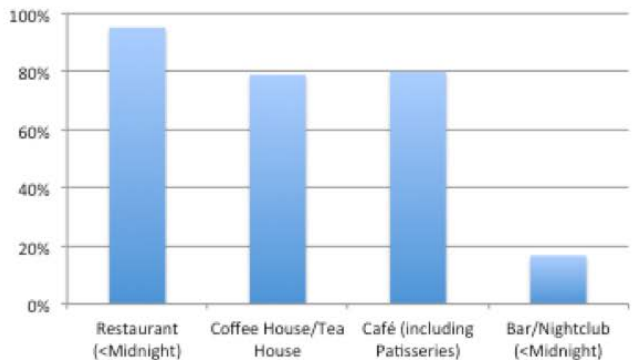
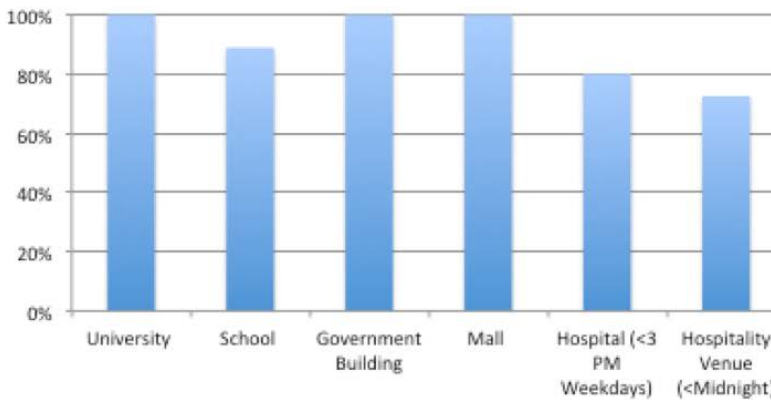
**Istanbul (167 venues, 832 locations, and 9,020 people)**



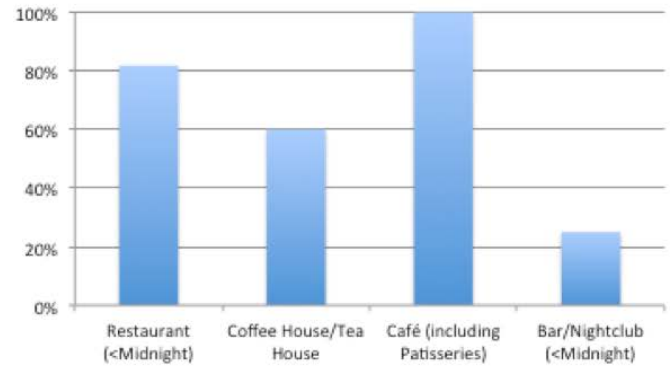
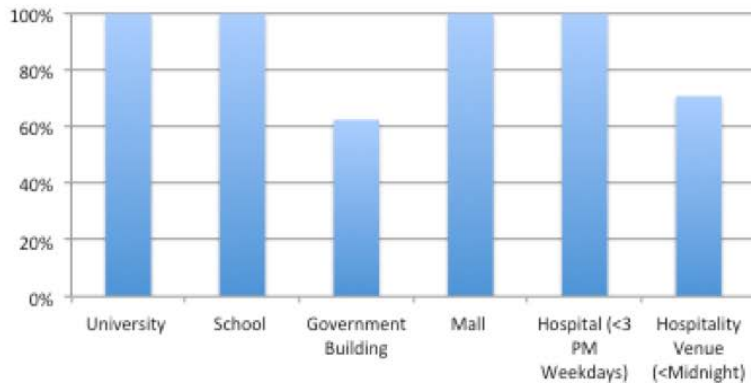
**Ankara (119 venues, 598 locations, and 5,745 people)**



