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Characterization of Smoking Habits Patterns in Medical Doctors of a Central Hospital in Portugal—What has Changed after 15 Years? A Comparative Cross-Sectional Study

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Abstract

Introduction: Tobacco dependence remains one of the primary health care concerns worldwide. Attitude of healthcare professionals towards smoking is crucial for any long-term prevention and smoking cessation program.

Objectives: Analyze smoking habits of medical doctors from a central hospital in Lisbon (2014), comparing results between medical versus surgical specialities. Results were compared with those obtained in 1999.

Design and setting: A voluntary and anonymous questionnaire was distributed to all physicians for a period of 4 months. The questions included sociodemographic data, smoking habits characterization, attitudes towards smoking, importance attribute to smoking cessation programme in the hospital and knowledge of the 2008 country law.

Participants: All medical doctors working in the central hospital studied between 1/1/2014 and 30/6/2014.

Outcome measures: The primary outcome measure was to characterize the smoking habits of medical doctors. Secondary outcomes included comparison of results between surgical and medical groups and with those obtained in a similar study in 1999.

Results: Of the 423 surveys distributed we obtained 171 responses, with female predominance (58.6%). Response rate increased from 19.0% in 1999 to 40.4%. Smokers prevalence among doctors decreased in 2014 (21.0% vs. 14.6%), but significantly increased in females of 35.0% to 52%. Knowledge of the ban on smoking in public places was universal. Medical group had more responders (48.9% vs. 29.5%) but also more smokers (16.8% vs. 6.1%) with a higher degree of dependence (4.6 vs. 3.2) and more attempts to stop smoking (56.0% vs. 50.0%).

Conclusions: Knowing the smoking habits of medical professionals help us to identify risk groups in our hospital and to establish future smoking cessation strategies more specific and effective.

Keywords: Tobacco dependence; Premature mortality; Smoking cessation; Occasional smoker

Introduction

Tobacco use is the most important cause of preventable morbidity, disability and premature mortality, associated with adverse health outcomes and with a serious impact on the cost of health care services. According to the World Health Organization (WHO), smoking kills nearly 6 million people annually, an average of one person every six seconds, and accounts for 6% and 12% of all female and male deaths respectively [1-3].

Tobacco dependence remains one of the primary health care concerns worldwide. Healthcare professionals should be active in smoking prevention, as part of their daily practice [2-7]. Previous studies demonstrated that the attitude of healthcare professionals towards smoking is crucial for any long-term prevention and smoking cessation program [3-9].

In Portugal, a restriction upon smoking in enclosed public places has been in effect since 2008. In 2010, tobacco was responsible for 11800 deaths in our country. In 2012, more than a quarter of the population of 15 to 64 years was a tobacco consumer [4-12]. The majority of Portuguese started smoking consumption between 12 and 20 years of age, largely due to the influence of friends or curiosity and willingness to experiment. Recent data demonstrated an increase in tobacco use among school students, a trend that matters to monitor and reverse in the future. For the most Portuguese population, smoking is not perceived as a serious risk factor for health. These facts confirm

that it is imperative to invest in prevention and control of this important national public health problem [3-17].

Health care professionals who smoke are generally less sensitized to promote smoking cessation measures in their patients and frequently adopt a more passive attitude toward the dependence problem. Studies suggest that as smoking rates decline among physicians, a similar reduction will be observed in the general population as well. Recent data demonstrated that surgical specialities have greater tendency to stress with more highest percentage of smokers [1-17].

The aim of this study was to estimate smoking prevalence among medical doctors at Hospital Egas Moniz, (Centro Hospitalar Lisboa Ocidental), Portugal in 2014 and to characterize their smoking habits, comparing workers from medical versus surgical specialities. Results were compared with those obtained in 1999 under similar conditions.

Material and Methods

We conducted a report of an observational study in Hospital Egas Moniz that belongs to Centro Hospitalar Lisboa Ocidental (which also includes Hospital São Francisco Xavier and Hospital Santa Cruz). Data recruitment was collected only in Hospital Egas Moniz because it is where the Pulmonology Department is located and to maintain the same method used in 1999 prior work, allowing comparison of data.

With collaboration of chief directors from study hospital a tobacco questionnaire in paper format of voluntary and anonymous response was distributed to all physicians. Participants were the total of medical doctors working in hospital spread over 26 specialities (19 medical specialities versus 8 surgical specialities). The medical group included the following specialities: Pathology, Anesthesiology, Cardiology, Dermatology, Endocrinology, Gastroenterology; Immunoallergology; Immunohemotherapy; Infectiology; Rehabilitation Medicine; Internal Medicine, Microbiology, Neurology, Neuroradiology, Pulmonology, Psychiatry, Radiology, Rheumatology, Intensive Medicine. The surgical group included the following specialities: General surgery (I and II), Plastic surgery, Stomatology, Neurosurgery, Ophthalmology and Otorhinolaryngology. The total number of medical doctors in the hospital was requested to human resources department after Ethics Committee approval, totalizing 423 doctors in 2014 and 214 in 1999. It was safeguarded all aspects inherent to medical confidentiality.

