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ORIGINAL RESEARCH

Hookah Smoking Profiles of University Students and Their Perceptions of its Health Risks

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Main Points

- The students who smoke hookah have lower perceptions about the health effects of hookah compared to those who do not smoke it.
- More than half of the students who smoke cigarette also smoke hookah.
- Smoking cigarette increases the probability of smoking hookah by three times.

Abstract

This study was conducted to determine the hookah smoking profiles among university students and their perceptions of the health effects of hookah. The stratified random sampling method was used, and each school was accepted as a layer. The number of students to be included in the sample from each class was determined by dividing the total number of students to be taken from the school by the number of classes in that school. After determining the number of students who would be taken from each class, the students to be included in the sample were selected from the student lists using a simple random sampling method. The sample of this study included 625 students from a university. The data collection tools were (a) a personal information form containing the sociodemographic characteristics of the students, the characteristics of smoking and hookah smoking behavior, and (b) the perception scale of the effects of hookah use on health. The data were collected by the researchers between February 5 and May 5, 2018, by distributing the questionnaires and scale forms to the students in the classroom environment and having them fill the forms. The data obtained were evaluated in the Statistical Package for the Social Sciences 22.0 program using chi-square, significance test of the difference between the 2 means, variance analysis, Mann – Whitney U test, Kruskal – Wallis H test, and logistic regression analysis. In this study, it was found that the frequency of hookah use was 65.2% in male students and 34.8% in female students, and the mean score of the students from the perception scale of the effects of hookah use on health was 60.83±9.96. The mean score of the students who do not smoke hookah (62.53±9.70) was higher than that of those who smoke hookah (57.45±9.83), and the difference between them was statistically significant ($p<0.05$). It was found that students who did not use hookah knew better about the harmful effects of hookah than those who used hookah. It was also found that smoking cigarettes increases the possibility of smoking hookah by 3.05 (confidence interval, 1.11-8.33) times. As a result, the frequency of smoking hookah was found to be high among the students, and the students who smoke hookah were less aware of the adverse health effects of hookah use.

Keywords: Hookah, university students, nursing, health perception

The preliminary findings of this master thesis were presented as a verbal paper titled "The Hookah Smoking Prevalence of University Students and Affecting Factors" in the 5th National 1st International "Congress on Current Approaches in Nursing" on November 15-17, 2018 in Sakarya, Turkey.

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Introduction

Globally, 6 million deaths per year are attributed to tobacco smoking (World Health Organization, 2018). In addition to cigarette smoking, waterpipe tobacco smoking has become more popular, particularly among high school and university students (Maziak et al., 2015). In recent years, hookah smoking has been defined as a global tobacco epidemic and an important public health problem

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(Asma et al., 2016). Hookah smoking, an epidemic among young people, is rapidly becoming popular worldwide and across Turkey (Asma et al., 2016). Many studies related to university students' hookah smoking behaviors have been found in the literature. These studies report students' hookah usage frequency as between 26.1% and 67.7% (Aktas et al., 2018; Alqahtani et al., 2019; Creamer et al., 2016; Daradka et al., 2019; Fevrier et al., 2018; Kassem et al., 2019; Omotehinwa et al., 2019; Salloum et al., 2019). Advertising and publicity efforts of the industry have had a significant impact on the spread of hookah use among young people. Cafes that young people visit frequently as well as hookah cafes play an important role in promoting hookah smoking. In contrast, aromas such as vanilla, chocolate, and fruit, added to hookah tobacco make hookah smoking even more attractive for young people. Hookah is becoming a popular tobacco product, especially among university students (Aktas et al., 2018). There are also many misconceptions about hookah among university students. Many students who are hookah addicts believe that hookah smoking is safer and less addictive than cigarette smoking and that they will stop smoking hookah whenever they want. Most of the young people do not consider hookah as a tobacco product and think that smoking hookah does not have any harmful effects on health (Fevrier et al., 2018). Many studies concluded that students find hookah less harmful than cigarettes (Aktas, 2018; Fevrier et al., 2018; Creamer et al., 2016). This fact indicates that students have a lack of knowledge about the harmful effects of hookah, which has gained significant popularity as a new tobacco product in recent years. Nurses have an important role in reducing the hookah smoking, which has become a global tobacco epidemic and an important public health problem. People usually start using hookah without realizing that it is a tobacco product; after a while, they become addicted to it. It is important for healthcare providers, especially nurses as health educators and advisors, to evaluate the lifestyle behaviors of university students, determine the prevalence of unhealthy lifestyle behaviors among them, and support them to replace these behaviors with healthy lifestyle behaviors. The recent increase in the percentage of people smoking hookah presents a new challenge in the world in terms of the tobacco control community. A thorough search of the relevant literature yielded no study on the hookah smoking profiles of the university students in Sivas. Considering these as a starting point, this study aimed to determine the hookah smoking profiles of the university students in Sivas province and explore their perceptions about the harmful effects of hookah on health.

