



HAL
open science

Medium-term effects of the Italian smoke-free legislation: findings from 4 annual population based surveys

Irene Tramacere, Silvano Gallus, Esteve Fernandez, Piergiorgio Zuccaro, Paolo Colombo, Carlo La Vecchia

► **To cite this version:**

Irene Tramacere, Silvano Gallus, Esteve Fernandez, Piergiorgio Zuccaro, Paolo Colombo, et al.. Medium-term effects of the Italian smoke-free legislation: findings from 4 annual population based surveys. *Journal of Epidemiology and Community Health*, 2009, 63 (7), pp.559-n/a. 10.1136/jech.2008.084426 . hal-00477892

HAL Id: hal-00477892

<https://hal.science/hal-00477892>

Submitted on 30 Apr 2010

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

**Medium-term effects of the Italian smoke-free legislation:
findings from 4 annual population based surveys**

Irene TRAMACERE^a, Silvano GALLUS^{a,*}, Esteve FERNANDEZ^{b,c},
Piergiorgio ZUCCARO^d, Paolo COLOMBO^e, Carlo LA VECCHIA^{a,f}

^aIstituto di Ricerche Farmacologiche “Mario Negri”, 20156 Milan, Italy

^bCancer Prevention & Control Unit, Institut Català d'Oncologia-IDIBELL; 08907
L'Hospitalet (Barcelona), Spain

^cDepartment of Clinical Sciences, Campus de Bellvitge, Universitat de Barcelona;
08907 L'Hospitalet (Barcelona), Spain

^dDipartimento del Farmaco, Istituto Superiore di Sanità, 00161 Rome, Italy

^eIstituto DOXA, Gallup International Association, 20144 Milan, Italy

^fIstituto di Statistica Medica e Biometria “G.A. Maccacaro”, Università degli Studi di
Milano, 20133 Milan, Italy

Keywords: Epidemiology; Italy; Population survey; Smoke-free legislation; Tobacco
smoking.

Word count: 1,879

***Correspondence to:**

Silvano Gallus, ScD
Istituto di Ricerche Farmacologiche “Mario Negri”
Via Giuseppe La Masa 19, 20156, Milan, Italy.
Tel: +39 02 39 01 4657; Fax: +39 02 33 200 231
e-mail: gallus@marionegri.it

(22 January, 2009)

WHAT THIS PAPER ADDS

What is already known on this subject?

- Italy was the first large country that has banned smoking in all indoor public places, including restaurants and bars.
- In the short-term (1-2 years after the law came into force) the legislation was almost universally respected, supported, and did not affect the business of bars/cafes and restaurants.

What does this study add?

- More than 80% of Italians reported that the smoking ban was respected in bars/cafes and restaurants, and almost 75% in workplaces, also 3 years after the law came into force.
- After the legislation, 10% of Italians went to bars/cafes and restaurants more frequently and 7% less so frequently.
- Thus, the legislation did not unfavourably affect the business of restaurants and bars.

ABSTRACT

Background: Italy was the first large country that has banned smoking in all indoor public places, including restaurants and bars. The aim of this study was to quantify, 3 years after the law came into force, the effects of the smoking ban in terms of observance of the legislation and change of habits.

Methods: We considered data from 4 representative surveys on smoking, conducted between 2005 and 2008 on a total of 12,245 individuals (5,906 men and 6,339 women) aged 15 years or over.

Results: In 2008, more than 80% of Italians (more than 90% in northern Italy) had the perception that the smoking ban was respected in bars/cafes and restaurants, despite a slight reduction since 2005. In all the surveys combined, 75% of the Italian population reported that the smoking ban was respected in workplaces. Overall, approximately 10% of Italians reported that, after the implementation of the tobacco regulation, they went to bars/cafes and restaurants more frequently, and approximately 7% less frequently, than before.

Conclusion: Our study shows that in Italy the smoke-free legislation did not affect the business of restaurants and bars, and remain widely respected also 3 years after the law came into force.

