



Behavior and attitudes towards smoking among teachers in Turkey

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Abstract

Aim Investigation of the attitudes of teachers who smoke and those who do not smoke is important in terms of their status for being a role model for their students and for intervention and prevention of smoking in a society. This study investigated the behavior and attitudes about smoking among teachers in a province (Şanlıurfa) in Turkey.

Subjects and methods The data were collected from 546 teachers from public schools. The participants consisted of 291 female (53.3%) and 255 male (46.7%) teachers. These data were collected by convenience sampling. We used the attitude scale towards smoking.

Results This study indicates that half of the participants were smokers and there were more male smokers than female smokers. Smoker teachers had more positive inclination towards smoking than the non-smokers. Male teachers displayed more favorable attitudes towards smoking than female teachers.

Conclusion The attitude of teachers towards smoking varied according to their cigarette smoking status. Their behavior and attitudes about smoking corresponded well with cognitive dissonance theory.

Keywords Attitude towards smoking · Gender · Smoking behavior · Teachers

Introduction

It is well documented that smoking exerts deleterious effects on human health. It has been shown in various studies that smoking either causes or it is related to lung (Doll and Hill 2004), larynx (Jyrkkiö et al. 2012), kidney (Cote et al. 2012), and bladder (Ajili et al. 2013) cancers, heart attacks (D'Alessandro et al. 2012), and several other diseases (Claus et al. 2014; Tuncer 2008). Besides causing serious health problems, it is highly addictive (Gu et al. 2015; Korzeniowska et al. 2015; WHO 2015). Turkey is a country with an average income (OECD 2014; The World Bank 2014) and, according to the Tobacco Atlas, in 2014, Turkey ranked

8th among the top 10 countries in the world regarding cigarette consumption (Eriksen et al. 2015). Turkey signed the World Health Organization (WHO) Framework Convention for Tobacco Control (WHO FCTC 2013), despite producing tobacco. In 1996, and later (e.g., WHO 2008), the Turkish government implemented measures to control tobacco consumption. This measure caused a significant decrease among smokers over 15 years of age in Turkey (WHO 2015; Public Health Institution of Turkey 2012; TÜİK 2009) and these implemented measures reduced acute health problems related to tobacco smoking (WHO 2012). The Global School Personnel Survey (GSPS) (e.g., teachers) and the Global Youth Tobacco Survey (GYTS) of Turkey are the important steps taken in discussing the control of tobacco consumption in schools (GTSS Collaborative Group 2006). However, while the reports related to the GYTS of Turkey gives some information (e.g., Ergüder et al. 2008), there are limited data/reports related to the GSPS. Teachers who spend most of their time with their students are a role model with their knowledge, attitudes, and behaviors; they are expected to alter the behaviors of students related to smoking attitudes (GTSS Collaborative Group 2006; Wen et al. 2009; Chen and Rakip 1975).

In Turkey, 919,393 teachers work in structured education (according to 2015 data). Two-thirds of these teachers (621,015) are in the primary education level and one-third

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(298,378) are in the secondary education level. Among Turkish teachers, 45.7% (420,591) are male and 54.3% (498,802) are female. The difference in the distribution ratios of gender is not significant according to school type (Milli Eğitim Bakanlığı, MEB 2015). In Turkey, a great majority of teachers are appointed by the Ministry of Education (Official Gazette 2015). Teachers' initial salary (when the purchasing power parity is used, average \$25,943/year) is well behind most of the OECD countries (OECD 2015). There are no comprehensive studies addressing the general health problems of Turkish teachers and there are a limited number of studies concerning their smoking prevalence and smoking habits (e.g., Dinç 2016; Mermer et al. 2016; Uzuner et al. 2015; İnce et al. 2010). The students are exposed to their teachers for a considerable time during their education; therefore, the attitudes of teachers towards smoking may affect students' perception towards smoking and may play a critical role in controlling tobacco use (e.g., Ganley and Rosario 2013; Rakete et al. 2010; De Leeuw et al. 2008; Piontek et al. 2008; Simmons et al. 2004; Clark et al. 2004; Shore et al. 2000; Barrueco et al. 2000).