Methods

Study Design and Participants

This descriptive study was conducted in Turkey in all faculties and schools of Sivas Cumhuriyet University central campus. There are 16 faculties, 2 colleges, and 3 vocational schools in the central campus of the university. The population of the study included all graduate and undergraduate students enrolled in daytime education (28,972) in all faculties and colleges of Sivas Cumhuriyet University. According to the calculation with N=28,972, p=0.40, q=0.60, d=0.05, and t=2.58 by using the formula N=Nt2pq/(N-1) d2+t2pq, the study sample was calculated as 625. The stratified random sampling method was used as the sampling method.

Procedure

Each school was considered a stratum. The number of students to be sampled from each stratum was determined in proportion to the total number of students in those schools. The number of students to be included in the sample from each class was determined by dividing the total number of students to be taken from the school by the number of classes in that school. After determining the number of students to be taken from each class, the students to be included in the sample were selected from the student lists using the simple random sampling method. The sample (625 students) also represents 21% of the population. The data were collected by the researcher between February 5 and May 5, 2018, by distributing questionnaires and scale forms to the students in the classroom environment and having them fill the forms. It took approximately 10-15 minutes for the students to fill out the forms.

Instruments

A total of 2 forms were used as data collection tools. The personal information form, developed by the researcher in light of the literature includes 29 questions about students' sociodemographic characteristics, cigarette smoking, and hookah smoking behaviors. The second form is the perception scale of effects of hookah use on health developed and validated by Cakmak and Cinar (2014). The scale is a 5-point Likert-type scale including 15 items. Each item is scored from 1 to 5, and the scores vary according to the answers. The minimum score to be taken from the scale is 15, and the maximum score is 75. The Cronbach alpha value of the scale was found to be 0.93. Higher scores indicate higher awareness about the health effects of hookah.

Statistical Analysis

The data obtained from the study were transferred to the computer environment and evaluated by the Statistical Package for Social Sciences for Windows 22.0 Statistics program. Means, numbers, and percentages were used to evaluate the sociodemographic data in the personal information forms, and Mann – Whitney U and Kruskal – Wallis H tests were used to evaluate the data obtained from the perception scale on the effects of hookah use on health. Chi-square test, Student's t-test, and 1-way analysis of variance were used for the relationship between students' sociodemographic characteristics and their hookah smoking behaviors. Logistic regression analysis was used to determine the risk factors for students' hookah smoking. The significance level was set at $p<0.05$.

Ethical Considerations

Ethics committee approval was received for this study from the ethics committee of Sivas Cumhuriyet University (decision number: 30182376-044-E.293191), and written permission was obtained from the same university. The students selected for sampling were informed about the research before filling out the forms, and voluntary participation was ensured by obtaining their written and verbal consent. They were informed that they had the right to withdraw from the study at any time.

Results

Characteristics of the Students

Of the students participating in this study, 96.3% were between the ages of 18 and 25 years (21.25±2.16 years), 50.6% were males,

81.8% had equal income and expense, 74.4% had a nuclear family, and 57.1% lived in a dormitory.

Smoking Characteristics of Students

It was found that 40% of the students smoked 100 cigarettes (5 packs) in their lifetime, 37.3% still smoke, 63.1% of those who still smoke were males, and 74.4% started smoking cigarettes when they were 15 – 19 years old. The smoking frequency was found to be higher among the students studying in faculties not related to health (41.3%), male students (46.5%), students who defined their economic status as "income higher than expenses" (53.1%), students who had smokers in the family (44.4%), and students who had smokers in the circle of friends (43.9%) ($p<0.05$). No significant difference was detected among grade, age, family type, and smoking status ($p>0.05$) (Table 1).

