

Investigation of Attitudes, Knowledge and Skills of Family Physicians About Smoking and Anti-smoking Activities in Turkey; One of the Leading Countries in Tobacco Control

Tütün Kontrolünde Önde Gelen Ülkelerden Türkiye’de Aile Hekimlerinin Sigara ve Sigara Karşıtı Aktiviteler Hakkında Bilgi, Beceri ve Tutumlarının Araştırılması

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ABSTRACT

Aim: Family physicians play important role in smoking cessation practices. It was aimed to investigate attitudes, knowledge and skills of Turkish family physicians towards tobacco control.

Methods: In the cross-sectional and multi-centered study, a self-administered study survey about their knowledge, attitudes and skills about smoking and anti-smoking activities was applied to family physicians.

Results: A small number of the family physicians (1.1%) received regularly formal training in smoking cessation practice. Almost all had high knowledge level about effects of smoking. It was observed that significant differences in all items regarding attitudes of family physicians towards anti-smoking activities between ever and never smokers. It was found that only one-third of family physicians have often asked about smoking habits to patients. Only one-fifth of the family physicians stated that they were competent for smoking cessation practice. It was found that the minority of family physicians (11.6%) often arrange follow-up for their patients who stop smoking. 86.4% of family physicians stated that they never or rarely referred current smokers to a well-established center.

Conclusion: Family physicians, particularly ever smokers, were usually incompetent for smoking cessation practice. Smoking cessation programs and continuing medical education should be introduced among Turkish family physicians.

Keywords: smoking cessation; family physician; attitude, knowledge, skill

ÖZET

Amaç: Aile hekimleri sigara bırakma tedavisinde önemli rol oynarlar. Bu çalışmada Türkiye’de Aile Hekimlerinin tütün kontrolü hakkında bilgi, beceri ve tutumlarının araştırılması amaçlanmıştır.

Yöntemler: Kesitsel ve çok merkezli bu çalışma aile hekimleri tarafından doldurulan ve hekimlerin sigara ve sigara karşıtı aktiviteler hakkında bilgi, beceri ve tutumlarını içeren çalışma anketi uygulanmıştır.

Bulgular: Çalışmaya katılan aile hekimlerinin az bir kısmı düzenli olarak sigara müdahalesi hakkında eğitim almıştı (%1,1). Hemen hemen hepsinin sigaranın etkileri hakkında bilgi seviyeleri tamdı. Sigara karşıtı eylemlerde hiç sigara kullanmayan ve sigara kullanmış ya da kullanan aile hekimleri arasında tutum ile ilgili maddelerde anlamlı farklılık gözlemlendi. Sadece hekimlerin üçte birinin hastalarını her zaman ya da sıklıkla sigara içip içmediği konusunda sorguladığı saptandı. Hekimlerin beşte biri sigara müdahalesi için kendilerini yeterli görmekte idi. Çok az sayıda aile hekiminin (%11,6) sigara bırakmak isteyen hastalarına bir takip oluşturduğu bulundu. Hekimlerin %84,4’ü çok seyrek ya da hiçbir zaman sigara içicilerini daha ileri bir merkeze refere ettiklerini belirtmedi.

Anahtar kelimeler: sigara bırakma, aile hekimi, davranış, bilgi, tutum

Introduction

Tobacco dependence is a chronic disease. It is one of the major public health problems. It causes many diseases such as chronic bronchitis, lung cancers and cardiovascular diseases (1,2). It is difficult to stop smoking. So it often needs multiple attempts and requires several repeated interventions. Health professionals, especially family physicians, play an important role in providing smoking cessation (3). Frequency of smoking among primary care physicians is not rare, and cigarette

smoking by family physicians in health care practice undermines their roles (4,6).

It is essential that clinicians consistently identify and document tobacco use status and treat every tobacco user seen in a health care setting (7). It was suggested that there were many reasons for clinicians to fail to intervene smoking cessation practice, such as lack of knowledge about how to identify smokers quickly and easily, time constraints, limited training in tobacco cessation or inadequate payment for treatment (8). A systematic review showed that while the majority of general practitioners (GP) or family physicians (FP) do not hold negative beliefs and attitudes towards discussing smoking cessation with their patients, a sizeable minority do (9).