According to the cognitive dissonance theory (e.g., Fotuhi et al. 2013; Kleinjan et al. 2006; Clark et al. 2004; Tagliacozzo 1979; Johnson 1968; Bem 1967; Festinger 1957), people who smoke and favor smoking can be persuaded to develop new attitudes in attaining desirable behaviors, such as quitting smoking or beliefs against smoking behavior. An example of rationalization is that smokers reject the harmful effects of smoking and/or perceive these negative effects as negligible (e.g., Orcullo and San 2016; Pervin and Yanko 1965). It is important for the health authorities which consider tobacco control crucial for Turkish teachers to know their smoking status and their attitudes, to develop anti-smoking campaigns, to be aware of the attitudes of the teachers who should influence young people to discourage smoking and to introduce anti-smoking attitudes.

There are a limited number of studies in Turkey in which the attitudes of the teachers towards cigarette smoking, their smoking habits, and how often they smoke are investigated (e.g., Çoban and Sungur 2013; Konan 2012; Çoşkun et al. 2010; Fidan et al. 2006; Erbaydar et al. 2003; Danacı et al. 2000). These studies have shown that the ratio of cigarette smoking in male teachers is greater than that in female teachers. These studies performed in Turkey did not evaluate the validity and reliability of the questionnaires. However, our study focused on the smoking patterns and attitudes of teachers in Turkey, Şanlıurfa province.

This study focused on the incidence of smoking behavior among teachers and their attitude towards smoking, which will help us to understand the teachers' inclination to smoking, since teachers are important contributors to the development of societies' awareness about health-related hazards, such as of smoking and other addictive substances.

Materials and method

Design

This study was conducted between 2014 and 2015, as a cross-sectional study. A descriptive design was used to define the rate of smoking and the teachers' attitude towards smoking.

Sample

The participants are employed in primary and secondary schools in Şanlıurfa. One of the researchers worked in Şanlıurfa province; therefore, the sampling and collection of data were provided by coauthor M.A.A. Şanlıurfa is located in the south-eastern part of Turkey and ranked 9th in terms of population (Algan 1995). South-east Anatolian regions (e.g., Şanlıurfa) are in the lower order in terms of index values according to the Human Development Index developed by the United Nations Development Programme (UNDP) (e.g., Ünal 2008). In Şanlıurfa province, the majority of state (official) schools and a large proportion of teachers are appointed by the Ministry of Education. Most of these teachers work on a full-time basis, 15–30 h per week for about 185 working days per year. A total of 2500 teachers work in Şanlıurfa province. These teachers comprise about 1200 women and 1300 men. Before the initiation of the study, official ethical permission was obtained from the Education Directorate of the province. The researcher randomly selected the schools in Şanlıurfa city center and ten district towns. The investigator informed the school administrators and teachers about the research. A purposive sampling method has been chosen for sample selection and the number of selected teachers was limited to 60 persons. The questionnaires (660) were distributed to the teachers who voluntarily participated in the study. About 650 questionnaires were collected. Only 546 questionnaires were valid. 291 of the participants (53.3%) were female and 255 (46.7%) were male. While the age of 283 teachers ranged from 20 to 30 years, 260 teachers were over 30 years of age. Among these teachers, 114 worked in elementary schools, 201 teachers were employed in middle schools, and 228 teachers worked in high schools. The number of teachers whose professional experience is less than 5 years is 296 and two teachers had teaching experience of more than 21 years, while 248 teachers had working experience of 5–21 years.

