

Knowledge and Attitudes of Pediatric Residents to Smoking Intervention in Adolescents

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What is already known on this topic?

- The vast majority of tobacco users start using tobacco products before the age of 18.
- In previous studies, it is suggested that smoking intervention for parents and children should be included in the pediatric resident training program.

What this study adds on this topic?

- This study demonstrates that, despite the strong recommendations of previous studies, future pediatricians are unlikely to contribute to tobacco control in adolescents, and including a structured smoking intervention program in the pediatric resident's curriculum can make a significant contribution to a tobacco-free future.

ABSTRACT

Objective: Tobacco use is an important, preventable public health problem, and its use usually begins in adolescence. For this reason, smoking intervention for tobacco control is considered one of the fields of pediatrics. This study aims to examine the knowledge and attitudes of pediatric residents toward tobacco control and smoking intervention.

Materials and Methods: In this multicenter study, pediatric residents were asked about their knowledge and attitudes toward adolescent smoking intervention and tobacco control through an online questionnaire.

Results: A total of 271 pediatric residents participated in the study, and 56% of the residents stated that they asked adolescents with respiratory tract symptoms whether they smoked or not. However, 22% of pediatric residents stated that they asked the same question to adolescents regardless of their symptoms, 92% of residents were unaware of the International Diagnostic Code for tobacco use, and 86% of the participants reported that they did not receive any training on tobacco control. It was determined that the residents, who knew the national smoking cessation hotline, were female, smokers, and seniors. They asked the adolescents whether they smoked or not and the results were statistically significant ($P < .05$).

Conclusion: The results show that pediatric residents have insufficient knowledge about tobacco control and cannot guide adolescents in smoking intervention. This research reveals that pediatric residents need a training program for adolescent smoking intervention in the pediatric resident curriculum. Pediatricians who are well trained in adolescent tobacco control can make important contributions to the prevention of tobacco use in adults.

Keywords: Adolescent, attitude, knowledge, pediatric residents, tobacco control, smoking intervention

INTRODUCTION

Tobacco and tobacco products are the world's most widely used addictive substances and are responsible for serious morbidity and mortality. According to World Health Organization (WHO), 1/3 of the world's population uses tobacco products and it was determined that 90% of tobacco users started using tobacco products before the age of 18.1

It is estimated that half of the adolescents who smoke will die due to complications caused by smoking if they continue to smoke.² According to the European School Survey Project on Alcohol and Other Drugs report from 2015, 47% of adolescents aged 15-16 in European countries have smoked at least 1 cigarette in their lifetime. In addition, it was found that

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23% of smokers experienced smoking before the age of 13.³ In a study conducted in South East Asia, the rate of smoking among adolescents increased compared to previous years.⁴ As shown in a study from Korea, the rate of smoking increases with increasing age in adolescents. This rate was found to be 14.3% in 8th-grade students and 30% in 10th-grade students.⁵ Despite the social and political struggle against tobacco, adolescent tobacco use does not decrease in most countries.⁶

Past surveys have shown that most adolescents do not intend to continue smoking into adulthood. In a survey, about half of the smokers between the ages of 16 and 20 stated that they wanted to quit smoking.⁷ In another study, it was found that 84% of smokers aged 12-19 thought to quit and 55.1% attempted to quit in the last 6 months. Interventions by physicians to help adolescents quit smoking will have a significant impact.⁸

In this context, pediatric outpatient clinics provide an opportunity for adolescents willing to quit smoking to access professional help; because each adolescent has already visited these places for different reasons. In the early 2000s, the American Academy of Pediatrics (AAP) urged pediatricians to help protect the youth to prevent and dissuade them from smoking.⁹ Despite the recommendations of the AAP, there has not been enough research to ensure that training on tobacco control for pediatricians has been added to their curriculum. By investigating the knowledge and attitudes of pediatric residents toward tobacco control, it can be predicted whether they have received training in this direction.

In a study conducted in Turkey, the attitudes of child and adolescent psychiatrists toward adolescent smoking intervention were investigated. In the same study, half of the physicians asked adolescents whether they smoked, but very few stated that they underwent treatment.¹⁰

However, as far as we know, there are a limited number of studies measuring the knowledge and attitudes of pediatric residents regarding tobacco control in adolescents.

Hence, this study aims to investigate the knowledge and attitudes of pediatric residents toward tobacco control in adolescents and to question the adequacy of pediatric residents' residency training on this subject.