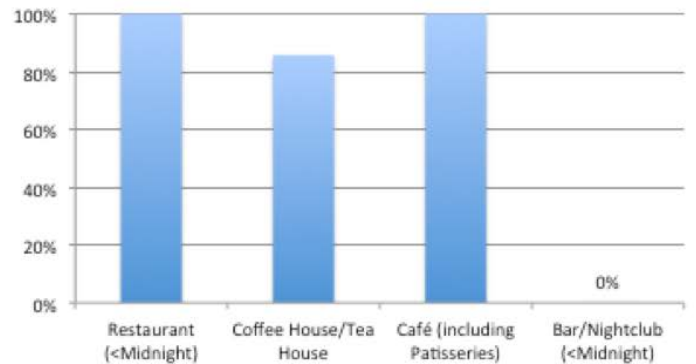
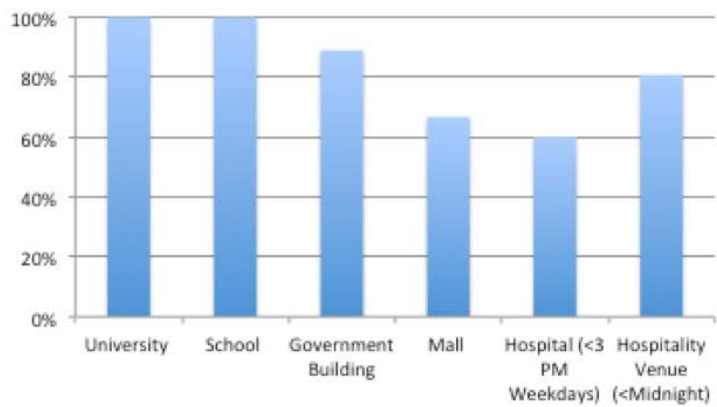
**Izmir (118 venues, 558 locations, and 5,355 people)**



**Adana (54 venues, 253 locations, and 1,645 people)**

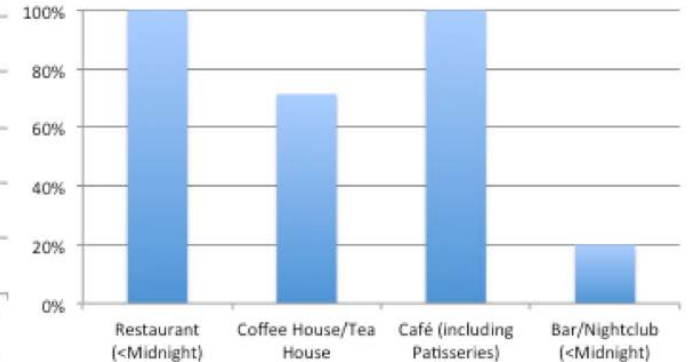
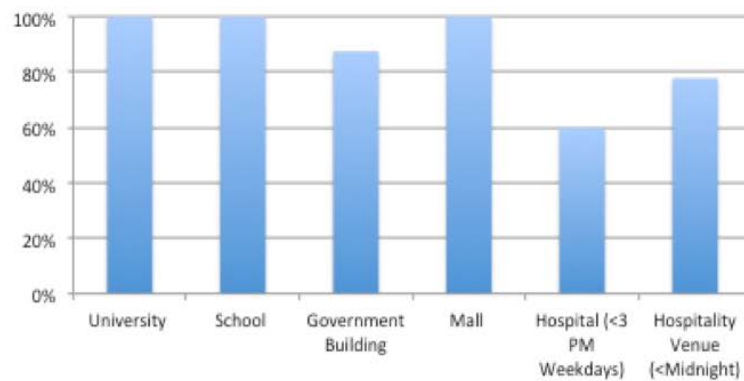