Instrument

The questionnaires included personal information and the scale to define the attitudes towards smoking. Personal information included questions such as gender, teaching experience, and institution level. The scale was developed by Shore et al. (2000), composed of four subscales with 17 items and is graded using a 7-point Likert scale (7 = strongly agree,

1 = strongly disagree). These four subscales are named as health concerns, restrictions on public smoking, interpersonal relationships, and marketing of cigarettes, respectively. Shore et al. (2000) constructed this smoking attitude scale on distinct facets of smoking-related issues (e.g., smokers’ rights, non-smokers’ rights, legal restrictions) to measure the different components of attitudes. A reliability and validity study was carried out to adapt the attitude towards smoking scale to the Turkish language with the single back-translation method. The attitude scale towards smoking was translated into Turkish by researchers of seven experts in health, education, and language for review. Upon feedback, some corrections were made. The same subject was then translated into English by an expert with no knowledge of the original scale. Both translations were compared by three experts from different fields, after which some expressions were reconsidered. Meanwhile, some structures such as “working environment” was changed into “school”, “patron” was changed into “director”, etc. The rearranged scale was then compared by two experts and they agreed on the final version. To measure the validity of the comprehension, the scale was applied to 42 teachers (age: mean = 30.2 years, standard deviation [SD] = 5.40; gender: female = 15, male = 27). The scale was rated on a 7-point Likert scale For validity, a confirmatory factor analysis (CFA) was used through the SPSS 20.0 and LISREL 8.53 programs. Table 1 shows the lambda, R² and t values.

The scale remained the same and was calculated by goodness of fit indices, as the t values of all items (*p* < 0.05) were

found to be significant. The validity of the study was adequate with four factors, using a 17-item original scale. The first factor was named “relation”, the second “law”, the third “health”, and the fourth “marketing”. For the reliability of the four subscales, Cronbach alpha values were considered for items and distinguishing item–correlation values were calculated (Table 2).

The Cronbach alpha values of the four factors were between 0.613 and 0.741. The values of internal consistency of the reliability of the relation and law subscales were acceptable, while the values of health and marketing scores were questionable (Blanz 2015). Since the number of items in the health and marketing subscales was lower and the correlation values of these items were between 0.36 and 0.49, these may have caused lower Cronbach alpha values. Since the correlation values of the items in the health and marketing subscales were over 0.30 (acceptable) and the goodness of fit model supported these subscales, it was decided that the Cronbach alpha values of the health and marketing subscales were acceptable. When the item–total correlation is examined, it is observed that the law factor items 6 and 11 are below 0.39, while the others are above. Therefore, items 6 and 11 were omitted.

At the end of the study, a valid and reliable scale of four subscales and 15 items were reached. When every item was examined, items 2, 5, 6, 7, 8, 9, 10, 11, 13, and 16 expressed positive attitudes towards smoking, whereas items 1, 3, 4, 12, 14, 15, and 17 expressed negative attitudes.

Table 1 The factor loading from confirmatory factor analysis (CFA)

Subscale	Item	Lambda	R ²	t	Goodness of fit indices*	Value
Relation	1	0.64	0.41	15.59	χ ² /df	362.55/113 = 3.20
	2	0.57	0.33	13.38	GFI	0.92
	3	0.74	0.55	19.79	CFI	0.93
	4	0.71	0.51	11.39	NFI	0.91
	5	0.48	0.24	11.20	NNFI	0.92
Law	6	0.23	0.05	4.78	RFI	0.89
	7	0.67	0.44	18.21	S-RMR	0.058
	8	0.71	0.51	20.95	RMSEA	0.064
	9	0.70	0.49	20.38		
	10	0.45	0.20	9.64		
	11	0.29	0.08	6.74		
Health	12	0.69	0.48	14.89		
	13	0.53	0.28	10.95		
	14	0.67	0.44	13.76		
Marketing	15	0.59	0.35	14.38		
	16	0.52	0.27	12.59		
	17	0.70	0.50	19.17		

χ²/df = Chi-square test/degree of freedom; GFI = goodness of fit index; CFI = comparative fit index; NFI = normed fit index; NNFI = non-normed fit index; RFI = relative fit index; S-RMR = standardized root mean square residual; RMSEA = root mean square error of approximation

**p* < 0.05

Statistical analysis

The data are presented as the means and SDs. Analysis using the open source R-3.3.4 was carried out. In the case where the smoking status is investigated by the analysis with single variables, Chi-square or independent samples *t*-test or univariate analysis was employed, depending on the data type. The skewness and kurtosis values of the variables were examined. Cohen's *d* was taken into account as the effect size value (η^2 : eta-square) of dependent variables (Cohen 1988). The cases in which the type I error level was under 5% were considered statistically significant.