MATERIALS AND METHODS

Design

This study was approved by Health Sciences University Clinical Research Ethics Committee with decision protocol number: 2019-158. The study was planned as an online questionnaire for easy access to pediatric residents in different hospitals and confidentiality of their answers. The questionnaire consisted of questions about the demographic data of pediatric residents, their knowledge on tobacco control, and their attitudes toward smoking intervention for adolescents. The questionnaire was prepared by researchers based on previous studies in this field^{11,12} and according to national data in Turkey.¹³

Population and Data Collection

A total of 353 pediatric residents within 4 pediatric specialty hospitals in 2 different cities have been invited to participate

in the online survey. The online survey invitation has been e-mailed to the pediatric residents and the responses were collected anonymously. It was stated in the invitation text that participation was entirely voluntary. The survey consists mainly of multiple-choice questions.

The first part of the created questionnaire was about the demographic characteristics of the participants. The questions asked were gender, age of pediatric residents, length of residency, duration of working as a family practitioner before residency, whether she/he smokes, whether she/he has children, whether she/he has a chronic illness, whether she/he does sports or not, and whether she/he has a parent who smoked when she/he was a teenager. In addition, the participants were asked whether they had received any training on tobacco control. Before starting the pediatric residency, the duration of working as a family practitioner was grouped as less than 6 months and 6 months or more.

Those who started their pediatric residency within the last 24 months were grouped as junior residents, whereas those who completed the first 24 months of their residency were grouped as senior residents.

The second part on the level of knowledge about tobacco consists of 4 multiple-choice questions. One of them includes: Do you know or have you ever heard of an International Classification of Diseases (ICD) diagnostic code related to tobacco? (options available: yes or no).

The remaining 3 questions, what is the prevalence of tobacco use among students aged 13-15 in your country? What is the prevalence of tobacco use among people aged 15 and over in your country? What is the national smoking cessation line in your country? had 1 correct answer, and the level of knowledge of the residents was evaluated according to whether they knew the correct answer or not. The correct answers to our questions were determined according to the national database.¹³ The third part on attitudes toward tobacco use consists of 6 questions. The answers to these questions consist of multiple options and reflect different attitudes (see Table 1), questions include: At what age should the adolescent be asked whether they smoke or not? Do you ask adolescents if they smoke (intermittently or regularly)? Do you ask the children about passive smoking? If an adolescent asks you directly to help him/her stop smoking, what is the safest option for the adolescent if he/she requests smoking cessation medication? What do you think about the use of smoking cessation medicines by a smoker adolescent? At what age should an adolescent be asked whether they smoke (intermittently or daily)? The answers to this question are also grouped as follows for the convenience of statistical calculation: responses specifying the age range of 5-13.5 years were classified as "<14 years" and those older than 13.5 years were classified as "age \geq 14."

Data Analysis

Data obtained from the study were analyzed using Statistical Package for the Social Sciences 23.0 for Windows.¹⁴ Mean, standard deviation, standard error, minimum, maximum, median, frequency, and percentage were presented as descriptive statistics. The Shapiro-Wilk test was used to analyze the normal distribution of continuous data. Since the data

Table 1. Attitudes of Pediatric Residents About Tobacco and Smoking Intervention in Adolescents

		n (%)
At what age should adolescents be asked whether they smoke or not?	Ages < 14	172 (66.9)
	Ages ≥ 14	85 (33.1)
Do you ask adolescent patients if they smoke (intermittently or regularly)?	I always ask	60 (22.1)
	I ask if there is a complaint about the respiratory tract	153 (56.5)
	I don't usually ask	58 (21.4)
Do you ask the children about passive smoking?*	I don't usually ask	41 (15.2)
	I ask the parents of the babies	51 (18.8)
	I ask if there is a complaint about the respiratory tract of the adolescents	50 (18.4)
	I ask the parents of the babies, and I ask if there is a complaint about the respiratory tract of adolescents	129 (47.6)
If an adolescent asks you directly to help him/her stop smoking	I tell the adolescent that I can help him/her quit	34 (12.5)
	I refer the adolescent to child psychiatry	43 (15.9)
	I refer the adolescent to the smoking cessation clinic	141 (52.0)
	I don't know what to do in a situation like that	53 (19.6)
What is the safest option for the adolescent if he/she requests smoking cessation medication?*	I do not recommend medical treatment	148 (54.6)
	I recommend nicotine replacement treatment (NRT)	44 (16.3)
	I recommend bupropion	16 (5.9)
	I recommend vareniklin	19 (7)
	I recommend NRT, vareniklin, bupropion	15 (5.5)
	I recommend vareniklin, bupropion	15 (5.5)
	I recommend antidepressant	16 (5.2)
What do you think about the use of smoking cessation medicines by a smoker adolescent?	I think they are ineffective	25 (9.2)
	I don't know how to prescribe their use	100 (36.9)
	There is insufficient evidence for their effectiveness on people under the age of 18	51 (18.8)
	I have no idea about smoking cessation medicines	95 (35.1)