INTRODUCTION

Italy was the fourth European country, after Ireland, Norway and Malta, that banned smoking in all indoor public places, including restaurants and bars. After the implementation of the ban in 2005, Italian studies showed the short-term (1-2 years) favourable effects of the legislation in terms of reduced hospitalization for cardiovascular events [1-3] and out-of-hospital deaths for acute coronary events,[2] confirming findings from other countries, including the USA,[4-8] Canada,[9] Scotland,[10] and Ireland.[11] Furthermore, several studies from the USA, Norway, Ireland, Scotland, Spain and Italy showed the favourable effects of the workplace smoking ban in terms of reduction of exposure to second-hand smoke and improvement in respiratory health among workers, particularly among barmen.[12-22]

In Italy, several studies showed that the legislation was almost universally respected,[23-28] supported,[23, 24, 26-28] and did not affect the business of bars/cafes and restaurants [23, 24, 27, 28] in the short-term (1-2 years after the legislation). Furthermore, the decrease of smoking prevalence and consumption, observed during the last years, appeared to be at least in part due to the comprehensive smoking legislation.[23, 26-29]

In order to assess the medium-term changes on the attitudes towards such a smoking legislation, we present findings from 4 representative surveys conducted in Italy after the smoking ban, between 2005 and 2008.

METHODS

We considered data from 4 companion surveys on smoking, conducted during March-April of 2005, 2006, 2007 and 2008 in Italy by DOXA, the Italian branch of the Gallup

International Association.[23, 26, 30, 31] Overall, the 4 surveys included a total of 12,245 individuals (5,906 men and 6,339 women) aged 15 years or over, representative of the general Italian population in terms of age, sex, geographic area, and socio-economic characteristics. The 2005 survey included 3,114 participants (1,511 men and 1,603 women),[23, 26] the 2006 survey 3,039 participants (1,461 men and 1,578 women),[26, 30] the 2007 survey 3,057 participants (1,475 men and 1,582 women),[30] and the 2008 survey 3,035 participants (1,459 men and 1,576 women).[31]

The 4 surveys used similar, previously described sampling criteria.[23, 26, 30, 31] *Ad hoc* trained interviewers collected data, using a structured questionnaire in the context of a computer-assisted personal in-house interview (CAPI). The questionnaire included general information on socio-demographic characteristics and on smoking habits, including smoking status (never/ex-/current smoker), number of cigarettes smoked per day, and (for ex-smokers) time since stopping. Current smokers were participants that smoked 100 or more cigarettes in their lifetime, or those that had quit smoking since less than 1 year; never smokers were participants that did not smoke in a lifetime more than 100 cigarettes; ex-smokers were participants that had quit smoking since at least 1 year. Education was categorized in 3 levels: low (up to primary school diploma), intermediate (middle to high school without diploma) and high (senior high school with diploma or over).

In all the 4 surveys, some specific questions referred to the attitudes towards the new smoking regulation, including 2 questions formulated as follows: i) “According to your recent observation, do you think that the new smoke-free legislation is respected in bars/cafes and restaurants?” ii) “Do you think that the new smoke-free legislation is respected in the workplaces (public and private)?”. Another question referred to the

implications of the smoking ban on one's own habit of going to bars/cafes and restaurants. Since 2007, 2 questions were formulated in order to investigate the influence of the smoking ban on smoking cessation among ex-smokers, and on smoking habit among current smokers.

RESULTS

In 2005 25.6% of Italians described themselves as current smokers (29.3% of men, and 22.1% of women); in 2006 smoking prevalence was 24.3% (28.6% for men, and 20.3% for women); in 2007 was 23.5% (27.9% for men, and 19.3% for women); and in 2008 was 22.0% (26.4% for men, and 17.9% for women).

Table 1 shows the attitudes of the population towards smoke-free policies after the implementation of the tobacco regulation, according to year of interview. Participants reporting that the legislation was respected in bars/cafes and restaurants declined from 90.5% in 2005 to 83.9% in 2008 (p for trend<0.001). The smoking ban was respected in workplaces by around 75% in all the surveys (p for trend=0.19). Overall, in the 4 surveys considered, approximately 10% of Italians reported that, after the implementation of the tobacco regulation, they went to bars/cafes and restaurants more frequently, and approximately 7% less frequently than previously. We observed a peak in 2006 of the prevalence of Italians reporting to go to bars/cafes and restaurants more frequently (13.3% for the survey conducted in 2006 vs a mean of 9.3 for the other surveys; p <0.001).