Results

The rate of smoking among Turkish teachers

Among 546 Turkish teachers, 206 (37.07%) were smokers, 337 (61.7%) were non-smokers, and three teachers did not indicate their smoking status.

In Table 3, the genders and institutional levels of the teachers are compared, depending on their smoking status. The difference between the ratios of gender and smoking status among the teachers is statistically significant ($p < 0.05$). This finding shows that the ratio of male smokers is significantly higher than that of male non-smokers. Likewise, the ratio of female non-smokers is significantly higher than that of female smokers. When their institutions are compared, there is no significant difference.

The smokers' and non-smokers' attitudes towards smoking

Table 4 shows the negative and positive attitudes of teachers towards smoking, according to their smoking status.

Table 4 shows that smoker teachers agreed with marrying, living together, and being close friends with those who are smokers, while non-smokers totally disagreed with this above notion. Smoker teachers did not agree with the banning of smoking indoors and in public, but non-smokers agreed with the related rules. Smokers supported all kinds of tobacco selling and advertisements, while non-smokers did not. Both smokers and non-smokers acknowledged the risks of passive smoking and its dangers.

According to the smoking status among teachers, the difference between the total mean point of the relation, law, health, and marketing subscales was statistically significant ($p < 0.05$, Table 5). When the effect sizes are examined, the variances ranged from 14 to 57%, and the influence value of the law score appeared to be moderate and significant.

The effect of the teachers' institution and smoking status on attitudes towards smoking

The average of the scores obtained from the relation subscale according to the institutions and smoking status of the teachers varied between 15.40 and 18.91 (Table 6). However, this difference between the averages seems to be insignificant ($F_{(2, 464)} = 1.309$). The common effects of institution and smoking status on teachers' law scores were significant ($F_{(2, 464)} = 7.397, p < 0.05$). It was found that the law scores of the smoker teachers who taught in primary schools, middle schools, and high schools were significantly higher compared to the law scores of those who did not smoke. The smoker teachers' health scores were not significantly different from those of non-smokers ($F_{(2, 464)} = 0.357$). When the effect size values were examined, the variance of the law scores was 30%, and the influence value appeared to be small and significant.

The effect of gender on attitudes towards smoking

When the total score for the four subscales relation, law, health, and marketing is averaged according to the gender of the teachers, we observed that there is only a significant difference between the average score for the law subscale ($p < 0.05$) (Table 7). The law subscale's average score among the male teachers was significantly greater than that among the female teachers. The effect size is small and it is significantly different with respect to the law subscale.

Discussion

In this study, we found that the ratio of male teachers was greater than that of female teachers, and their attitudes towards smoking were more positive than that of females in Şanlıurfa province in Turkey. We evaluated the rate of smokers and non-smokers among teachers and their attitudes related to smoking in primary, middle, and high schools. Half of the participants were found to be smokers and the ratio of male smokers was greater than that of female smokers. In a research carried out in Istanbul among 454 teachers, similar findings were observed. It was stated that half of the teachers were smokers (Erbaydar et al. 2003; Kutlu and Çivi 2007). The ratio of female smokers was again lower than that of male smokers. These findings are in line with others, (e.g., Erick and Smith 2013; Heilert and Kaul 2017; Konan 2012) and in all OECD countries except Norway (OECD 2013); however, some of our findings contradict the results of other studies (e.g., Erbaydar et al. 2003). In their study, female smokers were found to be in excess, which could be due to the social structure of the area under investigation (e.g., Elkind 1985) in Manchester, England. The WHO reports show that, in the developing countries, inclination to smoking among females is lower than that observed in males (WHO 2013). It is