**Balikesir (52 venues, 234 locations, and 1,617 people)**

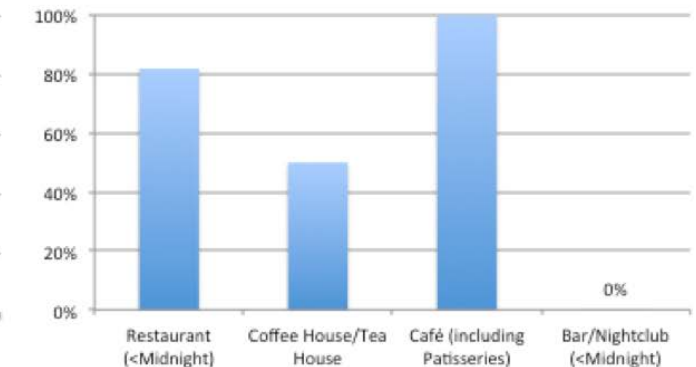
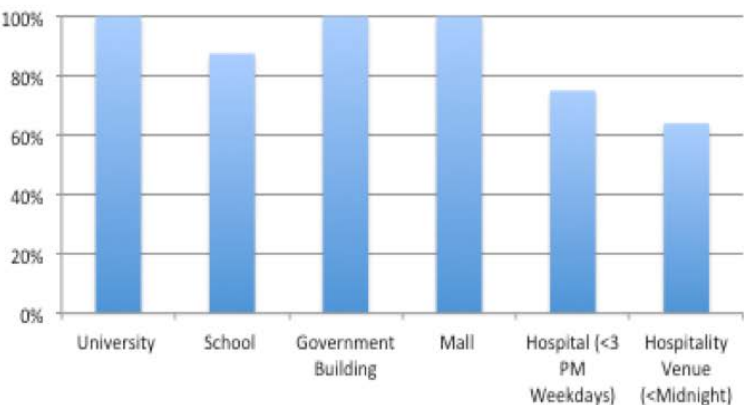


Compliance was 0% in Bar/Nightclub

**Bursa (53 venues, 247 locations, and 1,883 people)**

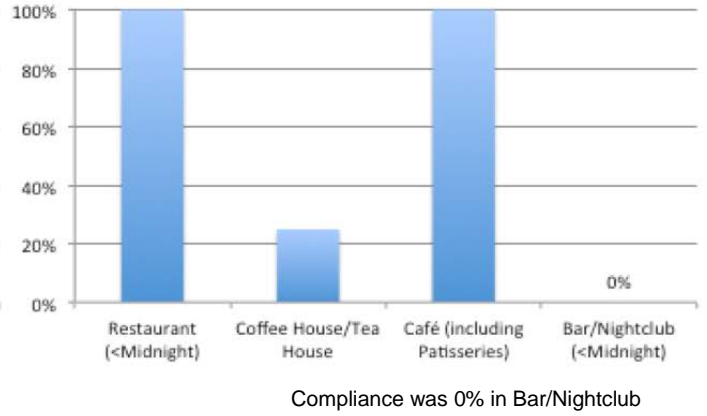
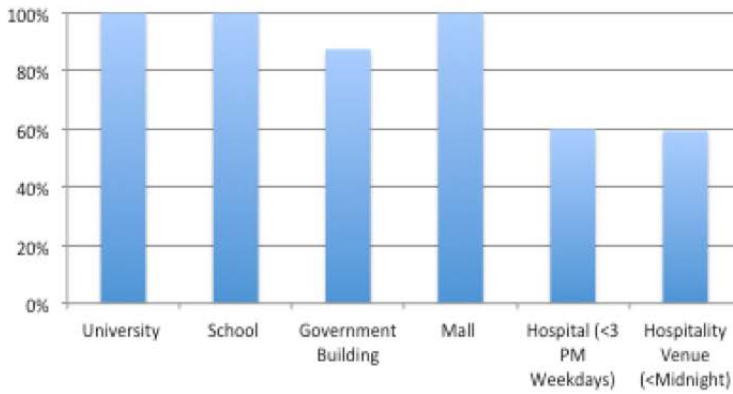