Participants reporting that the legislation was respected in bars/cafes and restaurants were less frequently women compared to men (p =0.01), and more frequently older participants (p for trend<0.001), with higher levels of education (p for trend<0.001),

current smokers ($p < 0.001$) and from northern Italy ($p < 0.001$) [Table 2]. In particular, 94.2% of Italians reported that the legislation was respected in northern Italy vs 79.3% in southern Italy.

Likewise, participants reporting that the legislation was respected in workplaces were more frequently older (p for trend < 0.001) and from northern Italy ($p < 0.001$), and less frequently ex-smokers ($p < 0.001$). No significant difference was found according to sex and level of education.

Participants reporting that, after the implementation of the tobacco regulation, they went to bars/cafes and restaurants more often than before were more frequently those with higher levels of education (p for trend < 0.001) and living in northern Italy ($p < 0.001$), and less frequently smokers ($p < 0.001$). No significant difference was found according to sex and age group. The estimates provided in Table 2 were consistent in the 4 surveys considered.

Table 3 shows the effects of the tobacco regulation on smoking habit, among current and ex-smokers, using data from the 2 surveys conducted in 2007 and 2008. Approximately 30% of ex-smokers since less than 3 years reported that their smoking cessation has been influenced by the smoking ban. Almost 83% of current smokers reported that the tobacco regulation has had no effect on their smoking habit, 12% reported a reduction in their smoking consumption (with approximately 5.0% that reduced and subsequently relapsed) and approximately 3.5% have stopped smoking (with approximately 2.5% that stopped and subsequently relapsed).

DISCUSSION

In the present study we found a slight reduction of the observance of the smoke-free law in bars/cafes and restaurants from 2005 to 2008, confirming data from a study conducted between 2004 and 2006 on 471 Italian hospitality premises.[24] Such a reduction is partly or largely attributable to the covered outdoor smoking places (dehors), built by some bars/cafes and restaurants since the end of 2005.[27] Moreover, the reduced observance of the legislation could be, at least in part, attributable to the fact that since August 2005 owners of bars/cafes and restaurants are no longer responsible for enforcing the legislation,[26, 32] and to the lack of re-enforcement by the health authorities once the effect of the novelty of the law has passed. In Spain a similar effect has been observed 2 years after the law came into effect, with a slight increase in the levels of second-hand smoke (measured as vapour-phase nicotine) in bars/cafes and restaurants.[33] The legislation was largely respected among subjects with more privileged socio-economic characteristics (from northern Italy and more educated participants) but less so among subjects with a lower socio-economic level, particularly in southern Italy. Nevertheless, in 2008, 3 years after the implementation of the tobacco regulation, more than 80% of Italian adults reported that the smoking ban was respected in bars/cafes and restaurants.

Moreover, consistently in all the surveys, three quarters of Italians reported that the smoking ban was respected in workplaces. Still, a quarter of Italians, most likely working in workplaces with a limited number of employees, reported that the law was not respected. Accordingly, another survey conducted in 2 Italian cities showed that 19% (in Belluno) and 39% (in Florence) of non-smoker workers reported second-hand smoke (SHS) exposure at workplaces.[34] These proportions are higher than those

derived from self-reported exposure data in Ireland, where 14% of non-smokers declared to continue to be exposed at SHS in the workplace [35] and similar to Spain where 28% of non-smokers declared to be exposed at SHS in the workplace.[36]

Considering all the 4 surveys conducted after the implementation of the legislation, approximately 7% of Italians reported they went to bars/cafes and restaurants less frequently and approximately 10% more frequently than before. These findings confirm that the legislation did not unfavourably affect the business of bars/cafes and restaurants in Italy,[23, 26] as well as in other countries.[28, 37] In 2006 a peak in prevalence of Italians reporting to go more frequently to hospitality premises has been observed. This could be explained through an immediate but not consistent change of this habit, that could not be observed only 2 to 3 months after the implementation of the legislation (i.e. when the 2005 survey was conducted). As expected, current smokers reported to go less frequently and non-smokers more frequently to bars/cafes and restaurants after the legislation came into force. This explains at least part of the differences found in strata of level of education and geographic area, the lower educated subjects and subjects from southern Italy being more frequently current smokers.[31]