Family physicians are gate keeper physicians, so they are anticipated to be the most important providers for smoking cessation (10,11). In recent years, Turkey has gained major accomplishments with transition in primary health care services and anti-smoking interventions (12,13).

Education, communication and training are most effective when incorporated into a comprehensive tobacco control program. In this context, Turkey has been taken among highest achieving countries. A comprehensive ban on all tobacco advertising, promotion and sponsorship could decrease tobacco consumption by about 7%, independent of other tobacco control interventions, with some countries experiencing a decline in consumption of up to 16 %. Increasing tobacco prices through higher taxes is the most effective intervention to reduce tobacco use and encourage smokers to quit (14). To our knowledge, there was no comprehensive study on family physicians attitudes towards, knowledge and skills about smoking cessation practice and smoking ban in Turkey. The purpose of the present study was to examine the family physicians' (FP) knowledge about health effects of smoking, their attitudes towards smoking cessation practice and anti-tobacco control activities in Turkey.

Methods

The method of the study was described in previous study by Baltaci et al (15). Target group in the present study was family physician working at primary care settings. The study was multicentered

and conducted by 3 centers: 1) Department of Family Medicine and Public Health, Duzce University, 2) Department of Family Medicine, Ataturk University, and 3) Department of Chest diseases, Duzce University. The study was carried out between September 2010 and February 2011. Legal permission was obtained by Family Medicine Department of Health Ministry, Republic of Turkey, before starting the present study. All physicians were informed about the study by cover sheet-attached to study survey. Participation in the study was dependent on willingness. The ethical issue was approved by the ethic committee of our institute. Inclusion criteria were 1) working in primary care settings, and 2) willingness.

We used a modified form of study survey originally developed by WHO, "Global Health Professional Survey" (16), and totally 1500 study surveys were distributed to family physicians by e-mail (2.7%), post-office (3.1%) and mostly hand-out (94.2%). It was self-administered questionnaire consisting of 32 questions investigating smoking habits as well as socio-demographic and occupational features. The study survey was recruited via post-office and hand-out by a physician within 2 weeks. A total of 1233 surveys were returned and response rate of the study was 82.2%. Status of smoking was determined as the current smoker, never smoker, and the former smoker defined by WHO (17). Knowledge levels on smoking, attitudes towards to smoking and anti-smoking controls, and skills of smoking cessation practice among family physicians were asked. Those were analyzed and compared between ever and never smokers.

All data were entered the PC software program. Statistical analysis was done using SPSS for Windows (version 15.0, Chicago, IL, USA). Sample size was calculated with Epi Info. The study sample was selected from among a population of approximately 2200-23000 family physicians in Turkey. Using an estimated prevalence of smoking in the population of 35-40% (p), and accepting a 1% type 1 error, the sample size needed to reach a power of 80%, sample size was determined about 1050-1100 participants.

$$n = p(1-p) \frac{t_{0,01}^2}{s^2} = \frac{(0,35) \times (0,65) \times (2,58)^2}{(0,04) \times (0,04)}$$

Mean and standard deviation for continuous variables and percentage and frequency for categorical variables were computed. Continuous variables with normal distribution were analyzed by using student T test and but those without normal distribution were analyzed with Mann-Whitney U test. Categorical variables were analyzed with chi-square or Fisher's exact test. A p value of less than 0.05 was considered to be statistically significant for all tests.

Results

The data of 1233 family physicians with mean age of 38.4±7.1 years-old was analyzed. The female and male distribution the study was 42.9% and 57.1%, respectively. The mean age of all participants was years-old. Mean year of working as a physician was 13.85±6.96 years-old. Among all participants, the percentage of ever smokers (ES) (the current and the former smoker) was 48.9%. The prevalence of smoking status as the current, former and never smokers in the study was previously reported (15).

A small number of the family physicians (1.1 %) received regularly formal training in smoking cessation practice. Degree of physicians' preparedness for smoking cessation practice was generally incompetent or somewhat (80.1%). Only 19.9% stated that they were fully competent in smoking cessation practice. 35.3% of FP has often or always asked about smoking habits to every patient during consultation. Whereas 83.7% of FP advised all smokers to stop smoking, 16.3% advised to those with relevant medical conditions. A large number of FPs (88.4%) never or rarely have arranged smoking cessation follow-up for patients. Out of the FP, 7.1% often suggested nicotine replacement therapy and 6.7% suggested medication such as bupropion or varenicline. The 86.4 % of FP never or rarely referred the CS to smoking cessation program or center. The number of CS patients more than 3 a week consulted by family physicians was about 9.2%. When skills of FP were compared between ES and NS, significant difference was observed in item "Advising stop smoking for all or current smokers with relevant medical conditions. 79.6 % of ES advised smokers to stop smoking, but 87.5 % of NS (p=0.001). Item "degree of preparedness in SCP as competent"

between ES and NS was significantly different (17.8 % versus 22.1, p = 0.045) (Table 1).