*Question where multiple options can be checked.

were not normally distributed, Mann-Whitney *U* test was used for comparison between paired groups. Pearson chi-square and Fisher's exact test were used for the analysis of categorical variables. The analyses were performed at a 95% CI, and the *H*₀ hypothesis was rejected with a *P* < .05.

RESULTS

Characteristics and Demographic Data of the Participants

Around 271(76%) pediatric residents participated in the study and 194 (71.6%) of the participants were female. The mean age of pediatric residents was 28.7 ± 3.45 (min: 25-max: 47). Totally 136 (50.2%) of the participants were junior residents, and the ratio of working as a family practitioner for 6 months or longer before residency was 151 (55.7%).

Sixty-eight (25.1%) pediatric residents stated that they exercise regularly, and 247 (91%) of the pediatric residents stated that they do not smoke intermittently or every day, while 164 (60.5%) of the participants had at least 1 smoker in their family during adolescence. A total of 234 (86.4%) of the pediatric residents received training in tobacco control either during or after medical school and 32 (11.8%) of the pediatric residents stated that they received training on tobacco control in medical school and 5 (1.8%) after medical school.

The answer given by the pediatric residents to the question "From what age should children and adolescents be asked about tobacco?" was min: 5 and max: 18, with an average of 12.8 ± 2.47. Demographic data of the participants are given in Table 2.

Pediatric Residents' Knowledge of Tobacco Use

While 21 (7.7%) of the participants knew the tobacco-related ICD diagnosis code, 250 (92.3%) did not. The participants were asked about the frequency of use of tobacco products in their own country in students aged 13-15 and 92 (33.9%) of the participants marked the correct option.

Table 2. Demographic Characteristics of Pediatric Residents

		n (%)
Gender	Female	194 (71.6)
	Male	77 (28.4)
How long (in years) did you work as a family practitioner before residency?	Less than 6 months	120 (44.3)
	6 months and longer	151 (55.7)
According to the length of the pediatric residency	Junior residents	136 (50.2)
	Senior residents	135 (49.8)
Do you smoke (intermittently or daily)?	Yes	23 (9)
	No	247 (91)
Do you smoke hookah (intermittently or daily)?	Yes	23 (9)
	No	247 (91)
Were there any smokers in your family when you were a teenager?	Yes	164 (60.5)
	No	107 (39.5)
Do you have children?	Yes	57 (21.0)
	No	214 (79.0)
Do you have any chronic diseases?	Yes	42 (15.5)
	No	229 (84.5)
Do you exercise regularly (daily/weekly)?	Yes	68 (25.1)
	No	203 (74.9)
Have you received any education on tobacco control? If you have received it, where did you receive it?	Yes, during medical school	32 (11.8)
	Yes, after medical school	5 (1.8)
	No	234 (86.4)

Table 3. Pediatric Residents' Knowledge of Tobacco Use

		n (%)
Do you know or have you ever heard of an ICD diagnostic code related to tobacco?	Yes	21 (7.7)
	No	250 (92.3)
What is the prevalence of tobacco use among students aged 13-15 in your country? (%)	Below 5	10 (3.7)
	5-10	59 (21.8)
	11-20*	92 (33.9)
	21-30	85 (31.4)
	31 and above	25 (9.2)
What is the prevalence of tobacco use among people aged 15 and over in your country? (%)	Below 5	1 (0.4)
	5-10	0 (0)
	1-20	23 (8.5)
	21-30	70 (25.8)
	31 and above*	177 (65.3)
What is the national smoking cessation line in your country?	171*	133 (49.1)
	I don't know	56 (20.7)
	181	79 (29.1)
	191	3 (1)

*Correct answers.

Participants were asked about the frequency of use of tobacco products in their own country by people aged 15 and over, and 177 (65.3%) of the participants marked the correct option.