Almost a third of ex-smokers since less than 3 years reported to have stopped smoking as a consequence of the tobacco regulation, although this result was based on a limited number of subjects (101 in 2007, and 98 in 2008), and approximately 15% of current-smokers reported to have modified their smoking habit (stopping or reducing daily cigarette consumption). This result, obtained through a prevalence study, shows that the legislation acts as a strategy to reduce smoking prevalence and consumption, confirming findings from before-after studies.[23, 26-29, 38, 39]

The limitations of this study include those that are typical of population-based surveys,

such as reporting errors. Although the trained interviewers and the CAPI system have been designed to reduce this type of information bias, participants may have responded inaccurately because of failure to remember correctly or because of a desire to give a certain response. These limitations notwithstanding, the probability sampling design of the present study allowed us to accurately estimate the prevalence of smoking and related behaviors, because the samples of various surveys were highly representative of the Italian population.

In conclusion, our study confirms that, besides the favourable effects in terms of morbidity and mortality,[1-10, 12-19, 27, 28, 40-42], and reduction of smoking prevalence and consumption,[23, 26] smoke-free legislations did not affect the business of owners of bars/cafes and restaurants, and remain largely respected also 3 years after the law came into force. Part of the success should be attributable to the extensiveness and comprehensiveness of the Italian legislation.[43, 44] In fact, a study conducted in Ireland 6 months after a similar smoke-free legislation came into force showed compliance levels of 94% [45]. Moreover, a before-after study conducted 1 year after the introduction of the ban on 38 public houses in Dublin showed that there was no significant decrease in customer numbers [46]. Conversely, several other European countries, including Germany, Belgium, Spain and Portugal, have recently adopted a less strict smoke-free legislation, that has been shown to be weak and only partially effective, at least in bars and restaurants.[22, 47] Therefore, the adoption of complete smoke-free bans are encouraged by our results.

ACKNOWLEDGEMENTS

This work was conducted with the contribution of the Italian Ministry of Health, the Italian League Against Cancer and the Italian Association for Cancer Research. Esteve Fernández is supported by Instituto de Salud Carlos III, Government of Spain (RTICC RD06/0020/0089) and Ministry of Universities and Research, Government of Catalonia (SGR200500646). The work of this paper was undertaken while Carlo La Vecchia was a Senior Fellow at the IARC.

Licence Statement

Silvano Gallus has the right to grant on behalf of all authors and does grant on behalf of all authors, an exclusive licence on a worldwide basis to the BMJ Publishing Group Ltd and its Licensees to permit this article (if accepted) to be published in JECH and any other BMJ PGL products to exploit all subsidiary rights, as set out in our licence.

REFERENCES

- 1 Barone-Adesi F, Vizzini L, Merletti F, *et al.* Short-term effects of Italian smoking regulation on rates of hospital admission for acute myocardial infarction. *Eur Heart J* 2006;**27**:2468-72.
- 2 Cesaroni G, Forastiere F, Agabiti N, *et al.* Effect of the Italian smoking ban on population rates of acute coronary events. *Circulation* 2008;**117**:1183-8.
- 3 Vasselli S, Papini P, Gaelone D, *et al.* Reduction incidence of myocardial infarction associated with a national legislative ban on smoking. *Minerva Cardioangiol* 2008;**56**:197-203.
- 4 Sargent RP, Shepard RM, Glantz SA. Reduced incidence of admissions for myocardial infarction associated with public smoking ban: before and after study. *BMJ* 2004;**328**:977-80.
- 5 Bartecchi C, Alsever RN, Nevin-Woods C, *et al.* Reduction in the incidence of acute myocardial infarction associated with a citywide smoking ordinance. *Circulation* 2006;**114**:1490-6.
- 6 Juster HR, Loomis BR, Hinman TM, *et al.* Declines in hospital admissions for acute myocardial infarction in New York state after implementation of a comprehensive smoking ban. *Am J Public Health* 2007;**97**:2035-9.
- 7 Khuder SA, Milz S, Jordan T, *et al.* The impact of a smoking ban on hospital admissions for coronary heart disease. *Prev Med* 2007;**45**:3-8.
- 8 Seo DC, Torabi MR. Reduced admissions for acute myocardial infarction associated with a public smoking ban: matched controlled study. *J Drug Educ* 2007;**37**:217-26.

