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ORIGINAL ARTICLE

The attitude toward tobacco dependence and barriers to discussing smoking cessation: a survey among Turkish general practitioners

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Abstract
Objectives To evaluate the general attitude of a sample of Turkish general practitioners (GPs) toward tobacco dependence and to assess their knowledge and behavior regarding smoking cessation (SC).
Methods A self-administered questionnaire modified from WHO, Global Health Professional Survey was distributed to GPs, working in our district, Isparta.
Results As much as 41% of GPs were current smokers. Ever smokers were generally less likely to agree with statements that would change their freedom to smoke in certain places. While 46% of GPs frequently inquired about tobacco use in their patients, 13.5% did not advise any of their patients to quit smoking during the month preceding the questionnaire. The most common barriers reported by GPs to discussing SC with their patients were as follows: considering the discussion not to be effective (57.8%), having low confidence in knowledge (48.1%), having unpleasant personal experience or considering it a thankless task (46.1%).
Conclusions It appears essential to reduce the number of GPs who smoke and to improve GP training on SC procedures for integrating SC treatment into primary care in Turkey.

Keywords Smoking cessation · General practitioner · Primary care · Training · Attitudes · Beliefs

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Introduction

Cigarette smoking is the most important preventable cause of morbidity and mortality all over the world. World Health Organization (WHO) estimates that 5 million people die yearly from tobacco-related diseases and, if the current trends continue, the toll will rise to more than 8 million by the year 2030 (WHO Report on the Global Tobacco Epidemic 2008). The prevalence of smoking is very high in Turkey and is also a common problem in other developing countries. According to a nationwide study conducted in 1988, 62.8% of men and 24.3% of women aged 15 years and more are smokers (Bilir et al. 1997). In the WHO Statistical Information System, the prevalence of current tobacco use among adults living in Turkey was shown as 35.5% in 2005 (WHO Statistical Information System 2005). Despite the high prevalence of smoking, there were few anti-smoking activities in Turkey until 1996 when the law on the prevention of harm induced by tobacco products had been adopted. During the past 10 years, increasing interest has been shown to smoking cessation (SC), both in terms of education and counseling. Self-help materials such as brochures have been distributed to patients in health-care establishments. Several cigarette cessation outpatient clinics have been founded revealing considerable success rates (Demir et al. 2004; Can et al. 2004; Akkaya et al. 2006). Although every year, nearly 6,000 smokers are admitted to these clinics all over the country, it is known that the most frequent opportunity for SC intervention lies within the primary care. Primary care physicians can contribute to reducing the prevalence of smoking in the general population by brief SC interventions. The study by Russell et al. (1979) was the first to demonstrate that the advice of general practitioners (GP) asking patients to stop smoking could be effective. Since

then, the effect of brief advice has been studied extensively and is the subject of a number of meta-analyses. The Cochrane Review on the effect of physician advice on SC examined evidence from 41 trials involving over 31,000 smokers (Stead et al. 2008). The most common setting for advice was primary care. The outcomes used were abstinence from smoking after at least 6 months' follow-up using the most rigorous definition of abstinence in each trial and biochemically validated rates where available. Pooled data from 17 trials of brief advice versus no advice (or usual care) showed a significant increase in the odds ratio of quitting [odds ratio (OR) 1.66, CI 1.42–1.94], equating to an absolute difference in quit rates of 1–3% (Stead et al. 2008). Although the key role of primary care in SC has been definitely demonstrated, there is no study in literature regarding SC activities in primary care in Turkey. The current study was designed to assess the general attitude, knowledge and behavior of a sample of Turkish GPs regarding SC methods. We addressed five key questions in this study:

1. What percentage of GPs in our district are smokers?
2. What do GPs think about the roles of health professionals in SC and what is their knowledge level regarding adverse health effects of smoking?
3. What percentage of GPs had received formal training?
4. How often do they give advice to their patients to quit smoking? What are the factors affecting the frequency of SC advice given by GPs?
5. What are the perceived barriers of GPs toward discussing SC with their patients?

