

Attitudes of the High School Teachers and Students Towards Smoking: Two Sides of the Story

Smoking habit in teachers and students

Arzu Yorgancıoğlu, MD¹; Ayşen Esen Danacı, MD²; Pınar Çelik, MD¹; Fatma Topçu, MD¹; Firdevs Seyfe Şen, MD²

¹Department of Pulmonology, Faculty of Medicine, Celal Bayar University, Manisa, Turkey

²Department of Psychiatry, Faculty of Medicine, Celal Bayar University, Manisa, Turkey

Abstract

Objectives: To assess and compare the attitudes of high school students and teachers towards smoking, their knowledge about smoking-related diseases and their opinions on current legal restrictions.

Methods: A questionnaire was administered to 1052 high school students and 172 teachers. The mean age of the student group (59.7% males) was 16.1 ±1.3 years and that of the teachers group (50.6% males) was 38.3± 7.8 years.

Results: Smoking prevalence was significantly higher among teachers (40.7%) than students (13.1%) (p=0.000) and higher in males than females in both groups. Mean age of starting

smoking was 13.2± 2.7 years for students and 18.9 ±5.2 years for teachers. As provoking factors, the effect of imitation of smokers was more significant in the teachers group, while the effects of environment were more significant among the students. Teachers had a greater awareness of the hazards of smoking than the students and they were also more sensitive to the legal restrictions.

Conclusion: It was concluded that educators should be the first group to be addressed in education programs for prevention of smoking.

Turkish Respiratory Journal, 2002;3 (2):43-47

Keywords: Smoking, student smokers, teacher smokers

Introduction

Smoking is a major health hazard worldwide. In Turkey, it is reported that 43.5% of adults are smokers and that most smokers acquire the habit during adolescence (1). The smoking problem of adolescents is a very important issue. Likewise, the role of the teachers in dealing with this problem is of great importance.

This study was designed to assess and compare a) the attitudes of high school students and teachers towards smoking, b) their knowledge on smoking related diseases, and c) their opinions on legal issues pertaining to smoking.

Materials and Methods

From the 13 high schools in Manisa province in Turkey, 8 accepted to participate in the study. Students were selected by systematic randomized sampling, according to the numbers in the classes. All teachers who were willing to participate were

Correspondence: Dr. Arzu Yorgancıoğlu,
Mithatpaşa Cad. No:978/6
Göztepe 35290 İzmir, Türkiye
e-mail: arzuyo@hotmail.com

	Smokers (%)	Occasional Smokers (%)	Non-Smokers (%)
Total group (n=1052)	13.1 (n=138)	15.9 (n=168)	70.9 (n=746)
GENDER (p=0.000)*			
Male (n=628) 59.7	17.2 (n=108)	16.1 (n=101)	66.7 (n=419)
Female (n=424) 40.3	7.1 (n=30)	15.8 (n=67)	77.1 (n=327)
CLASS (p=0.000)*			
9 th grade (n=339)	7.6 (n=26)	5.3 (n=18)	87.0 (n=295)
10 th grade (n=394)	12.6 (n=50)	17.8 (n=70)	69.5 (n=274)
11 th grade (n=319)	19.4 (n=62)	25.0 (n=80)	55.5 (n=177)
PARENTAL STATUS (p=0.001)*			
Living with family (n=926)	11.9 (n=111)	15.2 (n=141)	72.8 (n=674)
Away from family (n=126)	21.4 (n=27)	21.4 (n=27)	57.1 (n=72)
SMOKING HABITS OF THE FAMILY			
Mother smoking (p=1.0)	16.5 (n=44)	17.3 (n=46)	66.2 (n=176)
Father smoking (p=0.93)	12.5 (n=80)	16.2 (n=101)	71.0 (n=442)
Sibling smoking (p=0.000)*	26.9 (n=53)	22.8 (n=45)	50.3 (n=99)

*Statistically significant

	Smokers (%)	Occasional smokers	Non-smokers
Total group (172)	40.7 (n=70)	17.4 (n=30)	41.9 (n=72)
GENDER (p=0.016)*			
Male (n=87) 50.6	48.3 (n=43)	10.1 (n=9)	41.6 (n=67)
Female (n=79) 45.9	32.5 (n=27)	25.3 (n=21)	42.2 (n=35)
MARITAL STATUS (p=0.3)			
Married	38.8 (n=59)	17.1 (n=26)	44.1 (n=67)
Unmarried	55.0 (n=11)	20.0 (n=4)	25.0 (n=5)
INSTITUTION (p=0.6)			
State school	42.3 (n=63)	16.6 (n=25)	40.9 (n=61)
Private school	30.4 (n=7)	21.7 (n=5)	47.8 (n=11)

*Statistically significant.