- 9 Lemstra M, Neudorf C, Opondo J. Implications of a public smoking ban. *Can J Public Health* 2008;**99**:62-5.
- 10 Pell JP, Haw S, Cobbe S, *et al.* Smoke-free legislation and hospitalizations for acute coronary syndrome. *N Engl J Med* 2008;**359**:482-91.
- 11 Cronin E, Kearney P, Sullivan P. Impact of a national smoking ban on the rate of admissions to hospital with acute coronary syndromes. *European Society of Cardiology Congress* 2007.
- 12 Eisner MD, Smith AK, Blanc PD. Bartenders' respiratory health after establishment of smoke-free bars and taverns. *JAMA* 1998;**280**:1909-14.
- 13 Allwright S, Paul G, Greiner B, *et al.* Legislation for smoke-free workplaces and health of bar workers in Ireland: before and after study. *BMJ* 2005;**331**:1117.
- 14 Eagan TM, Hetland J, Aaro LE. Decline in respiratory symptoms in service workers five months after a public smoking ban. *Tob Control* 2006;**15**:242-6.
- 15 Hahn EJ, Rayens MK, York N, *et al.* Effects of a smoke-free law on hair nicotine and respiratory symptoms of restaurant and bar workers. *J Occup Environ Med* 2006;**48**:906-13.
- 16 Jaakkola MS, Jaakkola JJ. Impact of smoke-free workplace legislation on exposures and health: possibilities for prevention. *Eur Respir J* 2006;**28**:397-408.
- 17 Menzies D, Nair A, Williamson PA, *et al.* Respiratory symptoms, pulmonary function, and markers of inflammation among bar workers before and after a legislative ban on smoking in public places. *JAMA* 2006;**296**:1742-8.
- 18 Skogstad M, Kjaerheim K, Fladseth G, *et al.* Cross shift changes in lung function among bar and restaurant workers before and after implementation of a smoking ban. *Occup Environ Med* 2006;**63**:482-7.

- 19 Goodman P, Agnew M, McCaffrey M, *et al.* Effects of the Irish smoking ban on respiratory health of bar workers and air quality in Dublin pubs. *Am J Respir Crit Care Med* 2007;**175**:840-5.
- 20 Gorini G, Moshammer H, Sbrogio L, *et al.* Italy and Austria before and after study: second-hand smoke exposure in hospitality premises before and after 2 years from the introduction of the Italian smoking ban. *Indoor Air* 2008;**18**:328-34.
- 21 Nebot M, López MJ, Ariza C, *et al.* Impact of the Spanish Smoking Law on Exposure to Secondhand Smoke in Offices and Hospitality Venues: Before and After Study. *Environ Health Perspect* In Press.
- 22 Fernández E, Fu M, Pascual JA, *et al.* Impact of the Spanish smoking control law on exposure to second-hand smoke and respiratory health in hospitality workers: a cohort study. *PLoS ONE* In Press.
- 23 Gallus S, Zuccaro P, Colombo P, *et al.* Effects of new smoking regulations in Italy. *Ann Oncol* 2006;**17**:346-7.
- 24 Binkin N, Perra A, Aprile V, *et al.* Effects of a generalised ban on smoking in bars and restaurants, Italy. *Int J Tuberc Lung Dis* 2007;**11**:522-7.
- 25 Fontana L, Di Martino T, Iavicoli I. Application and effects of smoking ban in bars and restaurants of Rome. *G Ital Med Lav Ergon* 2007;**29**:484-5.
- 26 Gallus S, Zuccaro P, Colombo P, *et al.* Smoking in Italy 2005-2006: effects of a comprehensive National Tobacco Regulation. *Prev Med* 2007;**45**:198-201.
- 27 Gorini G, Chellini E, Galeone D. What happened in Italy? A brief summary of studies conducted in Italy to evaluate the impact of the smoking ban. *Ann Oncol* 2007;**18**:1620-2.