Pediatric residents were asked what their country's national smoking cessation hotline was, and 49.1% of the participants gave the correct answer, which is 171. The details of the tobacco-related knowledge of the pediatric residents are given in Table 3.

Attitudes of Pediatric Residents About Tobacco Control and Smoking Intervention

Around 172 (66.9%) of the participants stated that it would be appropriate to ask adolescents about smoking before the age of 14 and 153 (56.5%) of the participants stated that they asked about smoking if the adolescent had respiratory symptoms. Regardless of the symptoms of the adolescents, 60 (22.1%) of the participants stated that they asked the adolescent about smoking, while 58 (21.4%) stated that they did not usually ask about smoking.

Fifty (18.4%) of the participants stated that they asked about passive smoking if the adolescent had complaints about the respiratory tract. The rate of those who ticked both the options "I ask the parents of the babies," and "I ask if there is a complaint about the respiratory tract of adolescents" was 129 (47.6%).

When an adolescent directly asked for help with quitting, 34 (12.5%) of the pediatric residents stated that they could help them quit smoking.

While 148 (54.6%) of the pediatric residents stated that they would not recommend any medical treatment to help the adolescent to quit smoking, 44 (16.3%) of the participants stated that they recommended the use of nicotine replacement therapy (NRT).

Around 95 (35.1%) of the pediatric residents did not know smoking cessation medicines, and 100 (36.9%) of them did not know how to use these medicines.

Variables Influencing Asking Adolescents Whether They Smoke (Regardless of the Adolescent's Symptoms)

Regardless of the adolescents' symptoms, female (n = 47, 61%), exerciser (n = 22, 66.7), smoker (n = 9, 90%), senior (n = 35, 63.6%), and national smoking quit line aware (n = 33, 62.3%) pediatric residents significantly asked adolescents whether they smoked more frequently ($P < .05$). The details of the variables that were observed to have a significant relationship with asking adolescents whether they smoke or not are given in Table 4.

The age suggested by the participants who were questioned about smoking (median = 12; min = 5-max = 16) to ask adolescents about smoking was lower than those who did not ask about smoking (median = 14; min = 7-max = 18), and this difference was statistically proven ($Z = -2.926$, $P = .003$, Mann-Whitney U).

Among the pediatric residents, 14 (50%) of those who had children, 38 (55.9%) of those who had at least 1 smoker in their family during adolescence, 10 (66.7%) of those with chronic diseases, 13 (68.4%) of those who received tobacco control training, and 4 (40%) of those who knew the ICD code related to smoking reported that they asked adolescents whether they smoked or not, regardless of their symptoms.

However, there was no significant relationship between asking adolescents whether they smoke or not and the following factors: having a child, having smokers in their own family during their adolescence, having received tobacco control education, having a chronic disease, and being aware of the (ICD) diagnosis code related to tobacco ($P > .05$). The details of the variables that were observed to have a non-significant relationship with asking adolescents whether they smoke or not are given in Table 4.

DISCUSSION

The results of our study show that pediatric residents have insufficient knowledge about tobacco control in adolescents and are not capable to guide tobacco intervention in adolescents. Our study shows that pediatric residents participating in the survey will probably not contribute to tobacco control in adolescents when they become pediatricians.

In our study, half of the residents stated that they asked adolescents who have respiratory tract symptoms whether they smoke or not, and just 22% stated that they asked the same question regardless of their symptoms. In a study conducted on child and adolescent psychiatrists in Turkey, it was determined that 52.5% of the physicians asked the adolescents about their smoking status, but only 15% applied for smoking cessation treatment and follow-up.¹⁰ It has been determined that most pediatric residents investigate children with respiratory symptoms in terms of passive smoking. In a previous study, it was found that pediatricians asked children and adolescents, with smoking-triggered diseases, more frequently about passive smoking. According to the same study, 87% of children with asthma were questioned about passive smoking, while 41% of the children were inquired during well-child visits.¹⁵ In our study, it was found that nearly half of the participants questioned passive smoking to the parents of the baby or if they

Table 4. Variables Affecting Pediatric Residents' Questioning of Adolescents About Smoking