**Erzurum (53 venues, 265 locations, and 2,057 people)**

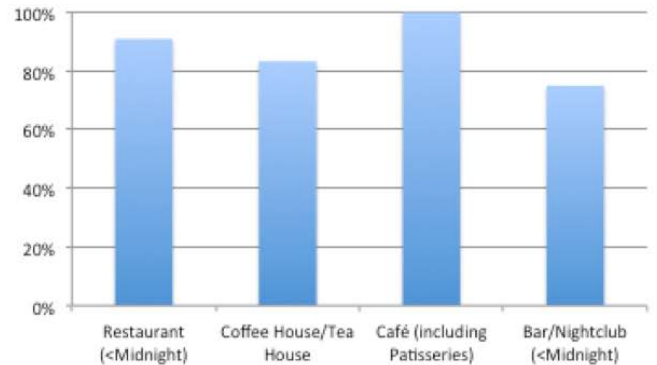
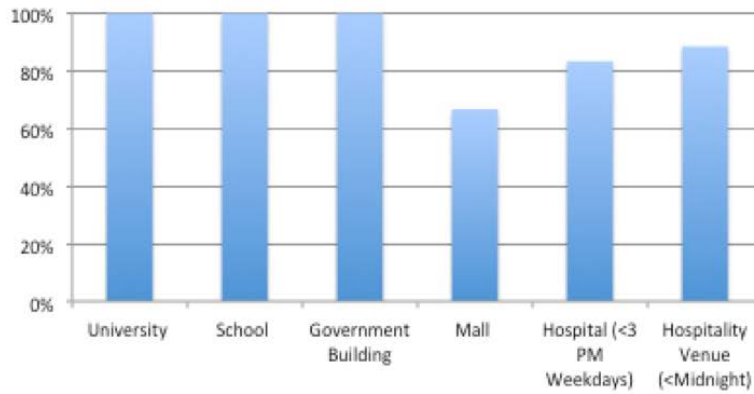


Compliance was 0% in Bar/Nightclub

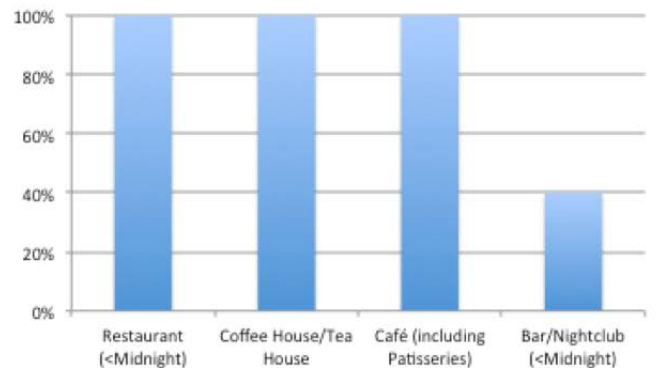
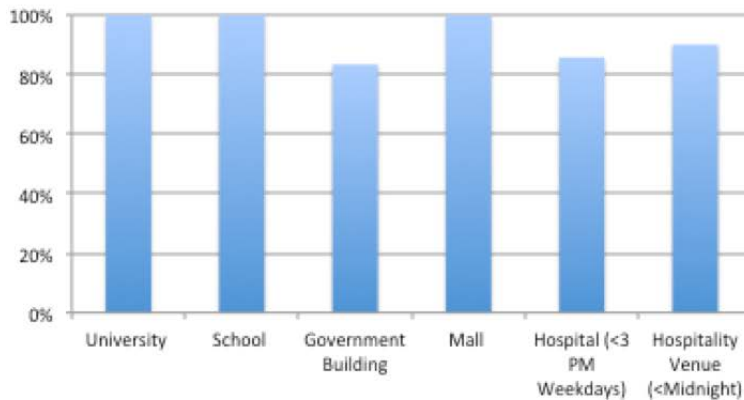
**Gaziantep (53 venues, 253 locations, and 2,022 people)**