Hookah Smoking Characteristics of Students

It was also found that 32.2% of the students smoked hookah, 65.2% of those who smoke hookah were males, 80.5% started to smoke hookah between the ages of 11 and 19 years, 74.6% were led into smoking hookah by their friends, 86.6% smoked hookah in cafes and hookah cafes. The students have smoked hookah for 3.59±2.23 years on average, 50.2% smoked hookah once a month, 99% preferred aromatic hookah, and 49.2% smoked hookah for more than an hour (Table 2). According to the sociodemographic characteristics of the students, hookah smoking was found to be higher in male students (41.5%), in those who reported that their income was higher than their expenses (43.8%), and in those who lived in a student house (51.5%) ($p<0.05$) (Table 3). It was revealed that 60.1% of cigarette smokers also smoked hookah, and there is a significant relationship between smoking cigarette and hookah ($p<0.05$) (Table 3).

Students' Thoughts on Hookah

It was found that 86.4% of the students think that hookah is harmful to health, 32.1% believed that hookah is harmless or less harmful than cigarettes, 35.5% believed that hookah is not addictive, and 7.8% thought that hookah does not transmit infectious diseases (Table 4).

Table 1.
Smoking Status of Students According to Their Sociodemographic Characteristics

	Smoker		Nonsmoker		Total		Statistical analysis	
	Number	%	Number	%	Number	%	X^2	p
Faculty								
Faculties related to health	27	21.4	99	78.6	126	100.0	16.959	0.001
Faculties not related to health	206	41.3	293	58.7	499	100.0		
Grade								
Grade 1	75	34.9	140	65.1	215	100.0	1.439	0.697
Grade 2	79	38.7	125	61.3	204	100.0		
Grade 3	51	40.5	75	59.5	126	100.0		
Grade 4	28	35.0	52	65.0	80	100.0		
Sex								
Female	86	27.8	223	72.2	309	100.0	23.33	0.001
Male	147	46.5	169	53.5	316	100.0		
Age, years								
18 – 25	222	36.9	380	63.1	602	100.0	1.136	0.287
26 – 35	11	47.8	12	52.2	23	100.0		
Economic status								
Income lower than expenses	38	46.3	44	53.7	82	100.0	7.623	0.022
Income equal to expenses	178	34.8	333	65.2	511	100.0		
Income higher than expenses	17	53.1	15	46.9	32	100.0		
Family type								
Nuclear	171	36.8	294	63.2	465	100.0	0.548	0.760
Extended	51	37.8	84	62.2	135	100.0		
Fragmented	11	44.0	14	56.0	25	100.0		
Smokers in the family								
Yes	158	44.4	198	55.6	356	100.0	17.843	0.001
No	75	27.9	194	72.1	269	100.0		
Smokers in the circle of friends								
Yes	241	43.9	273	56.1	487	100.0	41.872	0.001
No	19	13.8	119	86.2	138	100.0		

Table 2.
Hookah Smoking Habits (n=201)

Do you smoke hookah?	**Number**	**%**
Yes	201	32.2
No	424	67.8
Hookah smokers		
Male	131	65.2
Female	70	34.8
Age of smoking hookah onset, years		
11 – 19	162	80.5
20 – 23	39	19.5
Why did you start smoking hookah?		
Circle of friends	150	74.6
Curiosity	26	14.4
At least 1 of 3 closest friends used it	13	6.5
Use of hookah among family members	7	2.4
Radio, television, computer, etc.	5	2.1
Where do you smoke hookah?		
Hookah cafe	94	46.7
Cafe	79	39.9
Home	14	6.7
Everywhere	14	6.7
Hookah smoking duration 3.59±2.23 years (minimum: 1; maximum: 15)		
Hookah smoking frequency		
Several times a month	101	50.2
Several times a week	47	23.4
Several times a year	42	20.9
Everyday	11	5.5
Preferred hookah type		
Aromatized	199	99.0
Dearomatized	2	1.0
Hookah smoking duration		
> 1 h	99	49.2
1 h	58	28.9
< 1 h	44	21.9

Students' Perceptions of the Effects of Hookah on Health According to Their Hookah Smoking Behaviors

The awareness about the harmful effects of hookah on health is higher in hookah smokers than in nonsmokers, in students who thought hookah is harmful to health than those who did not, in those who believed that hookah is addictive than those who did not, and in those who believed that hookah transmits infectious diseases than those who did not ($p < 0.05$) (Table 5).