Variables of Pediatric Residents		Asking Adolescent If They Smoke	Not Asking Adolescent If They Smoke	P
Gender, n (%)	Female	47 (61)	30 (39)	.002*
	Male	13 (31.7)	28 (68.3)	
Doing regular exercise, n (%)	Yes	22 (66.7)	11 (33.3)	.032*
	No	38 (44.7)	47 (55.3)	
Does the resident know the national smoking quitline?, n (%)	Yes	33 (62.3)	20 (37.7)	.02*
	No	27 (41.5)	38 (58.5)	
Smoking status, n (%)	Smoke	9 (90)	1 (10)	.01**
	Not smoke	51 (47.2)	57 (52.8)	
According to the length of pediatric residency, n (%)	Junior residents	25 (41)	36 (59)	0.015*
	Senior residents	35 (63.6)	20 (36.4)	
From what age should adolescents be asked whether they smoke, n (%)	Ages <14	44 (61.1)	28 (38.9)	.015*
	Ages ≥14	14 (36.8)	24 (63.2)	
Have a child, n (%)	Yes	14 (50)	14 (50)	.91*
	No	46 (51.1)	44 (48.9)	
Any smokers in the family during adolescence, n (%)	Yes	38 (55.9)	30 (44.1)	.20*
	No	22 (44)	28 (56)	
Have any chronic diseases, n (%)	Yes	10 (66.7)	5 (33.3)	.19*
	No	50 (48.5)	53 (51.5)	
Any training on tobacco control, n (%)	Yes	13 (68.4)	6 (31.6)	.10*
	No	47 (48)	51 (52)	
Awareness of any tobacco-related ICD diagnostic code, n (%)	Yes	4 (40)	6 (60)	.52**
	No	56 (51.9)	52 (49.1)	

*Pearson chi-square; **Fisher's exact test.

had patients with respiratory complaints. In a review, it was stated that passive smoking is associated with respiratory, cardiovascular, infectious, otolaryngological, allergic, and metabolic disorders and increased mortality and has significant adverse effects on the health of children and adolescents.¹⁶ Even though passive smoking is a concern for the residents, the fact that only half of the pediatric residents in our study know the national smoking line suggests that they could not guide parents enough to quit smoking. Moreover, the fact that 92% of the residents are not aware of an ICD diagnosis code related to tobacco indicates that an adolescent who is using tobacco is not being diagnosed with tobacco-related ICD diagnosis codes. Therefore, there is no evidence that the relevant diagnosis and intervention are made by the residents even if they learn that the adolescent smokes. A study by the AAP shows that more than 80% of pediatricians recommend smoking cessation to smoking adolescents and only one-third of them are interested in smoking interventions.¹⁷ In another study, it was found that 72% of adolescents were screened for smoking, but only 17% of smokers were advised.¹²

In our study, nearly half of the participants favored asking about tobacco at the age of 12 and before, and some even suggested that it be asked at a much younger age. This result suggests that the residents are aware of the fact that smoking is experienced at even younger ages in our society. Studies show that adolescents generally try cigarettes for the first time in the sixth and seventh grades, 11-13 years of age. Nicotine develops addiction much faster than some other addictive substances, and adolescents may become addicted to tobacco soon after experiencing it.¹⁸⁻²⁰

In our study, only 13.6% of the residents stated that they received tobacco control training. Among these residents, almost no one (1.8%) received any tobacco control training after graduating from medical school. Almost all of the participants who received tobacco training had received this training in medical school, and this training was probably related to the harms of tobacco, not tobacco control in adolescents.

Few of the participants stated that they would be able to help an adolescent who directly sought help to quit smoking. This suggests that pediatric residents do not have adequate knowledge of smoking interventions. On the other hand, half of the residents stated that they would refer adolescent smokers looking for help to one of the national smoking cessation outpatient clinics. However, these centers only serve adult users of tobacco products in our country. All these observations suggest that the smoking habits of adolescents are largely ignored by pediatricians.

In a review article, it was stated that smoking intervention by the child's or adolescent's physician is the most effective method among the individual intervention methods. In a study, smoking adolescents stated that one of the top 3 motivations for smoking cessation was their pediatrician's recommendation to quit smoking.²¹ In another study, it was observed that 67% of the patients who were briefly advised to quit smoking during routine medical examinations were willing to come back for further intervention. Among adolescents who identify themselves as smokers, those who received brief smoking cessation intervention were found to have twice the smoking cessation rate of those who did not.²²

In our study, surprisingly, even those who had children and were exposed to passive smoking in their childhood did not ask adolescents about smoking at a significant level. One reason may be that pediatric residents do not have enough time to ask adolescents if they smoke and to intervene. However, a brief intervention by the pediatrician can be an important opportunity to prevent tobacco addiction.¹⁸

It was reported in a different study that although 76.3% of the adolescents who experienced smoking stated their intention to discontinue tobacco use, most of them became addicted in a short time frame.²³ Despite all prevention policies,¹⁻³ adolescents' smoking rates increase shortly after starting to smoke, revealing that they need appropriate consultation for smoking.