Table 1. Family physicians' skills and practice in smoking cessation

Items regarding with skills and practice in SCP (n=1233)	Statement of Agreement			
	All (%)	ES [†] (%)	NS [†] (%)	p [*]
Training in course on smoking cessation				
Never or rarely	98.9	99.1	98.8	
Regularly	1.1	0.9	1.2	0.437
Degree of preparedness in smoking cessation practice				
Incompetent or somewhat	80.1	82.2	77.9	
Competent	19.9	17.8	22.1	0.045
Asking about smoking to every patient during consultation				
Rarely or never	64.7	66.4	63.1	
Often or always	35.3	33.6	36.9	0.241
Advising to stop smoking				
To all smokers				
To smokers with relevant medical conditions	83.7	79.6	87.5	
	16.3	12.5	20.4	0.001
Arranging follow-up				
Never or rarely	88.4	89.2	87.8	
Often or always	11.6	10.8	12.2	0.509
Nicotine replacement therapy suggestion				
Never or rarely	92.9	92.5	93.3	
Often or always	7.1	7.5	6.7	0.634
Bupropion or varenicline therapy suggestion				
Never or rarely	93.3	92.9	93.8	
Often or always	6.7	7.1	6.2	0.611
Referral to smoking cessation program or center				
Never or rarely	86.4	88.0	85.0	
Often or always	13.6	12.0	15.0	0.152
The number of [†]CSs consulted for smoking cessation a week				
< 3 patients	90.8	89.8	91.7	
3-5 patients	6.4	5.6	7.2	
> 5 patients	2.8	2.6	2.6	0.545

*Indicates p value between ever smokers and never smokers, and accepted as significant if p value < 0.05. [†] ES: indicates ever smokers. NS: indicates never smokers. CS: indicates the current smokers.

Table 2 showed knowledge level all family physicians and comparisons between ES and NS physicians about smoking and smoking cessation. Majority of FP agreed with harmful effects of smoking on human body. There was statistically significant difference in items of "Smoking is harmful for health", "passive smoking increases risk

for heart disease and lung cancer in non-smokers”, “Passive smoking can cause neonatal death” (99.8% vs. 98.0%, p=0.011; 98.5% vs. 95.5%, p=0.009; and 93.1% vs. 87.5%, p=0.002, respectively). However, items of “Smoking during pregnancy increases sudden infant death”, and “Smoking in family medium can increase the risk for development of lower respiratory infection such as asthma, pneumonia” revealed no significant difference between ES and NS physicians (95.9% vs. 98.2%, p=0.681 and 99.5% vs. 98.2%, p=0.641).

Table 2. Family physicians’ knowledge about harmful effects of smoking

Items regarding with knowledge about smoking (n = 1233)	Statement of Agreement			p*
	All (%)	ES† (%)	NS‡ (%)	
Smoking is harmful to your health.	98.9	98.0	99.8	0.011
Neonatal death is associated with passive smoking.	90.4	87.5	93.1	0.002
Passive smoking increases the risk of lung and heart diseases in non-smokers.	98.6	98.9	98.5	0.641
Paternal smoking increases the risk of lower respiratory tract illnesses such as pneumonia and asthma in exposed children.	98.7	96.9	98.5	0.183
Maternal smoking during pregnancy increases the risk of Sudden Infant Death Syndrome.	94.6	93.1	95.9	0.068

*Indicates p value between ever smokers and never smokers, and accepted as significant if p value < 0.05. † ES indicates ever smokers, NS indicates never smokers.