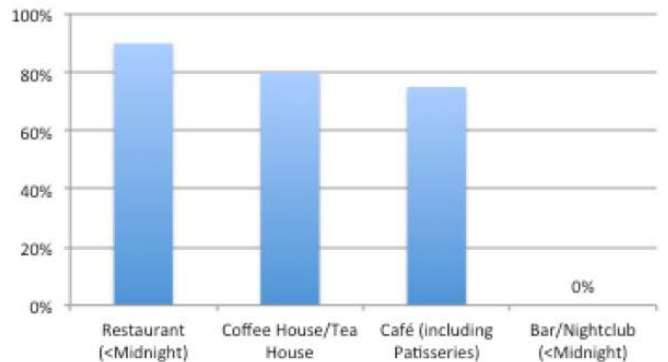
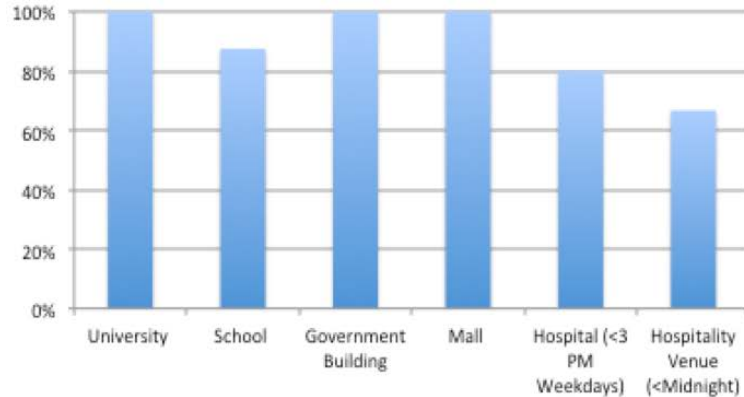
**Kayseri (55 venues, 286 locations, and 2,649 people)**



**Samsun (65 venues, 343 locations, and 3,080 people)**



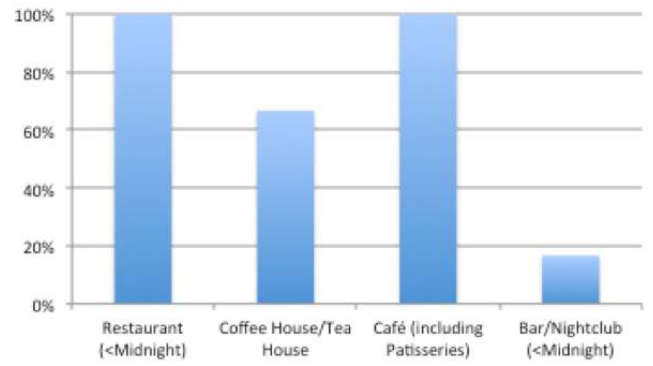
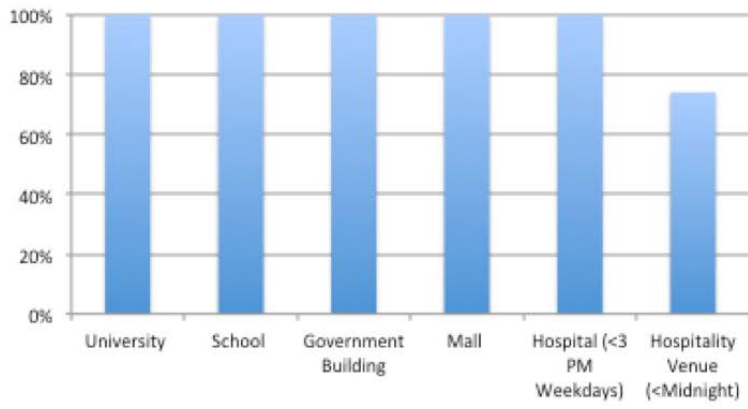
**Trabzon (57 venues, 274 locations, and 3,011 people)**