Methods

A modified form of the questionnaire, originally developed by WHO, "Global Health Professional Survey" was distributed to GPs working in our district, Isparta (Global Health Professionals Survey 2005). It was a self-administered questionnaire consisting of 45 questions investigating the demographic features and personal smoking behaviors of GPs, as well as measuring their knowledge about and attitudes toward tobacco dependence. The questionnaire also included a section evaluating the training they may have received in SC counseling and their self-confidence in counselling patients to stop smoking.

The SC activities during the month preceding the questionnaire were evaluated by two additional questions: (1) Do you ask your patients about their smoking status? (frequently/sometimes/never) (2) How many patients on average did you advise to quit smoking during the last month? (None/1–10 patients/11–20 patients/21–30 patients/>30 patients). According to the response given to the latter question, GPs were divided into two groups with low ($\leq$10 patients) and high activity (>10 patients) in SC efforts. To assess the effect of frequency of patient visits on SC advice, a question about the average number of visits practised during a day was also added.

The negative beliefs and attitudes of GPs toward discussing SC with their patients were assessed by an additional question, which included the categories determined in a recent systematic review (Vogt et al. 2005).

Statistical analysis

All data analysis was done using SPSS for Windows (version 15.0, Chicago, IL, USA). For statistical analysis of some parameters, the respondents were divided into "ever" and "never" smokers, based on their smoking history. Mean and standard deviation for continuous variables and percentages for categorical variables were computed. Correlation analyses were performed using Spearman rank correlation. Differences between groups were analyzed using Chi-square tests and relative risks. To evaluate whether the efforts of GPs in SC is related with factors such as their gender, smoking status or previous training, a linear regression analysis was performed. A p value of less than 0.05 was considered to be significant for all tests.

Results

A total of 185 GPs completed the questionnaires, giving a response rate of 92.9%. The demographic features of the GPs are shown in Table 1. Seventy-seven GPs (41.7%) were current smokers (58 GPs declared that they smoked every day, while 19 smoked occasionally). Of the current smokers, 83% were males and 17% females. The difference between sexes according to smoking status was statistically significant ($p < 0.0001$). The current and ex-smokers reported that they had started smoking on a regular basis at a mean age of 21 ± 4 (7–36) years. The mean number of cigarettes smoked per day by the current smokers was 16 ± 9 (1–40). Of the 77 physicians who

Table 1 Demographic features of the Turkish general practitioners

Characteristics	General practitioners
Age, years (mean ± SD)	34.9 ± 5.7 (24–59)
Sex, M/F	128/57
Smoking status	
Current, *n* (%)	77 (41.7)
Ex-smoker, *n* (%)	35 (18.9)
Never, *n* (%)	73 (39.5)
Work duration, years (mean ± SD)	9.8 ± 5.5 (3 months–32 years)

currently smoked, 25 (32%) were ready to quit instantly, 24 (31%) were thinking about quitting within the next 6 months, and 22 (28%) did not feel ready to quit within the next 6 months.

Table 2 presents the comparison of ever and never smoker physicians in terms of agreement with knowledge and attitude statements regarding cigarette smoking. Ever smokers were generally less likely to agree with statements that would change their freedom to smoke in certain places, e.g., in enclosed public places, hospitals and health-care centers. Additionally, there was a remarkable difference between ever (77.7%) and never (98.6%) smokers with regard to agreement with the statement "Health professionals should set a good example by not smoking".