According to the logistic regression analysis, cigarette smoking increases the likelihood of hookah smoking (odds ratio) by 3.05 times (95% [confidence interval]: 1.11 – 8.33). A 1-unit increase in their perceptions about the fact that hookah can transmit infectious diseases decreases the probability of hookah smoking by 75% ([1 – 0.25]´100). According to the regression analysis, students' age, gender, starting age of smoking hookah, thoughts about the effects of hookah on health, and ideas about addictive characteristics of hookah did not have a significant effect on their hookah smoking status ($p > 0.05$) (Table 6).

Discussion

In the research, the smoking frequencies of female students and male students were found to be 27.8% (86) and 46.5% (147), respectively. The smoking frequency of the students studying in faculties that are not related to health was found to be 41.3% (206), whereas the smoking frequency of the students studying in faculties that are related to health was 21.4% (27). The findings were similar to those reported in the literature, and the frequency of smoking was found to be more common in males than females and among those studying in health-related faculties than those not studying in health-related faculties (Akan et al., 2010; Demirel & Sezer, 2005, Ertekin Pinar et al., 2011; Kartal et al., 2012; Kutlu et al., 2005; Kutlu et al., 2009; Yengil et al., 2014). This suggests that receiving health education affects the smoking behavior in a positive way.

In the research, it was revealed that the smoking frequency was higher in students who had smokers in the family and their circle of friends. In other studies, the frequency of smoking was found to be higher in students whose family members were smokers (Caliskan, 2015; Ciftci et al., 2018; Mayda et al., 2007; Phiri et al., 2011; Yengil et al., 2014; Yuksek & Cucen, 2012). The research findings are similar to those in the literature, which suggests that the smoking behavior of students is associated with the presence of smokers in the family. In other studies, the frequency of smoking was found to be higher in students who have close smoker friends (Ciftci et al., 2018; Demirel & Sezer, 2005; Mayda et al., 2007; Ozcebe et al., 2014; Yazici & Sahin, 2005). The research findings are compatible with the literature, which confirms that having smoker friends is one of the important risk factors in smoking.

In the research, the smoking frequency was found to be higher in students who defined their economic status as "income higher than expenses." Ozcebe et al. (2014) reported that the smoking frequency was high in students who defined their socioeconomic status as "low." Capik and Cingil (2013) reported that economic status did not influence smoking frequency. Differences in findings in the literature regarding the relationship between economic status and smoking show that students from all the economic levels can have a smoking habit and that economic status is not a determinant in smoking behavior.

When the students' attitudes toward and thoughts about hookah were examined, it was found that 86.4% (540) of the students think that hookah is harmful, 38.1% (238) think that it is more harmful than cigarettes, 40.5% (253) think that it is addictive, 72.5% (453) think that it transmits diseases, and 72.3% (452) report that they had previously received information about the risks of cigarette and hookah. Similar to the findings of this study, other studies carried out with university students also revealed

Table 3.
Students' hookah smoking status according to Their Sociodemographic Characteristics (n=625)

	Hookah smoking status							
	Hookah smokers		Non – hookah smokers		Total		Statistical analysis	
Sociodemographic characteristics	**Number**	**%**	**Number**	**%**	**Number**	**%**	**X^2**	**p**
Age, years								
18-25	195	32.4	407	67.6	602	100.0	0.404	0.525
26-35	6	26.1	17	73.9	23	100.0		
Gender								
Female	70	22.7	239	77.3	309	100.0	25.315	0.001
Male	131	41.5	185	58.5	316	100.0		
Economic status								
Income less than expenses	34	41.5	48	58.5	82	100.0	6.376	0.041
Income equal to expenses	153	29.9	358	70.1	511	100.0		
Income greater than expenses	14	43.8	18	56.2	32	100.0		
Where do you live?								
In a dorm	101	28.3	256	71.7	357	100.0	21.090	0.001
With my family	47	28.5	118	71.5	165	100.0		
In a student house	53	51.5	50	48.5	103	100.0		
Smoking status								
Smoker	140	60.1	93	39.9	233	100.0	132.78	0.001
Nonsmoker	61	15.6	331	84.4	392	100.0		

Table 4.
Students' Views About the Harmful Effects of Hookah (n=625)