Data collection started in March 2014 and lasted four months, until the end of June. After this period the authors personally contacted all chief directors and collected the questionnaires responses from each department. We used the same data collection method in 1999 and 2014. Results were compared with those obtained in 1999 in the same hospital, using a similar questionnaire and assessing the impact of anti-smoking country legislation implemented in 2008. The questionnaires were distributed by the chief directors in respective service appointments to all medical staff of each department. The questions included smoking habits characterization, attitudes towards smoking, knowledge of the 2008 country law and importance attribute to smoking cessation programme existing in hospital.

Occasional smoker was defined as the one who consumes only in social circumstances and not on a daily basis, however this definition wasn't include in the questionnaire. We used the nicotine dependency Fargeström Test, to access the degree of nicotine dependency among smokers and occasional smokers. Motivation to quit smoking was assessed by Richmond Test.

The authors were always available to answer questions regarding the questionnaire throughout the period of study. Statistical analysis was performed using IBM SPSS Statistic 23.0 for MAC OS X. Comparisons between groups were performed using the Student's T test. Distribution of the categorical variables regarding participants was assessed by Chi-square test. Statistically significant was accepted at $p < 0.05$.

Results

Of the 423 surveys distributed in 2014 we obtained 171 responses (40.4%), of whom 58.6% were women and 43.6% were aged 40 years and above. Average age to start smoking in 2014 was 19, 9 years. Knowledge of the ban on smoking in public places was universal (100.0%) irrespective of smoking status and socio-demographic profile. Prevalence of smokers in 2014 among medical professionals was 14.6%, with slight female predominance (52.0%). Cigarettes were the preferred way to smoke (92.0%). Never smokers were 74.2% also with a female predominance but a slight lower average age (41.2 vs. 44.7 years). The main reasons appointed to start smoking were: social life (24.0%), work stress (22.0%) and other reasons (54.0%) (Table 1). From smokers group, 56.0% tried to stop smoking but only 8.0% with medical support. All considered important Smoking Cessation Hospital Program but only 44.0% want to attend it.

Table 1: Description of smoking habits of medical doctors in 2014.

Smokers (n=25)			
Percentage	Female	Male	Average age
14.60%	13	12	44.7
Occasional Smokers (n=4)			
Percentage	Female	Male	Average age

2.40%	2	2	54.7
Never Smokers (n=127)			
Percentage	Female	Male	Average age
74.20%	75	52	41.2
Ex-Smokers (n=15)			
Percentage	Female	Male	Average age
8.80%	5	10	52.7
Total (n=171)			
2008 Portuguese Legislation Law Knowledge	100%		
Main reason to start smoking	Social life		Work stress
	24%	22%	54%
Other reasons			

We analyzed 19 medical specialities (n=131, 61.8%) and 8 surgical specialities (n=49, 38.2%). Table 2 shows the characterization of smoking habits between medical and surgical group in 2014. The response rate was higher in medical specialties 48.9% vs. 29.5%. Gender prevalence was statistically significantly different by speciality (p<0.05), with higher prevalence of females in medical group (58.0%) and males in surgical group (59.2%). Beginning age for smoking habits was higher among surgical group 20.3 vs. 19.8 years (p<0.05). Medical group had more smokers (16.8% vs. 6.1%) with a higher

degree of dependence (4.6 vs. 3.2) and more attempts to stop smoking (56.0% vs. 50.0%).

The percentage of never-smokers was similar in both groups medical vs. surgical (74.6% vs. 80.3%). There was a higher rate of ex-smokers in surgical group 10.2% vs. 7.4% (p<0.05). All considered important the Smoking Cessation program in the hospital but only 36.0% of doctors working in medical specialties and 48.0% of surgical specialties expressed willingness to attend it.

Table 2: Characterization of smoking habits between medical and surgical group (2014).