With respect to the adverse effects of passive smoking, 95.6% of health professionals agreed that they should

Table 2 Percentage agreement with knowledge and attitude statements of ever and never smoker general practitioners

Statement	ES	NS	*p*
Smoking is harmful to your health.	99.1	97.2	ns
Health professionals serve as role models for their patients and the public.	84.8	90.1	ns
Health professionals should set a good example by not smoking.	77.7	98.6	<0.0001
Patient's chances of quitting smoking are increased if a health professional advises him or her to quit.	69.6	74.6	ns
Health professionals should routinely ask about their patients' smoking habits.	86.5	93.0	ns
Health professionals should routinely advise their smoking patients to quit smoking.	88.4	94.4	ns
Health professionals who smoke are less likely to advise people to stop smoking.	49.1	62.9	ns
Health professionals should get specific training on cessation techniques.	78.6	85.7	ns
Health professionals should speak to community groups about smoking.	71.4	81.4	ns
Smoking in enclosed public areas should be prohibited.	84.8	97.1	<0.05
Health warnings on cigarette packages should be in big print.	76.8	91.4	<0.05
Tobacco sales to children and adolescents should be banned.	93.8	98.6	ns
Sport sponsorships by tobacco industry should be banned.	86.6	92.9	ns
There should be a complete ban on the advertising of tobacco products.	90.2	92.9	ns
Hospitals and health-care centers should be "smoke-free".	89.3	98.6	<0.05
The price of tobacco products should be increased sharply.	58.0	72.9	ns
Neonatal death is associated with passive smoking.	64.3	62.9	ns
Maternal smoking during pregnancy increases the risk of "sudden infant death syndrome".	82.1	91.4	ns
Passive smoking increases the risk of lung disease in non-smoking adults.	92.9	95.7	ns
Passive smoking increases the risk of heart disease in non-smoking adults.	85.7	90.0	ns
Paternal smoking increases the risk of lower respiratory tract illnesses, such as pneumonia, in exposed children.	92.0	94.3	ns
Health professionals should routinely advise patients who smoke to avoid smoking when children are around.	95.5	97.1	ns

ES ever smoker, *NS* never smoker, *ns* not significant

advise smoking patients to avoid smoking around children. However, only 63.8% of GPs were aware of the association of neonatal death with passive smoking.

The SC activities during the month preceding the questionnaire were assessed by two questions. The first question assessing the frequency of asking patients about their smoking status were replied by GPs as "frequently" and "sometimes" with a ratio of 46.5% ($n = 86$) and 48.6% ($n = 90$), respectively. Four physicians (2.2%) declared that they did not ask their patients if they smoked cigarettes.

The second question was about the average number of patients whom they advised to quit smoking during the month preceding the filling up of the questionnaire. While 25 GPs (13.5%) did not advise patients to quit smoking during that period, 55.7% advised 1–10 patients, 15.1% advised 11–30 patients and only 13.5% advised more than 30 patients to quit smoking.

The univariate analysis showed no difference based on gender among GPs advising SC. The relation between smoking status of the GPs and their anti-smoking advice was also investigated. When ever and never smoker GPs were compared, a statistically significant difference was found in giving anti-smoking advice ($p = 0.034$). While 18.2% of ever smokers did not give advice on quitting to any of their patients, the same ratio for never smokers was 5.2% ($p = 0.012$).

The GPs were also asked if they had ever received formal training on SC methods and whether they felt prepared to counsel patients on how to stop smoking. Only 17.3% of GPs had a formal training in SC approaches during medical school, while 21.6% of the group attended special conferences, symposia or workshops on this subject. Accordingly, only 14.6% of GPs felt "very prepared" to counsel patients, while 56.2% felt "somewhat prepared". As much as 48 (25.9%) GPs stated that they were "not at all prepared" for SC counseling. Previous training in SC was associated with a higher rate of advice to quit ($p = 0.006$).

When the association between the aforementioned factors and high activity in advising to quit was analyzed by multivariate regression analysis, only previous training was found to be significant (95% CI; 0.085–0.368, $p = 0.002$). Finally, a positive correlation between the frequency of patient visits and the advice to quit smoking was detected ($r = 0.185$, $p = 0.012$).