- 28 Lotrean LM. Effects of comprehensive smoke-free legislation in Europe. *Salud Publica Mex* 2008;**50 Suppl 3**:S292-8.
- 29 Gorini G, Costantini AS, Paci E. Smoking prevalence in Italy after the smoking ban: towards a comprehensive evaluation of tobacco control programs in Europe. *Prev Med* 2007;**45**:123-4.
- 30 Gallus S, Tramacere I, Zuccaro P, *et al.* Attitudes and perceptions towards increasing cigarette price: A population-based survey in Italy. *Prev Med* 2008;**47**:454-5.
- 31 Tramacere I, Gallus S, Zuccaro P, *et al.* Socio-demographic variation in smoking habits. Italy, 2008. *Prev Med* In Press.
- 32 Tribunali Amministrativi Regionali 2005: http://www.giustizia-amministrativa.it/Sentenze/RM_200506068_SE.doc (accessed 5 September 2008).
- 33 Lopez M, Nebot M, Ariza C, *et al.* Impact in the levels of secondhand smoke exposure two years after the implementation of the non-smoking law in Spain. *Epidemiology* 2008;**19 (suppl)**:S126-S7.
- 34 Gorini G, Gasparini A, Tamang E, *et al.* Prevalence of second-hand smoke exposure after the introduction of the Italian smoking ban in the Florence & Belluno survey. *Tumori* In press.
- 35 Fong GT, Hyland A, Borland R, *et al.* Reductions in tobacco smoke pollution and increases in support for smoke-free public places following the implementation of comprehensive smoke-free workplace legislation in the Republic of Ireland: findings from the ITC Ireland/UK Survey. *Tob Control* 2006;**15 Suppl 3**:iii51-8.

- 36 Lushchenkova O, Fernandez E, Lopez MJ, *et al.* Secondhand smoke exposure in Spanish adult non-smokers following the introduction of an anti-smoking law. *Rev Esp Cardiol* 2008;**61**:687-94.
- 37 Eriksen MP, Cerak RL. The diffusion and impact of clean indoor air laws. *Annu Rev Public Health* 2008;**29**:171-85.
- 38 Chapman S, Borland R, Scollo M, *et al.* The impact of smoke-free workplaces on declining cigarette consumption in Australia and the United States. *Am J Public Health* 1999;**89**:1018-23.
- 39 Fichtenberg CM, Glantz SA. Effect of smoke-free workplaces on smoking behaviour: systematic review. *BMJ* 2002;**325**:188.
- 40 Ong MK, Glantz SA. Cardiovascular health and economic effects of smoke-free workplaces. *Am J Med* 2004;**117**:32-8.
- 41 Barnoya J, Glantz SA. Cardiovascular effects of second-hand smoke help explain the benefits of smoke-free legislation on heart disease burden. *J Cardiovasc Nurs* 2006;**21**:457-62.
- 42 Valdes-Salgado R, Avila-Tang E, Stillman FA, *et al.* [Laws that ban smoking in indoor places in Mexico]. *Salud Publica Mex* 2008;**50 Suppl 3**:S334-42.
- 43 Stephens T, Pederson LL, Koval JJ, *et al.* Comprehensive tobacco control policies and the smoking behaviour of Canadian adults. *Tob Control* 2001;**10**:317-22.
- 44 Jamrozik K. Population strategies to prevent smoking. *BMJ* 2004;**328**:759-62.
- 45 Howell F. Smoke-free bars in Ireland: a runaway success. *Tob Control* 2005;**14**:73-4.

46 McCaffrey M, Goodman PG, Kelleher K, *et al.* Smoking, occupancy and staffing levels in a selection of Dublin pubs pre and post a national smoking ban, lessons for all. *Ir J Med Sci* 2006;**175**:37-40.