**Van (52 venues, 252 locations, and 1,852 people)**

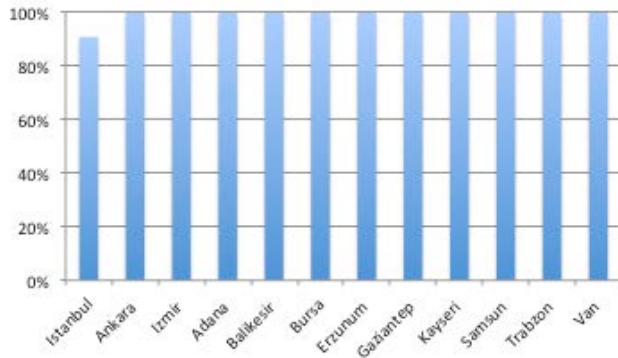
Compliance was 0% in Bar/Nightclub



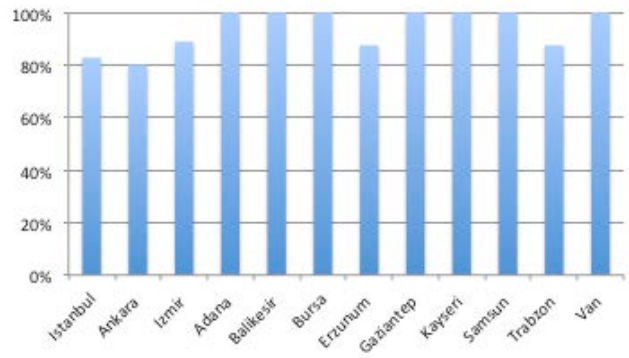


**Appendix 4: Compliance with smoke-free legislation in indoor public places by venue type**

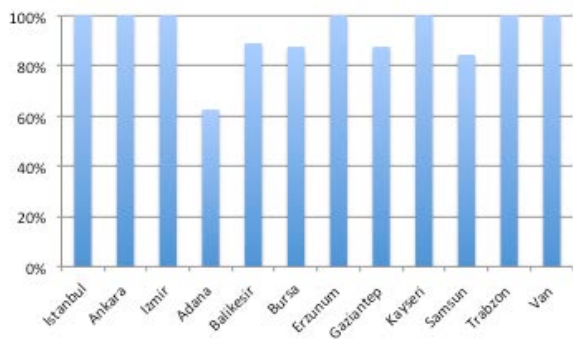
**Universities (N=37)**



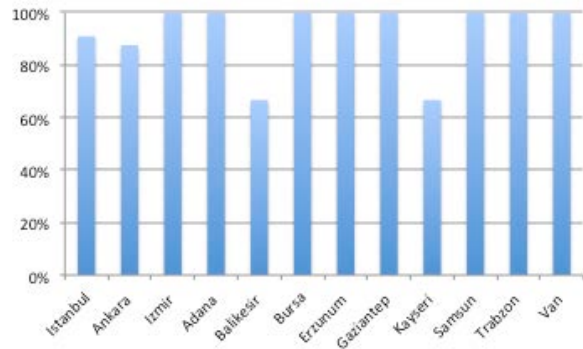
**Schools (N=134)**



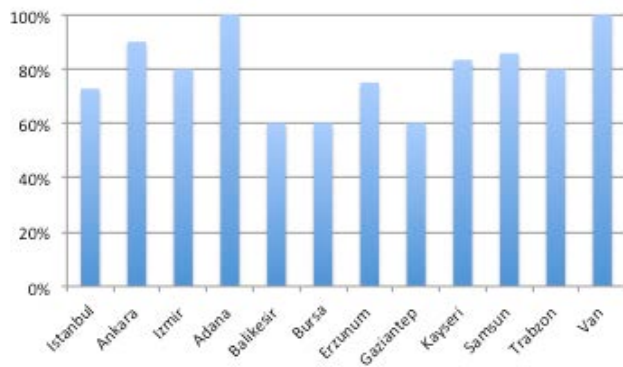
**Government Buildings (N=135)**



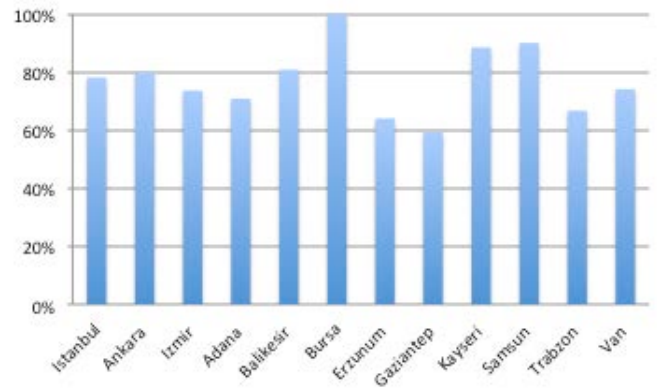