In table 3, family physicians ‘attitudes towards smoking ban and anti-smoking activities were evaluated and compared between ES and NS. Items related smoking ban were agreed by majority of all physicians. “Prohibition of smoking in enclosed area” was agreed by 93.5 of FP. Among FP, 88.7% agreed with statement of “Banning sponsorship by tobacco industries”. When statements of NS and ES physicians’ attitudes were compared, there was no significant difference in only item of “FP should advice the patients to not definitely smoke beside their children” (98.5% vs. 96.9%, p=0.183). However, other items (“FP should serve as role models for patients and society”, “FP should set a good example by quitting smoking”, FP routinely should ask to patients whether they smoke or not”, FP routinely should advice smokers to stop smoking”, “FP who smoke are less likely to advise people to stop smoking”, “FP should be trained on smoking

cessation skills”, FP should talk to people about smoking” revealed strongly significant differences between NS and ES physicians (Table 3).

Table 3. Family physicians’ attitudes towards anti-smoking activities

Items regarding with attitudes towards anti-smoking activities (n = 1233)	Statement of Agreement			p*
	All (%)	ES† (%)	NS‡ (%)	
Physicians should serve as role model for their patients and the public.	96.2	93.2	99.0	0.0001
Physicians should set a good example by not smoking.	91.8	85.2	98.1	0.0001
Physicians should routinely ask about their patients’ smoking habits.	88.8	85.7	91.8	0.004
Physicians should routinely advise their smoking patients to quit smoking.	89.2	85.9	92.3	0.002
Physicians should get a specific training on cessation.	86.6	82.7	90.3	0.001
Physicians should speak to community groups about smoking.	70.1	65.5	74.2	0.002
Smoking in enclosed public area should be prohibited.	93.5	89.2	97.5	0.0001
Health warnings on cigarette packages should be written and big print.	89.5	83.1	95.5	0.0001
Sponsorships supported by tobacco industry should be banned.	88.7	85.9	91.3	0.0001
There should be a complete ban on the advertising of tobacco products and it should be extended.	90.9	87.0	94.6	0.0001
The price of tobacco products should be increased sharply.	69.7	55.1	83.2	0.0001
Physicians should routinely advise patients to avoid smoking around their children.	97.7	85.9	92.3	0.002
Pharmacotherapy such as nicotine replacement and bupropion is useful for smoking cessation	59.5	55.8	62.9	0.0001
Physicians who smoke are less likely to advise people to stop smoking.	55.3	49.1	61.2	0.0001
Patient’s chances of quitting smoking are increased if a physician advises him or her to quit.	85.9	82.0	89.4	0.001

*Indicates p value between ever smokers and never smokers, and accepted as significant if p value < 0.05. † ES indicates ever smokers, NS indicates never smokers.

Table 3 summarized the evaluation and comparison of statements about anti-smoking activities among physicians. The items of “the price of tobacco should be increased sharply”, “pharmacotherapy is useful for smoking cessation”, and

physicians who smoke are less likely to advise people to stop smoking” were agreed by relatively small number of family physicians (69.7%, 59.5% and 55.3%, respectively). Ever smokers have less agreed than NS with items of anti-smoking activities. Item of “Smoking ban should be continued in the public area” was agreed by 97.5% of NSs but 89.2% ESs ($p=0.0001$). Item of “Health warnings related to smoking on cigarette package should be continued to be noticed” was agreed by 95.5% ratio of NS, whereas 83.1% of ES ($p=0.0001$). ES stated that they significantly less agreed, compared to NS, with items of “All sponsorships supported by the tobacco industry should be banned” and “advertising related to tobacco products was completely banned and bans must be extended” (85.9% vs. 91.3 and 87.0% vs. 94.6; $p=0.0001$ and $p=0.0001$, respectively). Among items, item of “Taxes and fees on tobacco products must be raised” was stated with the agreement by NS and ES physicians as the least ratio, but significantly different was also observed between NS and ES (83.2% vs. 53.1%, $p=0.0001$).

Discussion

Since 2008, anti-smoking activities have been gained momentum and tobacco ban has been successfully implemented after modification in Turkey. In this regard, Turkish Ministry of Health developed new strategies and established strong policies against smoking. Additionally, transition in health care system, family medicine implementation in primary care, has been initiated in 2005 and completed in 2010 (18,19). After this time, family physicians became central core for health care services, regarding both prevention and treatment. Recently, in a study by Baltaci and his colleagues, the prevalence among family physicians was found to be quite (15). Based on the results of the study, attitudes and skills of the family physicians towards and about the tobacco control was investigated in the current study.