47 Joossens L, Raw M. Progress in Tobacco Control in 30 European Countries, 2005 to 2007. Access date: 10 September 2008. URL: http://www.ensp.org/files/30_european_countries_text_final.pdf. 2007.

Table 1: Percent distribution of the Italian population according to the attitudes towards smoking regulation, based on 4 representative samples of 12,245 individuals interviewed from 2005 to 2008.

Year	2005	2006	2007	2008	P for trend*
Total	(3,114)	(3,039)	(3,057)	(3,035)	
Degree of observance of the legislation in bars/cafes and restaurants					
Moderately/strongly respected	90.5	89.8	86.0	83.9	p<0.001
Not frequently/not at all respected	9.5	10.2	14.0	16.1	
Degree of observance of the legislation in workplaces					
Moderately/strongly respected	76.8	75.2	77.7	74.3	p=0.19
Not frequently/not at all respected	23.2	24.8	22.3	25.7	
After the introduction of the tobacco regulation, Italians go to bars/cafes and restaurants					
More frequently	9.6	13.3	9.5	8.7	p=0.85
Less frequently	7.4	6.3	6.9	6.0	

* Adjusted for sex and age group.

Table 2: Percent distribution of the Italian population according to their attitudes towards smoking regulation, in strata of selected characteristics. Italy, 2005-2008.

Strata	Bars/cafes and restaurants: observance of the legislation		Workplaces: observance of the legislation		Go to bars/cafes and restaurants:		
	%	p-value*	%	p-value*	more frequently (%)	less frequently (%)	p-value*†
Total	87.6	-	76.0	-	10.3	6.7	-
Sex							
Men	88.7		75.6		10.4	8.1	
Women	86.6	p=0.01	76.4	p=0.68	10.1	5.4	p=0.25
Age group (years)							
<25	82.1		70.1		10.6	6.2	
25-44	89.1		76.6		11.6	7.2	
45-64	89.2	p<0.001‡	77.0	p<0.001‡	10.0	7.1	p=0.37‡
≥65	86.1		77.5		8.0	5.6	
Level of education							
Low	83.9		75.0		6.6	6.3	
Medium	87.6	p<0.001‡	75.8	p=0.17‡	8.5	6.7	p<0.001‡
High	88.9		76.4		12.8	6.8	
Geographic area							
South	79.3		69.0		9.4	8.8	
Centre	86.7	p<0.001	71.5	p<0.001	7.2	5.6	p<0.001
North	94.2		83.4		12.2	5.5	
Smoking status							
Never smokers	86.1		76.4		13.6	4.5	
Ex-smokers	87.8	p<0.001	73.4	p<0.001	10.3	4.2	p<0.001
Current smokers	91.0		77.0		2.1	13.9	

* p-values were adjusted for sex, age group, level of education, geographic area, smoking status and survey.

† Limited to participants reporting they changed their habit of going to bars/cafes and restaurants after the law came into force.

‡ p for trend

Table 3: Percent distribution and corresponding 95% confidence intervals (CI) of the Italian population according to the effects of tobacco regulation on smoking habit among current and ex-smokers. Italy, 2007-2008.

Year	2007 (95% CI)	2008 (95% CI)
<i>Ex-smokers (since less than 3 years)</i>	<i>101</i>	<i>98</i>
Tobacco regulation influence on smoking cessation		
Moderately/strongly influenced	26.4 (17.8-35.0)	32.6 (23.3-41.9)
Slightly/not at all influenced	73.7 (65.1-82.3)	67.5 (58.2-76.8)
<i>Current smokers</i>	<i>718</i>	<i>668</i>
Tobacco regulation effects on smoking habit		
Smoking cessation	0.9 (0.2-1.6)	1.1 (0.3-1.9)
Smoking cessation and relapse	2.3 (1.2-3.4)	2.8 (1.5-4.1)
Reduction of smoking consumption	7.1 (5.2-9.0)	6.5 (4.6-8.4)
Reduction of smoking consumption and relapse	5.4 (3.7-7.1)	4.6 (3.0-6.2)
No effects	82.8 (80.0-85.6)	82.6 (79.7-85.5)
Start subsequent	1.4 (0.5-2.3)	2.4 (1.2-3.6)