Table 2 The values of Cronbach alpha and item–total correlation

Subscale	Item	Item–total correlation	Corrected item–total correlation	Cronbach alpha
Relation	1	0.47		0.741
	2	0.44		
	3	0.58		
	4	0.61		
	5	0.42		
Law	6	0.21	–	0.718
	7	0.51	0.53	
	8	0.56	0.58	
	9	0.53	0.54	
	10	0.39	0.37	
	11	0.26	–	
Health	12	0.48		0.648
	13	0.40		
	14	0.49		
Marketing	15	0.45		0.613
	16	0.36		
	17	0.46		

assumed that, in developing communities, smoking among women is considered to be immoral (e.g., Elkind 1985; Haddad and Malak 2002) and socially unacceptable. In our study, a higher rate of smokers is found among high school teachers compared to primary school teachers. This higher rate could be due to their profession of teaching involving adolescents. At this stage, high school students are undergoing physical and emotional development and the high school teachers are exposed to young adolescents who may consider smoking as a rebellious activity to family and authority. The teachers are expected to be sensitive towards the behavioral alterations in their students (Cantu 2008).

This study showed that smoker teachers in Şanlıurfa province had a greater positive attitude towards smoking than non-smoker teachers. These results correspond with findings from previous studies showing that the attitudes of smokers towards smoking were reported to be positive compared to those of non-smokers, as also reported in different regions from different countries (e.g., Blake et al. 2009; Ganley and Rosario 2013; Kusma et al. 2010; Pericas et al. 2009; Süssenbach et al. 2013; Bin Yaacob and bin Harun 1994).

In this study, especially the attitudes of smoker and non-smoker teachers towards their health concerns, restrictions on smoking, interpersonal relationships, and marketing of cigarettes were evaluated. Smoker teachers displayed more positive attitudes than the non-smoker teachers towards interpersonal relationships and the marketing of cigarettes, while smoker teachers tended to have an inclination against restrictions on smoking more than non-smoker teachers. The difference in attitudes about restrictions on smoking was larger than the health concerns between smokers and non-smokers. The attitude of smokers against restriction of smoking in or around schools may be due to a feeling of opposition of teachers for their personal habits and behaviors. Also, the pecuniary penalties for offenders might contribute to objection of the smokers for smoking restriction. This displeasure leads to cognitive dissonance. Our results correspond well with the findings obtained from previous studies in which the attitudes of smokers against restrictions on smoking (e.g., Schumann et al. 2006; De Moor et al. 1992) were more supporting than those of non-smokers. A study performed in Germany reported that participants’ smoking ban depends on their tobacco smoking status and the dangers of tobacco use (Reuband 2014). In another study, among young students, higher acceptance rates related to smoking bans were found among girls and non-smokers (Morgenstern et al. 2008). Smoker and non-smoker teachers showed a positive tendency for the harmful effects of cigarette smoking and smokeless air, but this

Table 3 Investigation of the distributions of gender and institution of the participant teachers according to their smoking status

		Smoking status					p-Value
		Yes (n = 206)		No (n = 337)		? (no Information)	
		f	%	f	%		
Gender ^a	Female	92	44.70%	198	58.80%	1	0.001*
	Male	114	55.30%	139	41.20%	2	
	Total	206	100.00%	337	100.00%		
Institution ^a	Elementary	52	25.20%	62	18.40%		0.077
	Middle	66	32.00%	135	40.10%		
	High	88	42.70%	140	41.50%	3	
	Total	206	100.00%	337	100.00%		