The present study primarily investigated attitudes toward, knowledge and skills about tobacco use, smoking cessation and tobacco ban among Turkish family physicians. Frequency of smoking among family physicians was in Turkey comparatively high. Almost half of the FP had smoked at least for a while

in their life. It was not disregarded result, for community of physician.

The present study indicated that the ever smokers (current and the former smokers) were untoward level for attitude toward smoking habit and smoking cessation practice, compared to never smokers. The study displayed that FP need to be heavily trained in smoking cessation practice, because it was detected that experience in this issue among FP was very little. Moreover, the study revealed that almost all of family physicians needed to be trained in smoking cessation practice. It was sadness that third of FP have skipped to ask to patients during the consultation whether they smoke or not.

Recently, several studies on the smoking habits in Turkish physicians as well as health care workers were conducted. However, a few studies on attitude and knowledge of family physicians about smoking cessation practice and those were locally conducted. To best our knowledge, the study was the first study which investigated attitudes, knowledge and skills of family physicians on tobacco control and smoking cessation practice among FPs throughout Turkey.

Prevalence of smoking among primary care physicians was reported as various in different countries. Among European countries, Bulgaria (45.2%), Greece (40.0%) and Slovakia (38.0%) are the highest smoking prevalent, whereas Portugal (19.7%), United Kingdom (22.0%) and Italy (22.7%) are the lowest smoking prevalent countries based on reports of their national surveys (20). In USA, prevalence among health professionals except nurses was found to be less than 6.0%, based on 2010 report of national surveys (21). Jiang et al. (22) reported smoking prevalence among Chinese physicians as 23.0%. We found that the prevalence of current smokers among FP in Turkey was 34.1%. It was consistent with the general population from reports of national surveys. It was unwanted result for Turkish FP like outlander physicians.

Primary care physicians are gate keeper physicians and their counseling with patients about smoking cessation is very important for public health. Therefore, asking smoking habits and cessation practice by FP is necessary. Jacot Sadowski et al. (23) reported that 84.0% of Swiss primary care physicians prescribed nicotine replacement therapy (NRT),

65.0% did bupropion and 70.0% provided counseling. In USA, 75.0% of primary care physicians provided counseling, 64.0% prescribed NRT, 67.0% administered bupropion, 10.0% referred cessation experts and 26.0% referred to cessation program “often or always” (24). We observed that Turkish family physicians were less experienced and practiced in smoking cessation. Only 7.1 and 6.6% of FP advised NRT and bupropion, respectively. 14.1% of FP referred the smokers who were decided to quit smoking to cessation program. Between ES and NS Turkish family physicians, no significant difference for smoking cessation practice. Anyhow, the number of physicians who never or rarely counsel with patients in this issue was observed as very high (ES: 89.8%, NS:91.0 %, and all: 90.3%). In contrast, Barengo et al. (25) found no significant difference in anti-smoking advice between non-smoker and smoker GP.

Physicians’ knowledge level about smoking gives some clues from primary care physicians. What do they think? How much are they ready for anti-smoking activities? We expected that knowledge level of FP would be high. When it was evaluated, all have stated high agreement. We also investigated it between ES and NS. Hodgetts et al. reported that no significant difference for knowledge level about smoking except item of “Passive smoking increases risk of lung diseases in non-smokers between ES and NS (100.0% vs. 98.1%) (26). In contrast, we found also significant difference in the same item, but the percentage of agreement in NS was higher than ESs (98.5% vs. 95.5%). Underner et al. (27) reported that ever smoker were found to give anti-smoking advice to their patients lesser than never smokers.

In the study, significant differences in agreement with smoking ban and anti-smoking activities were observed between NS and ES. ES family physicians less agreed with items of anti-smoking activities. Particularly, the item of “Taxes and fees on tobacco product must be raised” was at least stated as agreement by ES, compared to NSs (53.1% vs. 83.1%). Behbehani et al. studied on physicians’ knowledge and attitudes toward tobacco control in Kuwait and Bahrain, and they reported a significant difference in their attitudes towards tobacco control policies between never and current smokers (28). Yan

et al. (29) studied on smoking knowledge, attitude and practice by health care providers, and reported that significant difference between attitudes of never smokers and ever smokers towards smoking and tobacco control (18.2±1.8 vs. 16.1±2.7). Czajkowska-Malinowska et al. (30) reported a significant difference in supporting anti-smoking activities between non-smoker and smoker physicians (94.8% vs. 66.1%).