Physicians are suggested to ask whether adolescents have experienced smoking, including a single puff, rather than asking whether they smoke. This is because adolescents who only smoke occasionally as a part of social activity might say that they do not smoke due to their tendency to not view themselves as smokers. If appropriate behavioral intervention is performed on adolescents who are experiencing smoking or identify as social smokers, it may be easier for them to quit smoking altogether.²⁴ For all these reasons, there is a need for pediatricians who are trained in tobacco control to be able to ask adolescents the correct questions regarding their smoking habits and to adopt the appropriate intervention methods for them.

In our study, approximately half of the pediatric residents stated that they could recommend some smoking cessation medicines. One-third of the participants stated that they had no idea about tobacco-cutting drugs and/or they did not know how to prescribe them. Few of the participants in our study stated that varenicline and/or bupropion could be used. More studies are needed in terms of the efficacy and safety of the use of varenicline and bupropion in adolescent smoking cessation.²⁵

In one study, varenicline was well tolerated in adolescent smokers but did not improve end-of-treatment abstinence compared to placebo.²⁶ Therefore, these drugs are not routinely used for adolescent smoking cessation. Previous studies indicate that there is no single method or medicine yet proven to be effective in the intervention of a smoker adolescent. A study suggests the off-label use of an NRT to alleviate some symptoms of nicotine withdrawal for adolescents;²⁷ however, few of the participants in our study stated that they would recommend the use of an NRT. Individual counseling by their physician was determined as the method with the most evidence to stop smoking in adolescents.²⁸ In the United States, at the time of the study referred here, it was stated that only 65% of the places providing pediatric resident training covered tobacco control.²⁹ In a study, it was stated that tobacco use could be reduced by 12.2%-16.2% among adults to prevent or quit using tobacco during adolescence.³⁰ In our study, it was observed that the participants who suggested asking about tobacco in early adolescence asked adolescents about smoking more frequently. This shows that some physicians are aware of their intention to smoke at a very early age.

In the current AAP guide, it is emphasized that tobacco products impair child health and all pediatricians should take an active role in the prevention and cessation of direct and second-hand tobacco use. It is further mentioned that pediatricians should implore adolescents to avoid smoking and advise current smokers briefly to stop tobacco use. In the same report, it is also recommended that they should use behavioral intervention to help adolescents who want to quit smoking. In this context, AAP strongly recommends including intervention training for tobacco control as a part of any pediatric residency program.³¹ It was surprising for us that pediatric residents with chronic diseases also did not ask about tobacco at a significant level.

Some previous studies emphasize the necessity of the curriculum for tobacco control in pediatric residency programs, which are mostly from the United States.³²⁻³⁴ To the best of our knowledge, this issue has not been adequately studied in many countries. With this study, it was thought that it would be beneficial to re-discuss the role of pediatricians in tobacco control.

It may be considered a limitation that the results of this research depend only on the declarations of the pediatric residents. However, since our research demonstrates the residents' lack of tobacco knowledge, it is more likely that they responded truthfully. Pediatric residents who state that they frequently ask about smoking may have done rotations in the chest or allergic disease sections or adolescent division. However, it is a limitation of our study that the pediatric residents were not asked which rotations they had completed before. Another limitation is the inability to include pediatric residents and pediatricians from all regions of the country.

CONCLUSION

In conclusion, our study demonstrated that our pediatric residents are not at a sufficient level of knowledge about tobacco use and cannot be a guide in tobacco intervention in adolescents. The results of our research reveal the importance of training in pediatric residency programs, especially for countries with high smoking rates, aimed at teaching appropriate smoking cessation interventions for children and adolescents. Finally, we believe that pediatricians who are adequately trained in tobacco control during their residency can fight adolescents' smoking and second-hand smoking in children better, as in other diseases. Including a structured smoking intervention program in the pediatric resident's curriculum can make a significant contribution to a tobacco-free future.

Ethics Committee Approval: This study was approved by Ethics committee of Health Sciences University, (Approval No: 158, Date: 2019).

Informed Consent: Written informed consent was obtained from the patients who agreed to take part in the study.

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