Speciality	Medical Group (n=131, 61.8%)		Surgical Group (n=49, 38.2%)		P-Value
Response rate	48.90%		29.50%		0.682
Gender prevalence	Female (58%)		Male (59.2%)		*0.002
Average age (years)	42.3		44.6		0.746
Beginning age (years)	19.8		20.3		*0.012
Main reasons for initiating smoking habits	Social causes (48.8%)		Stress work (39.6%)		0.564
Attempts to quit smoking	54.6% (with medical support: 8%)				-
	56%	50%	0.362		
Smokers (14.6%)	16.80%		6.10%		0.286%
	Female	Male	Female	Male	-
	68%	32%	62%	38%	-
Occasional smokers (2.4%)	1.2%		3.4%		0.165%
	Female	Male	Female	Male	-
	44%	56%	71%	29%	-
Never smokers (74.2%)	74.6%		80.3%		0.421%
	Female	Male	Female	Male	-
	78%	22%	77%	23%	-

Ex-Smokers (8.8%)	7.4%		10.2%		*0.012
	Female	Male	Female	Male	-
	56%	44%	77%	23%	-
Desire to enter in smoking cessation hospital program	36%		48%		0.671
Nicotine dependence (Average Value)	4.6		3.2		
Number of cigarettes smoked per day (Average value)	17.8		13.6		0.281
*: Significant at 0.05 P-Values corresponds to the comparison of the two categories: Medical Group, Surgical Group by indicators of compliance using Pearsons Chi-square test.					

Smokers specialties with the highest prevalence were Pathology (23.4%), Endocrinology (16.8%), Internal Medicine (16.8%) and Psychiatry (10.4%).

Response rate was higher in 2014 increasing from 19.0% in 1999 to 40.4% ($p < 0.05$) (Table 3). The percentage of smokers decreased from 21.0% to 14.6% and we observed a gender reversal with more women smokers in 2014 (52.0% vs. 35.0%).

In the study period there was a decreased in occasional smokers (6.0% vs. 2.4%) and ex-smokers (29.0% vs. 8.8%) but a significant increase in never smokers (44.0% vs. 74.2%). Nicotine dependence was lower in 2014 (low nicotine dependence: 64.0% vs. 10.0%) but motivation for smoking cessation was also lower in 2014 (51.0% vs. 34.0%).

Table 3: Comparing the smoking habits of Hospital Egas Moniz between 1999 and 2014.

Study Year	1999			2014			P-Value
Response Rate	19%			40.40%			*0.021
Smokers	21%			14.60%			0.561
	Female	Male		Female	Male	-	
	35%	65%		52%	48%	-	
Ocassional Smokers	6%			2.40%			0.689
Ex-Smokers	29%			8.80%			0.321
No-Smokers	44%			74.20%			0.193
Nicotine Dependence (Fagerstron test)	Low	Medium	High	Low	Medium	High	-
	10%	55%	35%	64%	24%	12%	-
Motivation for cessation (Richmond Test)	Low	Medium	High	Low	Medium	High	-
	34%	49%	17%	51%	30%	19%	-
*: Significant at 0.05.							
P-Values correspond to the comparison of the two categories: 1999 and 2014 group by indicators of compliance using the Pearson's Chi-Square Test.							

Discussion

Smoker prevalence among physicians at Hospital Egas Moniz, (Centro Hospitalar Lisboa Ocidental), Portugal in 2014 was 14.6%, lower than the prevalence of smoking in Portugal in the same year (estimated about 25.0%) and lower than the observed in 1999 (21.0%). All physicians reported knowing the Portuguese legislation regarding the smoking prohibition. We can assume that the law of 2008 had a positive impact on tobacco control.

We obtain a low response rate to the questionnaire, with higher number of responses from never smokers. However,

response rate increased from 19.0% in 1999 to 40.4% in 2014. This increase in response rate can be explained by a personalized follow-up of authors with the chiefs' services sensitizing them for active participation in the study.

However, the high abstention rate observed can condition the final data. Of concern was the fact of having observed a significant increase in the percentage of female smokers (35.0% in 1999 to 52.0% in 2014). In future we should paid more attention to dependence in women promoting measures to warn of the risks in this particular group.

In the 2014 study the average beginning age was 19, 9 years. Most had low degree of nicotine dependence (64.0%) better

than the observed in 1999 but the majority had low motivation to quit smoking (51.0%) which is a worst result than observed in 1999. We found interesting that all respondents who were smokers considered important smoking cessation hospital programme but only 44.0% want to attend it. Of those who tried to quit smoking (54.6%) only 8.0% had medical help. We must continue to encourage cessation smoking measures to health care providers.

Studies have shown that surgical specialties are usually subject to greater stress with higher smokers percentage. In 2014 we analyzed 19 medical specialties (61.8%, n=131) and 8 surgical specialties (38.2%, n=49). There was a responses predominance of women in medical group (58.0%) and men in surgical group (59.2%) which is according with gender prevalence in both groups.

The percentage of never smokers was similar in both groups medical vs. surgical (74.6% vs. 80.3%). There rate of smokers was higher in medical group (16.8% vs. 6.1%) which is not as described in previous studies. The age of onset of smoking habits was slightly lower in medical specialties (19.8 years vs. 20.3 years). The main reason for initiating smoking habits were: social causes (48.8%) in medical specialties (parties, friends, gatherings) while the stress at work comes as the first reason in surgical specialties (39.6%).