*p < 0.05

^a Chi-square test used

Table 4 The smokers' and non-smokers' attitudes towards smoking

	Items	Yes		No		<i>t</i>
		Mean	SD	Mean	SD	
Relation	1. I would not date a person who smokes	2.35	2.22	3.65	2.53	− 6.04*
	2. I would marry a person who smokes	5.04	2.35	3.23	2.22	9.06*
	3. I would object to living with a smoker	2.14	1.80	3.75	2.51	− 8.03*
	4. I prefer not to spend a lot of time with people who smoke	2.34	1.98	4.00	2.41	− 8.42*
	5. I would be willing to form a close friendship with a smoker	5.03	2.34	3.87	2.26	5.77*
Law	7. Restricting smoking in public places is unfair to smokers	4.69	2.52	2.66	2.34	9.53*
	8. Laws restricting smoking in schools are unfair to smokers	4.33	2.63	2.50	2.25	8.06*
	9. People should have the right to smoke where and when they want	4.36	2.46	2.34	2.15	9.97*
	10. Smoking should not be restricted by laws in any way	3.92	2.56	3.02	2.51	3.94*
Health	12. People have a basic right to breathe smoke-free air	4.80	2.31	5.84	2.04	− 5.12*
	13. Secondhand smoke is a legitimate health risk	4.30	2.39	5.36	2.24	− 5.12*
	14. Administrators should be required to provide a smoke-free work environment for their staff in the school	4.45	2.46	5.62	2.15	− 5.55*
Marketing	15. All forms of cigarette advertising should be illegal	3.02	2.34	4.47	2.62	− 6.63*
	16. Cigarette companies should be permitted to advertise their products in any way they wish	3.76	2.45	2.74	2.35	4.86*
	17. The sale of cigarettes should be outlawed altogether	3.02	2.53	4.59	2.62	− 6.83*

* $p < 0.05$

tendency among non-smoker teachers was found to be greater than smoker teachers. An explanation for this association between the attitudes towards smoking and smoking status may be due to cognitive dissonance beliefs. If this situation causes the psychological discomfort between the behavior and attitudes about smoking, such as awareness of the harmful effects of smoking and the pleasure of smoking, it should be possible that the smokers tend to reduce this psychological discomfort

Table 5 Investigation of the relation, law, health, and marketing subscales according to the teachers' smoking status

Subscales	Yes* Mean ± SD	No Mean ± SD	<i>p</i> -Value	η^2
Relation ^a	3.38 ± 0.98	3.70 ± 1.19	0.001**	0.014***
Law ^a	4.29 ± 1.87	2.63 ± 1.55	0.001**	0.057***
Health ^a	4.57 ± 1.69	5.61 ± 1.63	0.001**	0.026***
Marketing ^a	3.26 ± 1.32	3.91 ± 1.41	0.001**	0.019***

*Smoker: $n = 206$; non-smoker: $n = 337$; no information: $n = 3$ ** $p < 0.05$ ***Effect sizes as “small, $d = 0.01$ ”, “medium, $d = 0.06$ ”, and “large, $d = 0.14$ ”^aIndependent samples *t*-test used; 1 = strongly disagree through to 7 = strongly agree

by rationalization of the situation. However, the effect sizes of these differences of the attitudes about their interpersonal relationships and marketing of cigarettes were smaller than the effect sizes of their health concerns and restrictions. This finding implicates that the behavior difference related to interpersonal relationships and marketing of cigarettes does not cause apparent cognitive dissonance belief in Turkish teachers. Similar to our findings, a previous study reported that the attitudes of smokers towards the advertising of cigarettes were more favorable than non-smokers (Hanewinkel et al. 2010). Also, in Germany, nursing students' behaviors and attitudes towards smoking varied according to their smoking status (Vitzthum et al. 2013).

In this study, we also compared the attitude of teachers considering their gender and the common effect of smoking status and their institutions. Their demographic characteristics displayed a small but significant difference, indicating that the male smokers were against smoking restriction, whereas female smokers were not. Smoker teachers, without considering their gender, were against smoking restriction in all three types of institution levels. This finding is also compatible with other studies that demonstrated the relationship between attitudes towards smoking and the demographic characteristics of smokers and non-smokers (e.g., Xu et al. 2015; Macy et al.

Table 6 The effect of institution and smoking status on attitudes towards smoking

Institution	Smoking status***	Relation		Law		Health		Marketing	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Elementary	Yes	17.52	3.61	30.70	9.03	14.88	4.68	8.50	3.83
	No	18.23	4.55	17.25	7.76	17.27	5.11	12.05	4.41
Middle	Yes	17.61	5.40	25.34	9.71	13.72	5.70	10.10	3.98
	No	18.91	6.04	18.30	8.19	16.80	5.01	11.76	4.16
High	Yes	15.40	4.19	24.02	9.28	13.28	5.21	10.17	4.16
	No	18.17	6.50	18.57	7.38	16.75	4.75	11.70	4.35
Subscales	Source		Type III sum of squares	df	Mean square	F	<i>p</i> -Value	η^2	
Relation	institution*smoking status		79.407	2	39.704	1.31	0.271	0.006	
Law	institution*smoking status		1042.237	2	521.118	7.39	0.001**	0.031****	
Health	institution*smoking status		18.180	2	9.090	0.35	0.700	0.002	
Marketing	institution*smoking status		73.081	2	36.541	2.08	0.127	0.009	