Is hookah harmful?	**Number**	**%**
Harmful	540	86.4
Harmless	48	7.7
No idea	37	5.9
Is smoking hookah or cigarette more harmful?		
Hookah is more harmful	238	38.1
Equally harmful	186	29.8
Hookah is less harmful than cigarettes	178	28.5
Hookah is harmless	23	3.6
Is hookah addictive?		
Hookah is addictive	253	40.5
Hookah is not addictive	222	35.5
No idea	150	24.0
Does hookah transmit infectious diseases?		
Hookah transmits infectious diseases	453	72.5
No idea	123	19.7
Hookah does not transmit infectious diseases	49	7.8

that students think that smoking hookah is less harmful than smoking cigarettes (Fevrier et al., 2018; Majeed et al., 2017; Muzammil et al., 2019; Nduaguba et al., 2016; Sezer et al., 2018). The findings of this study and literature reveal that smoking hookah is perceived as less harmful than smoking cigarettes in society. It can be thought that this perception in society may lead to a shift toward adopting the hookah smoking habit and thus increase the rate of smoking hookah in the future.

In this study, it was found that the prevalence of smoking hookah is significantly higher in students who live in a student house (51.5%, 53), in male students (41.5%, 131), and in those who defined their economic status as high (43.8%, 14). In a study by Danaei et al. (2017) on 1090 Iranian adults, it was found that the most preferred places for smoking hookah are cafes or restaurants (34.4%) and their friends' houses (36.8%) (Danaei et al., 2017). Ozcebe et al. (2014) found that the frequency of hookah smoking was higher among male students and among students who defined their economic status as good. Subasi et al. (2005) found that hookah is mostly smoked in cafes. It is thought that the increase in the prevalence of smoking hookah in proportion to the increase in economic status may be related to the fact that students can meet the price of hookah smoking more easily. Smoking hookah at cafes with friends and thus seeing it as a social activity are important risk factors in increasing the hookah usage among students. In addition, for students who live in student houses, staying away from family and peer influence can be said to be the determinants for the prevalence of smoking hookah.

This study found that the total average score of the students from the perception scale of effects of hookah use on health was 60.83±9.96 (minimum: 22; maximum: 75). This result shows that students' perceptions about the health effects of hookah are close to the maximum. Zengin and Cinar (2018) reported that the total

Table 5.
Average Scores from the Perception Scale of the Effects of Hookah Use on Health According to Students' Hookah Smoking Characteristics (n=201)

	Perception scale of the effects of hookah use on health	**Statistical analysis**
	M±SD	
Do you smoke hookah?		
Yes	57.45±9.832	KW=37.834
No	62.53±9.707	p=0.000
Preferred hookah type		
Aromatized	57.75±9.692	U=93.500
Dearomatized	43.00±18.385	p=0.187
Is hookah harmful to health?		
Harmful	61.88±9.364	F=28.349
Harmless	51.48±10.943	p=0.000
No idea	57.62±10.324	
Is smoking hookah or cigarettes more harmful?		
Hookah is harmless	51.57±12.591	KW=32.381
Hookah is less harmful than cigarettes	58.67±9.777	p=0.000
Equally harmful	61.88±9.803	
Hookah is more harmful	62.52±9.192	
Is hookah addictive?		
Hookah is addictive	64.74±8.837	F=47.179
Hookah is not addictive	56.43±9.734	p=0.000
No idea	60.74±9.385	
Does hookah transmit infectious diseases?		
Hookah transmits infectious diseases	62.16±9.572	F=21.008
Hookah does not transmit infectious diseases	53.53±11.698	p=0.000
No idea	58.81±9.053	

M±SD = XX; KW = XX; F = XX; U = XX.

average score of adolescents from the perception scale of effects of hookah use on health is 61.97±11.12. In the study by Cakmak and Cinar (2015), it was reported that the total average score of adolescents from the perception scale of effects of hookah use on health is 58.47±1.25. The findings of this study are similar to the findings of other studies. Most students had previously been informed about the harmful effects of hookah and cigarette, which is thought to be effective in their increased awareness of the harmful effects of hookah. The students who thought that hookah is harmful to health scored higher (61.88±9.36) from the perception scale of effects of hookah use on health than those who thought that hookah is harmless to health (51.48±10.94) and those who had no knowledge of its harmful effects (57.62±10.32). In addition, the students who thought that hookah is addictive showed higher scores from the same scale than those who thought that hookah is not addictive and those who had no idea. Cakmak and Cinar (2019) found that the average scale scores of adolescents who opted for "Hookah is harmful" were higher than the average scale scores of those who opted for "Hookah is harmless" and "I have no idea." Saravanan et al. (2019) reported that a large number of university students think that smoking hookah has no detrimental effects on health. In their study, Aktas et al. found that 68.0% of the students think that hookah smoking is less harmful to health than cigarette smoking (Aktas et al., 2018). In one study, Fevrier et al. (2018) found that 70.2% of students think that hookah is a safe alternative to cigarettes. In a study conducted by Alqahtani et al. (2019), 58.6% of the participants stated that hookah is less harmful than cigarettes, and 64.6% stated that hookah is less addictive than cigarettes. The literature and study findings revealed that students' perceptions are effective in their behaviors, and students who think of hookah as a harmful habit and addictive substance are more aware of its health effects.