	Teachers (%)	Students (%)
Curiosity	37 (37)	31.0 (n=95)
Imitation	38 (38)	26.5 (n=81)
Environment	9 (9)	24.5 (n=75)
Having a particular problem	16 (16)	18.0 (n=55)

P= 0.96

smokers (at least 1 per day), non-smokers and occasional smokers (less than 1 per day).

Data from the questionnaire were evaluated statistically with SPSS 8.0 by using chi-square, t test and correlation analyses.

Results

In the students group, 59.7% (n=628) were males and 40.3% (n=424) were females. The mean age of the group was 16.1±1.3 years. Significant differences were found between sexes and among students of different grades (Table 1).

In the teachers group, 50.6% (n=87) were males and 45.9% (n=79) were females. The mean age of the teachers was 38.3±7.8 years (Table 2).

As seen in Tables 1 and 2, smoking prevalence was significantly higher among the teachers (40.7%, n=70) as compared to the students (13.1%, n=138) (p=0.000). Smoking prevalence among males was higher in both groups [17.2% in males, 7.1% in female students (p=0.00) and 48.3% in male, 32.5% in female teachers (p= 0.016)]. Prevalence among the students showed an increase in the higher grades. The prevalence was also higher among the students who

	Students (%)	Teachers (%)	P value
Smoking is dangerous for health	95.6 (n=998)	100 (n=172)	0.001
Aware of smoking-related diseases			
Bladder Cancer	43.4 (n=401)	56.7 (n=93)	0.007
Lung Cancer	95.8 (n=980)	99.4 (n=170)	0.001
Mouth Cancer	74.8 (n=727)	84.7 (n=144)	0.003
Larynx Cancer	87.1 (n=873)	97.7 (n=167)	0.0000
Cardiovascular Disease	86.9 (n=872)	94.7 (n=162)	0.014
Chronic Bronchitis	67.8 (n=659)	56.7 (n=93)	0.018
Infant Death Syndrome	76.0 (n=746)	100 (n=172)	0.000
Cerebrovascular Disease	74.5 (n=738)	80.0 (n=136)	0.08
Aware of the effects of passive smoking	82.4 (n=829)	92.0 (n=150)	0.008

included in the study. The study was conducted on a total of 1052 high school students and 172 teachers.

Physicians from the Departments of Pulmonology and Psychiatry administered a questionnaire prepared in accordance with the criteria recommended by the World Health Organization (2). The questionnaire included a variety of questions on tobacco use, family status, the hazards of active and passive smoking, smoking-related diseases, their opinions about the law on smoking which was passed in 1996 in Turkey and about the current legal antismoking regulations. Smoking habit was classified into 3 groups, as

Table 5. Knowledge and agreement about the Tobacco Law

Law	Students(%)	Teachers(%)	P Value
Legal precaution I*	66.7(n=690)	92.2(n=154)	0.000
Legal precaution II* (p=0.000)	82.5(n=843)	89.4(n=152)	0.013
Legal precaution III* (p=0.000)	85.9(n=883)	89.4(n=152)	0.02
Legal precaution IV* (p=0.000)	91.8(n=953)	97.1(n=166)	0.007
Legal precaution V* (p=0.000)	69.18(n=708)	52.7(n=89)	0.000
Legal precaution V* (p=0.000)	89.58(n=928)	97.1(n=165)	0.000

*I. There should be a warning label on cigarette packages stating that smoking is dangerous for health.

*II. Tobacco advertisements should be prohibited.

*III. Smoking in public areas should be forbidden.