**Malls (N=52)**



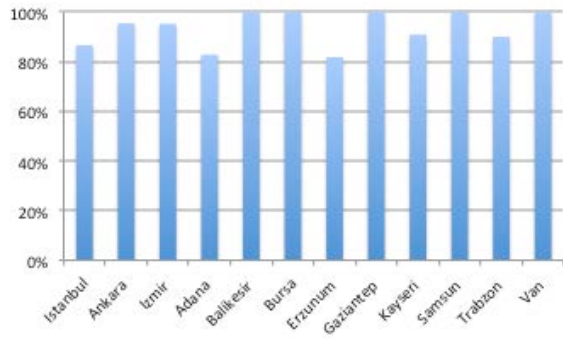
**Hospitals <3 pm weekdays (N=89)**



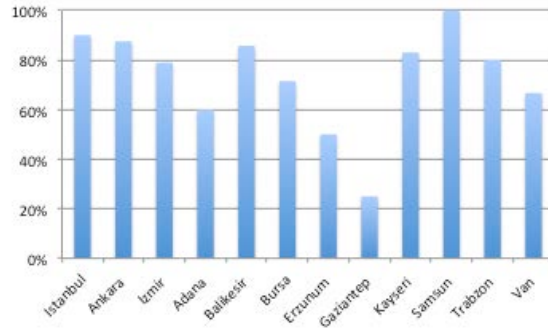
**Hospitality Venues < midnight (N=437)**



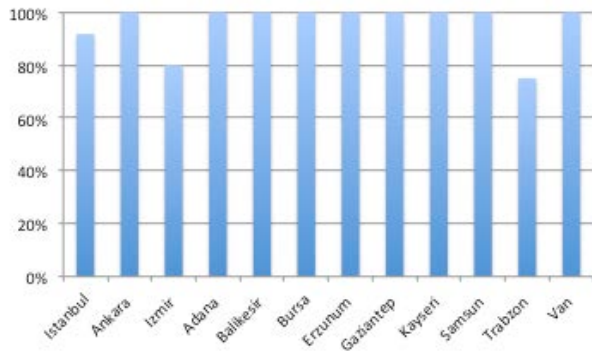
**Restaurants < midnight (N=171)**



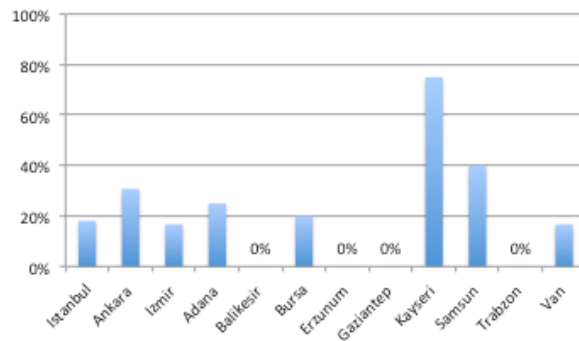
**Traditional Coffee/Tea Houses (N=120)**



**Cafés/Patisseries (N=67)**



**Bars/Nightclubs < midnight (N=79)**



Compliance was 0% in Balikesir, Erzurum, Gaziantep and Trabzon

**Taxis (N=356)**