The studies in the literature have reported similar findings. As students' level of knowledge and awareness about the harms of cigarettes and hookah increases, their perception of the harmful effects of hookah on health also increases. In this study, the students who thought that hookah transmits diseases showed higher scores (62.16±9.57) from the perception scale of effects of hookah use on health than those who thought that hookah

Table 6.
Logistic Regression Analysis of Risk Factors for Students' Hookah Smoking Status

							95% confidence Interval EXP(B)	
Independent variable	**B**	**SE**	**Wald**	**df**	**p**	**Exp (B)**	**Lower**	**Upper**
Age	0.272	1.200	0.051	1	0.821	1.312	0.125	13.790
Sex	0.543	0.540	1.011	1	0.315	1.722	0.597	4.964
Still smoking	1.116	0.512	4.749	1	0.029	3.053	1.119	8.333
Age of smoking hookah onset	– 0.178	0.117	2.335	1	0.127	0.837	0.666	1.052
Is hookah harmful?	0.115	0.646	0.031	1	0.859	1.121	0.316	3.976
Is hookah addictive?	– 0.250	0.498	0.252	1	0.616	0.779	0.293	2.068
Does hookah transmit infectious diseases?	– 1.386	0.699	3.934	1	0.047	0.250	0.064	0.984
Fixed				1				

B: regression coefficient; SE: standard error; Wald: Chi-square; df: degrees of freedom; p: significance level ($p<0.05$); Exp (B): odds ratio

does not transmit diseases (53.53±11.69) and those who had no idea (58.81±9.05). In the study by Cakmak and Cinar (2015), the average scale scores of the adolescents who opted for "Hookah transmits diseases" were found to be higher than the average scale scores of those who opted for "Hookah does not transmit disease" and "I have no idea." Fevrier et al. (2018) found in their study that 49.6% of university students do not think that "I can get herpes by sharing hookah." Kassem et al. (2019) found that 78.9% of hookah smokers shared their hookah with someone they knew. In accordance with the literature, the findings of this study showed that the students' perceptions of the effects of hookah on health increase as their level of knowledge and awareness about its harmful effects increases.

In this study, it was found that cigarette smoking increases the likelihood of hookah smoking by 3.05 times. This finding regarding the relationship between smoking cigarettes and smoking hookah is also supported by the literature findings emphasizing that smoking cigarettes is a gateway to smoking hookah (Alqahtani et al., 2018; Majeed et al., 2017; Sezer et al., 2018). Both our findings and literature findings revealed that the habit of hookah smoking should not be handled alone, and interfering with the smoking habit is the key to combating other tobacco products. Therefore, it is thought that the struggle against tobacco control should be continued effectively both in the world and in our country, and all the tobacco products should be taken into account in tobacco control.

In conclusion, the prevalence of hookah smoking was found to be high among university students. Although students' perception of the effects of hookah on health is generally high, it was found that hookah smoking students have lower perceptions of the effects of hookah on health than the nonsmokers. In addition, it was determined that smoking increases students' probability of smoking hookah by 3 times. These results show that raising awareness about the harmful effects of hookah, which is misperceived as less harmful than smoking cigarettes, is very important in tobacco control in the whole society, especially among the young population. The higher frequency of hookah smoking, especially among smoker students, indicates that the scope of tobacco control should be expanded to include not only cigarettes but also all tobacco products, especially hookah, which has become an increasingly common habit. Therefore, for effective tobacco control, training programs on "The Harms of Tobacco and Tobacco Products (Cigarettes and Hookah)" for the whole population, especially for the young population, should be developed by healthcare providers, especially by primary care workers and public health nurses.

Limitations and Directions/Suggestions for Future Research

The fact that the research was conducted in a single university is the limitation of the research. It is recommended that further studies on the same subject be carried out in different universities with larger sample groups.

Ethics Committee Approval: Ethics committee approval was received for this study from the Ethics Committee of Sivas Cumhuriyet University (decision number: 30182376-044-E.293191).