*IV. The costs of tobacco should be greatly increased

*V. Cigarette should not be sold to children/adolescents under age 18.

lived away from their parents as compared to those living with their family ($p=0.001$). There was no correlation between the habits of parents and students, but smoking habits of siblings were directly correlated with each other ($p=0.000$).

Marital status and the type of the school did not lead to any significant differences in the smoking habits of the teachers. The mean age for beginning smoking was 13.2 ± 2.7 years for the students and 18.9 ± 5.2 years for the teachers ($p=0.0000$).

As factors influencing initiation of smoking, curiosity and having a particular problem were equally distributed in both the students and teachers groups. Imitation of others was given as the most frequent reason for starting smoking in the teachers group while curiosity was the most frequent reason for the students.

Knowledge about the hazards of smoking and smoking-related diseases are shown in Table 4.

Awareness on hazards of smoking for all categories except for cerebrovascular disease was higher in the teachers' group. Knowledge and opinions of the students about the law on restricting smoking consumption which became effective in 1996 in Turkey and about some of the items covered by this law, are shown in Table 5.

The teachers were more sensitive about the legal precautions than the students, but the majority of the students also agreed that these precautions should be put into practice.

Opinions about smoking are shown in Table 6.

Table 6. Opinions about smoking

Opinion	Students	Teachers (%)	P Value (%)
Most of the smokers can quit if they want	82.9(n=859)	89.9(n=152)	0.066*
It is disturbing to be with a smoker	89.3(n=920)	85.3(n=145)	0.020
Adults should be good examples by being non-smokers	93.0(n=958)	86.4(n=146)	0.010
To convince the public for quitting is the responsibility of the physicians	32.9(n=335)	33.9(n=56)	0.043
Most people cannot quit though they are advised to quit	85.7(n=870)	79.3(n=134)	0.023
If there were an efficient method to quit smoking, the professionals in this field would be more willing to advise people to quit	85.2(n=858)	82.4(n=136)	0.20*

*Not significant

Both groups agreed with the opinions suggested in the questionnaire as shown in Table 6. There were slight differences in some of these items between the two groups. The ratio of positive answers was higher in the students group in three of the listed items (that it is disturbing to be a smoker; that most people cannot quit though they are advised to do so; and that adults should be good examples by being non-smokers).

Discussion

Teenage smoking continues to present a significant public health problem. Children begin to smoke in elementary school or in high school and consumption level is the highest during university years (3). A great number of studies have been conducted on smoking habits in adolescents; prevalence was reported to be 24.1% in Italy (4) and over 30% in the USA after the 7th grade (5). Studies in Turkey indicate a prevalence between 18% and 43% among secondary school students (6-8). The prevalence in our group was 13.1% and lower than other studies. It increases with age. Studies on different school groups in many countries including Turkey revealed a prevalence of 5.6% for students in elementary school. The prevalence values were between 17.9% and 43.0% for high school students and between 20.1% and 51.2% at university level (4-6,8,9,10,11,12). The high prevalence among males obtained in this study is similar to the results of many studies (8,9,10,11,12).

The prevalence among teachers (40.7%) in our series was similar to the prevalence of the general population in Turkey, (43.6%) (1). The prevalence rates among teachers in Spain, Japan, Romania, Malaysia, India and in Turkey were reported as 37.2%, 44.7%, 33.0%, 20.0%, 21.4%, and

43% respectively (13-18). The prevalence was higher in males, as also reported in many other studies (19,20).

As factors influencing the initiation of smoking, curiosity and having a particular problem were equally distributed in both the student and teacher groups. Interestingly, imitation was found to be a more significant factor in the teachers' group while environmental factors were found to be more effective in the students' group. The ratio of the smokers was high among the students away from their families. Also, a significant correlation was found among siblings. These findings emphasize the importance of social environment. The habits of the family members are very closely correlated with the attitudes of their children. This high ratio of imitation as a factor in initiating smoking should alert teachers and make them aware of the effect of their behaviour on their students.