Another section of the study survey was designed to explore the attitudes and opinions of the FP on their roles in anti-smoking activities. Almost all of Turkish FP agreed that FP should participate in anti-smoking practice. We observed remarkable differences between ES and NS physicians with regard to agreement with the statement of quitting smoking, role model, asking smoking habits, and training on smoking cessation practice. Additionally, statistically differences between ES and NS with regard to the statement with “FP who smoke are less likely to advise people to stop smoking”. However, no remarkable significance between ES and NSs with regard to agreement “FP should advise patients to definitely not smoke beside their children” was observed, but all agreed with a high percentage (96.9% vs. 98.5%). Consistent with our result, Gokirmak et al. (31) reported that there was a significant difference in the statement with “setting a good example by not smoking” between ES and NS (77.7% vs. 98.6%).

There are some limitations in the study. First of all, the sample size of the study was large, but it represented only 6% of family physicians in Turkey (among 20.500 family physicians). Secondly, one of the criteria for participation in the study was based on willingness. As such, current smokers among family physicians might have held back to complete the study surveys or participate in the study. Lastly, number of items on the study survey was large and long, so it might has influenced family physicians to complete the all items of the survey.

Conclusion

We observed that knowledge, attitudes of our Turkish family physicians were similar with reports of other countries, but smoking cessation practice provided our family physicians in primary care was

comparatively lower than in other countries. Family physicians can play an important role in smoking cessation practice among the population in such our country with a high burden of smoking related illness. The present study provides comprehensive data on family physicians' attitudes toward smoking as well as skills and knowledge among a large sample of Turkish FP. We concluded that political interventions in tobacco control was accomplished since last years in Turkey, but family physicians, particularly ever smokers compared to never smokers, seemed to be incompetent for smoking cessation practice. Based on the lights of our results, we highlight that smoking

cessation programs should be introduced among Turkish physicians to reduce the number of current smoking physicians and prevent the initiation of smoking among potential physicians. A continuing education program should be instituted to motivate physicians about their role in society and smoking cessation practice.

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References

1. Pelkonen M. Smoking: relationship to chronic bronchitis, chronic obstructive pulmonary disease and mortality. *Curr Opin Pulm Med* 2008;14(2):105-9.
2. Hanlin ER, Hendricks B, Jenkins K, Olson K, Murdock DK. Cardiovascular risk profile: comparison between white and Southeast Asian youth in Wausau SCHOOL Project. *WMJ* 2009;108(4):189-93.
3. Zwar NA, Richmond RL. Role of the general practitioner in smoking cessation. *Drug Alcohol Rev* 2006;25(1):21-6.
4. Pipe A, Sorensen M, Reid R. Physician smoking status, attitudes toward smoking, and cessation advice to patients: an international survey. *Patient Educ Couns* 2009;74(1):118-23.
5. Bener A, Gomes J, Anderson JA, Abdullah S. Smoking among health professionals. *Med Educ* 1994;28(2):151-7.
6. De Col P, Baron C, Guillaumin C, Bouquet E, Fanello S. Influence of smoking among family physicians on their practice of giving minimal smoking cessation advice in 2008. A survey of 332 general practitioners in Maine-et-Loire. *Rev Mal Respir* 2010;27(5):431-40.
7. Victor JC, Brewster JM, Ferrence R, Ashley MJ, Cohen JE, Selby P. Tobacco-related medical education and physician interventions with parents who smoke: Survey of Canadian family physicians and pediatricians. *Can Fam Physician* 2010;56(2):157-63.
8. Cokkinides V, Bandi P, McMahon C, Jemal A, Glynn T, Ward E. Tobacco control in the United States-recent progress and opportunities. *CA Cancer J Clin* 2009;59(6):352-65.
9. Vogt F, Hall S, Marteau TM. General practitioners' and family physicians' negative beliefs and attitudes towards discussing smoking cessation with patients: a systematic review. *Addiction* 2005;100(10):1423-31.
10. Zwar N, Richmond R, Borland R, Stillman S, Cunningham M, Litt J. Smoking cessation guidelines for Australian general practice. *Aust Fam Physician* 2005;34(6):461-6.
11. Grandes G, Cortada JM, Arrazola A. An evidence-based programme for smoking cessation: effectiveness in routine general practice. *Br J Gen Pract* 2000;50(459):803-7.
12. Edirne T, Bloom P, Ersoy F. Update on family medicine in Turkey. *Fam Med* 2004;36(5):311.
13. Günes ED, Yaman H. Transition to family practice in Turkey. *J Contin Educ Health Prof* 2008;28(2):106-12.
14. Karlikaya C. Turkey: first tobacco litigation. *Tob Control* 2006;15(2):78.
15. Baltaci D, Bahcebasi T, Aydin LY, Ozturk S, Set T, Eroz R, et al. Evaluation of