All considered important the smoking cessation program in the hospital but only 36.0% of doctors working in medical specialties and 48.0% of surgical specialties expressed willingness to attend it. In our study we found that doctors from surgical specialties are more aware of the smoking related problems.

Conclusion

As we all know, personal and social deep changes are needed if tobacco eradication is to be achieved, beginning with health professional's attitude towards the problem.

In our study prevalence of smokers among medical doctors decreased between 1999 and 2014. Implementation of legislation seems to have had a positive impact on tobacco control as well as other strategies. Prevalence of women smokers increased and in future we should pay more attention to females. We also found that doctors of surgical specialties are more aware of smoking-related problems, with lower smoker rate and higher never smoker and ex-smokers.

Knowing the smoking habits of health professionals is important because doctors who are motivate, give more importance to smoking cessation among their patients.

These results help us to identify risk groups in our hospital and to establish future smoking cessation strategies more specific and effective.

Contributorship Statement

RC and IR planned this study and conducted the analyses. RC wrote the manuscript, whereas IR provided the statistical guidance and MR, CM and FN provided conceptual input. All

authors commented on the subsequent drafts of the manuscripts.

References

1. Coleman T, Murphy E, Cheater F (2000) Factors influencing discussion of smoking between general practitioners and patients who smoke: A qualitative study. *Br J Gen Pract* 50: 207–210.
2. Lina M, Mazza R, Borreani C, Brunelli C, Bianchi E, et al. (2016) Hospital doctors' smoking behavior and attitude towards smoking cessation interventions for patients: A survey in an italian comprehensive cancer centre. *Tumori J* 102: 223-334.
3. Ravara SB, Castelo-Branco M, Aguiar P, Calheiros JM (2014) Are physicians aware of their role in tobacco control? A conference-based survey in portugal. *BMC Public Health* 14: 979.
4. Reis MF, Namorado S, Aguiar P, Precioso J, Nunes B, et al. (2014) Patterns of adherence to and compliance with the portuguese smoke-free law in the leisure-hospitality sector. *PLoS One* 9: e102421.
5. Zinonos S, Zachariadou T, Zannetos S, Panayiotou AG, Georgiou A (2016) Smoking prevalence and associated risk factors among healthcare professionals in Nicosia general hospital, cyprus: A cross-sectional study. *Tob Induc Dis* 14:14.
6. Zafar M. (2014) Prevalence of smoking and associated risk factors among medical professionals in hospitals of karachi, pakistan. *Int J Prev Med* 5: 457-462.
7. McBride CM, Emmons KM, Lipkus IM (2003) Understanding the potential of teachable moments: The case of smoking cessation. *Health Educ Res* 18: 156-170.
8. Mazza R, Lina M, Invernizzi G, Pierotti M, De Marco C, et al. (2011) The gap between tobacco treatment guidelines, health service organization, and clinical practice in comprehensive cancer centres. *J Oncol* 2011: 1-5.
9. Raupach T, Merker J, Hasenfuss G, Andreas S, Pipe A (2011) Knowledge gaps about smoking cessation in hospitalized patients and their doctors. *Eur J Cardiovasc Prev Rehabil* 18: 334-341.
10. Thy T, Boker T, Gallefoss F, Bakke PS (2007) Hospital doctors attitudes toward giving their patients smoking cessation help. *Clin Respir J* 1: 30-36.
11. Saud M, Madhu B, Srinath KM, Ashok NC, Renuka M (2014) Physician's practices and perspectives regarding tobacco cessation in a teaching hospital in mysore city, karnataka. *Ind J Psychiatry* 56:24-28.
12. Nardini S, Bertoletti R, Rastelli V, Ravelli L, Donner CF (1998) Personal smoking habit and attitude toward smoking among the health staff of a general hospital. *Monaldi Arch Chest Dis* 53:74-78.
13. Ficarra MG, Gualano MR, Capizzi S, Siliquini R, Liguori G, et al. (2011) Tobacco use prevalence, knowledge and attitudes among italian hospital healthcare professionals. *Eur J Public Health* 21:29-34.
14. Zanetti F, Gambi A, Bergamaschi A, Gentilini F, De Luca G, et al. (1998) Smoking habits, exposure to passive smoking and attitudes to a non-smoking policy among hospital staff. *Public Health* 112 : 57-62.
15. La Vecchia C, Scarpino V, Malvezzi I, Baldi G (2000) A survey of smoking among Italian doctors. *J Epidemiol Community Health* 54:320.

16. Nardini S, Bertoletti R, Rastelli V, Donner CF (1998) The influence of personal tobacco smoking on the clinical practice of Italian chest physicians. *Eur Respir J* 12: 1450-1453.
17. Franceschi S, Serraino D, Talamini R, Candiani E (1986) Personal habits and attitudes towards smoking in a sample of physicians from the north-east of Italy. *Int J Epidemiol* 15: 584-585.