The age of onset of smoking has dropped over the past decades. In 1950 most smokers began smoking after age 18 whereas after 1985 the age of onset has gone lower. In our study group, the age of initiation was 13.2 ± 2.7 years for students and 18.9 ± 5.2 years (range from 8 to 44 years) for the teachers. Children who begin to smoke during elementary school are more likely to smoke as adults than individuals who begin at older ages. A previous study showed that individuals who started smoking before age 13 were less likely to stop smoking than those who started after age 13 (18). Therefore, early identification of these high-risk group students is very important.

It can be said that interaction between adolescents is a very important factor influencing the prevalence of cigarette smoking. Adolescents continue smoking though they are aware of the hazards. Youth should be educated as early as possible about these hazards and educational programs should be planned and continued throughout the elementary school period. These programs should also aim to improve the social environment.

Curiosity and imitation appeared to be the two most important factors initiating smoking among the students. Teachers are considered to be one of the most effective professionals in antismoking programs and their attitudes can have a big impact on the students (13). In school centers which apply the non-smoking regulations or include antitobacco issues in their curricula, the percentage of teachers smoking in front of their pupils is significantly lower. For this reason, headmasters must enforce the application of non-smoking regulation in their schools (13). Unfortunately, the results of this study were not encouraging in this aspect, since the advice of a teacher who is a smoker himself would not be very effective in encouraging students to be non-smokers.

Although the teachers were slightly better-informed in this respect, the majority of the students were also aware of the hazards of active and passive smoking and knew about smoking-related diseases. Raudsepp reported that an awareness of smoking being associated with heart and lung disease which was reported to be more widespread among ex-smokers and non-smokers than among current smokers (21)

Teachers were more informed about the law against smoking although 66.7% of the students were also aware of the law. It is expected that teachers act as the disseminators of this valuable knowledge to the students and to the public. In this study, while both the student and the teacher groups agreed that the legal precautions for restriction of smoking should be put into practice, the teachers were more willing.

Pierce reported that strategies promoted by statewide tobacco control programs can potentially be effective and that these efforts should be continued and expanded (22). In spite of their limitations, school-based campaigns are the most effective weapons against smoking (3). In a study by Scheffels (23), it was concluded that public authorities should introduce a set of universal rules for smoking among students and teachers in upper secondary schools since, compared with schools without such a plan, smoking is less frequent among both teachers and students in schools where these rules are applied (4). In another study from Spain, the degree of awareness and compliance of legal and normative regulations regarding promotion, sales and consumption of cigarettes was investigated (24). It was concluded that principals of secondary school were aware of the existing policy and in most cases largely restricted public consumption, but that there were still some important gaps regarding signals, consumption in outdoor public spaces and teachers consumption in their own offices, indicating a need for specific interventions (24). We feel that there are some gaps in the application of legal restrictions also in Turkey. Kumar (17) pointed out that non-smokers were in greater agreement with various anti-smoking measures compared to smokers.

The opinions expressed by the students in this study indicate that a high proportion of the students believe that smoking may be disturbing to others, that most smokers cannot quit although they are advised to do so, and that adults should be good examples by being non-smokers. This last thought is probably the most important of all. These results emphasize the importance of adults as models in the eyes of children and adolescents and the ineffectiveness of advice which is not accompanied by supportive behaviour. In conclusion, this study also shows that education in smoking prevention should be started with the educators, since teacher motivation alone can promote effective implementation of behavior change in public schools (25).