- smoking habits among Turkish family physicians. *Toxicol Ind Health* 204;30(1):3-11.
16. WHO report on the global tobacco epidemic 2013: Warning about the dangers of tobacco? Tobacco control country profile of Turkey. Geneva: World Health Organization; 2013. 8 p.
17. Warren CW. Tobacco Use and Cessation Counseling: Global Health Professionals Survey Pilot Study, 10 countries, 2005. *Tob Control* 2006;15(suppl 2):ii31-ii34.
18. Unluoglu I, Mazicioglu M. The establishment of primary health care and transition period in Turkey. *Srp Arh Celok Lek* 2006;134(7-8):359-62.
19. Abyad A, Al-Baho AK, Unluoglu I, Tarawneh M, Al Hilfy TK. Development of family medicine in the middle East. *Fam Med* 2007;9(10):736-41.
20. Bogdanovica I, Godfrey F, McNeill A, Britton J. Smoking prevalence in the European Union: a comparison of national and transnational prevalence survey methods and results. *Tob Control* 2011;20(1):e4.
21. Tong EK, Strouse R, Hall J, Kovac M, Schroeder SA. National survey of U.S. health professionals' smoking prevalence, cessation practices, and beliefs. *Nicotine Tob Res* 2010;12:724-733.
22. Jiang Y, Ong MK, Tong EK, Yang Y, Nan Y, Gan Q, et al. Chinese physicians and their smoking knowledge, attitudes, and practices. *Am J Prev Med* 2007;33(1):15-22.
23. Jacot Sadowski I, Ruffieux C, Cornuz J. Self-reported smoking cessation activities among Swiss primary care physicians. *BMC Fam Pract* 2009;10:22.
24. Schnoll RA, Shields AE. Physician barriers to incorporating pharmacogenetic treatment strategies for nicotine dependence into clinical practice. *Clin Pharmacol Ther* 2011;89(3):345-7.
25. Barengo NC, Sandström HP, Jormanainen VJ, Myllykangas MT. Attitudes and behaviours in smoking cessation among general practitioners in Finland 2001. *Soz Präventivmed* 2005;50(6):355-60.
26. Hodgetts G, Broers T, Godwin M. Smoking behaviour, knowledge and attitudes among Family Medicine physicians and nurses in Bosnia and Herzegovina. *BMC Fam Pract* 2004;5:1.
27. Underner M, Ingrand P, Allouch A, Laforgue AV, Migeot V, Defossez G, et al. Influence of smoking among family physicians on their practice of giving minimal smoking cessation advice. *Rev Mal Respir* 2006;23(5):426-9.
28. Behbehani NN, Hamadeh RR, Macklai NS. Knowledge of and attitudes towards tobacco control among smoking and non-smoking physicians in 2 Gulf Arab states. *Saudi Med J* 2004;25(5):585-91.
29. Yan J, Xiao S, Ouyang D, Jiang D, He C, Yi S. Smoking behavior, knowledge, attitudes and practice among health care providers in Changsha city, China. *Nicotine Tob Res* 2008;10(4):737-44.
30. Czajkowska-Malinowska M, Ciesielska A, Kruza K, Jesionka P. The prevalence of tobacco smoking and attitudes of Polish pulmonologists towards smoking. *Pneumonol Alergol Pol* 2008;76(3):148-54.
31. Gokirmak M, Ozturk O, Bircan A, Akkaya A. The attitude toward tobacco dependence and barriers to discussing smoking cessation: a survey among Turkish general practitioners. *Int J Public Health* 2010;55(3):177-83.

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