An additional question existed in the questionnaire identifying the negative beliefs/attitudes of GPs toward discussing SC with their patients. Thirty-four (18.4%) physicians did not answer the question. The barriers reported by the remaining physicians are shown in Table 3. The most common negative beliefs were "considering the discussion not to be effective", "having low confidence in knowledge" and "having unpleasant personal experience/considering it a thankless task".

Discussion

The current study revealed that 41.7% of Turkish GPs, which is nearly the same ratio reported for the overall Turkish population, were current smokers. Only 17.3% of them had received formal training in SC approaches during their medical education. While 13.5% declared that they did not advise any of their patients to quit smoking during the month preceding the questionnaire, only 13.5% advised more than 30 patients to quit smoking during that period. To our knowledge, this is the first study investigating SC practices among Turkish GPs and the results show that there is much to be done for integrating SC treatment with primary care in our country.

Recently, several studies on the smoking status of Turkish physicians as well as other health-care workers had been conducted and reported. In a very recent study by Talay et al. (2007) the ratio of smoking among 629 health-care workers in the counties of Istanbul was found to be 49.3%. The smoking prevalence among Turkish doctors was reported to range between 32.6 and 66.2% in a meta-

Table 3 The answers given by Turkish general practitioners to the question regarding the negative beliefs/attitudes about discussing smoking cessation

Categories of belief/attitudes	Yes	Partially	No	Not marked
Too time consuming, *n* (%)	13 (7.0)	61 (33.0)	49 (26.5)	62 (33.5)
Not effective, *n* (%)	27 (14.6)	80 (43.2)	22 (11.9)	56 (30.3)
No confidence in ability, *n* (%)	14 (7.6)	46 (24.9)	61 (33.0)	64 (34.5)
Unpleasant personal experience/considering it a thankless task, *n* (%)	26 (14.1)	59 (31.9)	40 (21.6)	60 (32.4)
Low confidence in knowledge, *n* (%)	30 (16.2)	59 (31.9)	45 (24.3)	51 (27.6)
Intrusion on privacy, *n* (%)	8 (4.3)	35 (18.9)	81 (43.8)	61 (33.0)
Not professional duty, *n* (%)	5 (2.7)	25 (13.5)	87 (47.0)	68 (36.8)

analysis of 22 studies (Tezcan and Yardim 2003). When the smoking rate of Turkish GPs were compared to that of their European colleagues, a higher rate was found. The smoking rate of Italian, German, French GPs and Swiss primary care physicians were reported to be 28.3, 32.1, 9.6 and 12%, respectively (Pizzo et al. 2003; Twardella and Brenner 2005; Josseran et al. 2005; Sebo et al. 2007). The mean age for starting of smoking on a regular basis was 21 years, which means that most GPs started smoking during their medical education. A study was conducted at seven medical schools in Turkey, which also supports this result showing that the prevalence of daily smoking increases from 11.8% among first-year students to 30.2% in the final year (Kocabas et al. 1994). In a more recent study, information about substance use was obtained from 304 first-year, and 143 sixth-year medical students from three medical schools located in different regions of Turkey. The ratios of regular smokers were at alarming levels and reported as 26.4 and 44.1% among junior and senior medical students, respectively (Akvardar et al. 2003). These results indicate that the targeted training on smoking prevention is urgent and mandatory for Turkish medical students.

The second section of the questionnaire was designed to learn about the opinions of the GPs on the roles of health professionals in SC, to assess their knowledge level regarding adverse health effects of smoking and to explore their ideas about policy issues related to cigarette smoking. In this section, there was a remarkable difference between ever (77.7%) and never (98.6%) smokers with regard to agreement with the statement "health professionals should set a good example by not smoking". Additionally, there was a statistically significant difference between ever and never smokers with regard to the statements related to banning smoking in certain places, such as enclosed public places, hospitals and health-care centers. In the year 2006 in which our study was conducted, smoking in those places was not prohibited, but as of May 2008, it has been banned in Turkey by law.