References

1. Sigara alışkanlıkları ve sigara ile mücadele kampanyası kamuoyu araştırması raporu (Report of the public poll of smoking habits and antismoking campaign) PIAR January, 1988.
2. Guidelines for the conduct of tobacco- smoking surveys of the general population WHO/SMO/83,4, Geneva,1983.
3. Barrueco M, Blanco A, Garcia J et al. Teachers' attitudes toward smoking prevention in schools. *Pneumologie* 1994; 48:481-3.
4. Gaeta G, Del Castello E, Coumuo S et al. Personal, familial and enviromental factors influencing the inclination of smoking in adolescents: differences between sexes and between city and small-town dwellers. *Cardiologica* 1998;43:417-26.
5. Everett SA, Husten CG, Warren CW et al. Trends in tobacco use among high school students in the United States, 1991-1995. *J Sch Health* 1998;68:137-40.
6. Önder R, Egemen A. Lise çağı gençliğinin sigara içme durumu. *Türk Hij Den Biyol Derg* 1987;44:121-30.
7. Kocabaş A. Orta dereceli okul öğrencilerinde sigara içme alışkanlığı. *Ankara Tıp Mecmuası* 1988;41:9-22.
8. Tümerdem Y, Ayhan B, Emekli U et al. İstanbul kentinde öğrenim gençliğinde sigara içme olayı etkinliklerinin araştırılması. *Solumun* 1986;2:412-6.
9. Saltık A, Yılmaz T, Yorulmaz F et al. Edirne merkezinde 5100 ortalise öğrencisinde sigara içme davranışı ve Spielberger testi ile ölçülen kaygı düzeyinin incelenmesi. *Ege Tıp dergisi* 1992;31:53-9.
10. Blackford KA, Bailey PH, Coutu-Wakulczk GM. Tobacco use in northeastern Ontario teenagers: Prevalence of use and associated factors. *Can J Public Health* 1994;85:89-92.
11. Kocabaş A. Öğrencilerde ve öğretmenlerde sigara içimiyle ilgili tutum ve inanışlar. *Ankara Tıp Mecmuası* 1988;41:365-80.
12. Metintaş S, Sanboyacı MA, Nuhoglu S et al. Eskişehir ilinde üniversite öğrencilerinde sigara içme alışkanlığına ait özellikler. *Tüberküloz ve Toraks* 1996;44:77-83.
13. Barrueco M, Hernandez-Mezquita MA, Jimenez-Ruiz C, Torrecilla M, Vega MT, Garrido E: Attitudes of teachers about tobacco prevention at school. *Allergol Immunopathol (Madr)* 2000; 28:219-24.
14. Ohida T, Osaki Y, Mochizuki Y, Sekiyama M, Kawaguchi T, Ishii T, Minowa M: Smoking behaviors and attitudes among school teachers in Mie, Japan. *J Epidemiol* 2000; 10: 16-21.
15. Mihaltan F, Ghiculete D, Enache G, Negreanu D, Tabacu E, Petruu JD: Survey of the prevalence of smoking in Rumanian teachers. *Pneumologie* 1994; 48 (7):481-3.
16. Bin Yaacob I, bin Harun MH: Smoking habits and attitudes among secondary school teachers. *Southeast Asian J Trop Med Public Health* 1994; 25:74-9
17. Kumar A, Mohan U, Jain VC: Academicians' attitudes and beliefs towards anti-smoking measures. *Public Health* 1996; 110:241-6
18. Coogan PF, Adams M, Geller AC, Brooks D, Miller DR, Lew RA, Koh HK. Factors associated with smoking among children and adolescents in Connecticut. *Am J Prev Med* 1998; 15: 17-24.
19. Raudsepp J, Rahu M: Smoking in schoolteachers in Estonia 1980. *Scand J Soc Med* 1984;12: 49-53.
20. Arciti C, Doglio B, Gipponi M, Chiola S, Santi L: Teachers and smoking. Methods and results of an awareness and up-dating program in Ligurian schools. *Minerva Med* 1988; 79:569-74.
21. Raudsepp J, Rahu M: Smoking among school teachers in Estonia 1980 *J Epidemiol Community Health* 1979;33:219-22.
22. D Pierce JP, Gilpin EA, Farkas AJ. Can strategies used by statewide tobacco control programs help smokers make progress in quitting? *Cancer Epidemiol Biomarkers Prev* 1998;7:459-64.
23. E Scheffels J, Lund KE. Prevalance of smoking among high school teachers and students in Norway: Tidsskr Nor Leageforen 2000;120(14):1633-6.
24. F Ballestin M, Bosch N, Nebot M. The knowledge and application of regulations on smoking in secondary teaching centers *Aten Primaria* 1999;24(10):589-93.
25. Kealey KA, Peterson AV Jr, Gaul MA et al. Teacher training as a behavior change process: principles and results from a longitudinal study. *J Epidemiol* 2000;10:16-21.