*Independent samples ANOVA used; 1 = strongly disagree through to 7 = strongly agree

***p* < 0.05

***Smoker: *n* = 206; non-smoker: *n* = 337; no information: *n* = 3

****Effect sizes as “small, *d* = 0.01”, “medium, *d* = 0.06”, and “large, *d* = 0.14”

2012). The demographic characteristics of smokers and non-smokers in these different studies did not appear to influence the attitudes towards smoking.

According to the findings of this study, the smoker teachers have an attitude that is more favorable towards smoking but the non-smoking teachers have an attitude against smoking. The teachers’ behaviors and attitudes towards smoking appear to be in harmony, as the smokers tend to prefer smoking behavior and the non-smokers are against it. This type of two opposite cognitions corresponds well with cognitive dissonance theory, since the smoker teachers are well aware of the negative consequences of smoking on their health and they had no intention to change their behavior and attitudes against smoking. In addition to this behavior, they continue smoking

because they enjoy the biological effects of smoking and disregard its harmful effects. Therefore, this behavior supports reduction of cognitive dissonance by rationalization of the conflicting situation. Likewise, although the smoker teachers are aware of the legal prohibition of smoking on school premises, they are extremely against this kind of restriction upon smoking in public areas, even in schools. In order to further reduce cognitive dissonance, it is possible that they try to find a private place in school in which they can smoke without causing a legal issue by rationalization.

Conclusion

In Şanlıurfa, Turkey, the attitude of teachers towards smoking varied according to their cigarette smoking status, such as: male smokers outweighed female smokers and they favored smoking even if they are aware of the deleterious effects of smoking, and did not approve restrictions about smoking in public areas. With these findings, we conclude that teachers’ behavior and attitudes about smoking corresponded well with cognitive dissonance theory.

Recommendations

For tobacco control in schools, it seems to be important to change their cognitive dissonance beliefs. In this study, the dissonance occurring as a result of inconsistency between

Table 7 The effect of gender on attitudes towards smoking

Subscale	Female	Male	<i>p</i> -Value	η^2
Relation ^a	3.63 ± 1.17	3.51 ± 1.06	0.232	0.004
Law ^a	3.06 ± 1.83	3.49 ± 1.87	0.006**	0.010****
Health ^a	5.30 ± 1.71	5.10 ± 1.75	0.172	0.005
Marketing ^a	3.72 ± 1.38	3.61 ± 1.44	0.375	0.003

*Female: *n* = 291; male: *n* = 255

***p* < 0.05

***Effect sizes as “small, *d* = 0.01”, “medium, *d* = 0.06”, and “large, *d* = 0.14”

^aIndependent samples *t* test used; 1 = strongly disagree through to 7 = strongly agree

the smoking behavior and attitudes of the teachers is rationalized. Teachers' behavior in this contradiction may have led to a change in their attitude and behavior. However, interventions against smoking should include specific attention of teachers to challenge their beliefs for cognitive dissonance. More effective methods and strategies for intervention against smoking are possible. Negative attitudes about smoking among teachers should be an important factor for controlling tobacco use. These findings may also help educators to develop antismoking training programs. The burden of disease profile of teachers for occupational risk factors in Turkey can be investigated. Also, the role of cigarette smoking on this burden can be studied. Another topic of study may be related to determining the underlying motives of teachers towards smoking.

Limitations

This study is limited to the views of the teachers in Şanlıurfa, Turkey about their behavior and attitudes related to smoking. In this study, we did not question how long the teachers smoked and their degree of addiction to nicotine. The study also does not represent all of the teachers in Turkey because it was carried out in only one province in Turkey.

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