The SC activities of Turkish GPs were also assessed in the current study. Twenty-five GPs (13.5%) reported that they did not advise any of their patients to quit smoking during the month preceding the questionnaire, while four of them reported that they did not even ask their patients if they smoked cigarettes. The relation between smoking status of the GPs and their anti-smoking advice was also investigated and in accordance with the results of several other studies, ever smokers were found to give anti-smoking advice to their patients lesser than never smokers (Twardella and Brenner 2005; Hallet 1983; Gunes et al. 2005; Brotons et al. 2005; Underner et al. 2006).

Another question addressed in the current study was the percentage of GPs who had received formal training on SC approaches. It was found that only 17.3% of GPs had a formal training during medical school, while 21.6% of the group attended special conferences, symposia or workshops on this subject. These findings were similar to those obtained by the Global Health Professionals Survey Pilot study, which collected information from health profession students in ten countries about their tobacco use and training as cessation counselors. The study indicated that only 5–37% of the third-year students had actually received formal training on how to conduct SC counseling (Centers for Disease Control and Prevention 2005). Although the number of GPs who received training on SC was low in the current study, previous training was associated with a higher rate of advice to quit smoking. These results corroborate previous reports that training is associated with improved counseling practices (Ockene et al. 1997). In a cross-sectional survey among German GPs, a clear dose–response relationship was shown between the time spent on training and the activity in SC promotion (Twardella and Brenner 2005).

Several recently conducted studies have investigated methods to promote SC treatment in primary care (Ulbricht et al. 2006; Mcewen et al. 2006; Unrod et al. 2007; Salize et al. 2009). The important role of GPs in SC, due to the opportunity afforded through frequent contacts with patients, has been emphasized in various recent reviews (Jackson et al. 2001; Zwar and Richmond 2006). GPs can motivate their patients to quit smoking using clinical practice guidelines for SC, known as the 5As model: ask (screen for smoking), advise (provide a quit message), assess (evaluate readiness to quit), assist (provide treatment) and arrange (track cessation progress) (Puschel et al. 2008). However, although general practice has great potential as a source of SC advice, currently it is not being used as effectively as it should be. Some barriers for GPs to engage in greater efforts in SC remain, such as perception of the lack of effect, lack of GP time and skills, etc. Another aim of the current study was to determine the perceived barriers of Turkish GPs toward discussing SC with their patients. "Considering the discussion not to be effective", "having low confidence in knowledge" and "having unpleasant personal experience/considering it a thankless task" were found to be the most common barriers. In another study conducted among university hospital physicians in Turkey, it was also shown that most physicians were not self-confident about their skills and knowledge to counsel their patients on tobacco use (Gunes et al. 2005).

The perception of lack of time as a barrier was reported by 7–33% of GPs as definite and probable factors for inadequate SC interventions. Short interview times due to overcrowding is one of the major problems present in delivering primary care in Turkey (Guldal et al. 2005). To

evaluate the negative effect of time constraints, a correlation between frequency of patient visits and the frequency of the advice to quit smoking was evaluated. Although a positive correlation was detected, this fact may be related only to the greater number of patients interviewed and short interview times may still have a negative effect on SC efforts. The perception that "SC is not their responsibility" was rated as a definite barrier by only a minority of GPs (2.7%).

General practice can play an important role in SC in a country like Turkey with a high burden of disease from smoking-related illnesses. The current study provides baseline data on smoking behavior, as well as on the knowledge and attitudes about SC among a sample of Turkish GPs. Although these findings cannot be generalized to all Turkish GPs, our results show that there are difficulties in integrating SC treatment into primary care in Turkey. Future studies involving larger number of GPs from different regions of the country are needed. Nevertheless, it appears essential to reduce the number of GPs who smoke and to improve their training on SC methods, both in terms of having good role models for the public and making them feel "prepared" and active in SC counseling. Since medical students have an important role as tomorrow's doctors, both as an SC provider and as a role model for society, targeted and continuous training on smoking prevention is mandatory for Turkish medical students as well.

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