Informed Consent: Written and verbal voluntary consent was obtained from all participants who participated in the study.

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Genişletilmiş Özet

Giriş

Küresel olarak, her yıl 6 milyon ölüm tütüne atfedilmektedir. Sigaraya ek olarak, nargile içimi özellikle lise ve üniversite öğrencileri arasında daha popüler hale gelmiştir. Son yıllarda nargile, küresel tütün salgını ve önemli bir halk sağlığı sorunu olarak tanımlanmaktadır. Gençler, özellikle üniversite öğrencileri arasında bir salgın olan nargile, tüm dünyada ve Türkiye'de hızla popüler hale gelmektedir. Üniversite öğrencileri arasında nargile ile ilgili birçok yanlış algı vardır. Gençlerin çoğu nargileyi tütün ürünü olarak görmemekte ve nargilenin sağlık üzerinde herhangi bir zararlı etkisi olmadığını düşünmektedir. Birçok çalışma, öğrencilerin nargileyi sigaradan daha az zararlı buldukları sonucuna varmıştır. Bu da öğrencilerin nargile hakkında bilgi sahibi olmadıklarını ve nargilenin yeni bir tütün ürünü olarak pazarlandığını ve ciddi bir halk sağlığı sorununa neden olabileceğini kanıtlamaktadır. Küresel tütün salgını ve önemli bir halk sağlığı sorunu olan nargile içiminin azaltılmasında hemşirelerin önemli bir rolü vardır. Bir sağlık eğitimcisi ve danışmanı olan hemşirelerin, üniversite öğrencilerinin yaşam tarzı davranışlarını değerlendirmesi, sağlıksız yaşam tarzı davranışlarını belirleyerek bu davranışları sağlıklı yaşam tarzı davranışlarıyla değiştirmelerini desteklemeleri önemlidir. Literatür taramasında, Sivas ilinde üniversite öğrencileri arasında nargile kullanım profillerine ilişkin bir çalışmaya rastlanmamıştır. Bu noktadan hareketle; bu çalışmada, Sivas ilindeki üniversite öğrencilerinin nargile içme profillerinin ve nargilenin sağlığa olan etkileri konusundaki algılarının belirlenmesi amaçlanmıştır.

Yöntem

Tanımlayıcı tipte olan araştırma, Sivas Cumhuriyet Üniversitesi merkez kampüste yer alan tüm fakülte ve yüksekokullarda uygulanmıştır. Araştırmanın evrenini Sivas Cumhuriyet Üniversitesi merkez kampüste lisans ve ön lisansta birinci öğretimde okuyan tüm fakülte ve yüksekokul öğrencileri (28972) oluşturmuştur. Evrenin bilindiği formül kullanılarak yapılan hesaplamaya göre toplam 625 öğrenci örnekleme alınmıştır. Örneklem yöntemi olarak tabakalı rastgele örneklem yöntemi kullanılmış ve her bir okul bir tabaka olarak kabul edilmiştir. Her bir tabakadan örnekleme alınacak öğrencilerin sayısı, o okullarda yer alan toplam öğrenci sayısına göre orantılı olarak belirlenmiştir. Her bir okuldan alınacak örneklem sayısı kadar öğrenciye ise; okuldan alınacak toplam öğrenci sayısı, o okulun toplam sınıf sayısına bölünerek her sınıftan orantılı olarak ulaşılmıştır. Veri toplama aracı olarak araştırmacı tarafından literatür taranarak oluşturulmuş Kişisel Bilgi Formu ve Çakmak ve Çınar (2014) tarafından geliştirilip geçerlilik ve güvenirliği yapılmış olan Nargilenin Sağlığa Etkileri Algı Ölçeği kullanılmıştır. Ölçek, 15 maddeden oluşan 5'li likert tipi ölçektir. Ölçekten alınabilecek minimum puan 15, maksimum puan 75'tir. Ölçeğin Cronbach Alpha değeri 0,93 olarak bulunmuştur. Puanın yüksek olması nargilenin sağlığa etkileri ile ilgili algının iyi olduğunu göstermektedir. Araştırmanın verileri 5 Şubat-5 Mayıs 2018 tarihleri arasında toplanmıştır. Araştırmadan elde edilen veriler SPSS 22.00 İstatistik programı aracılığıyla değerlendirilmiştir. Verilerin değerlendirilmesi için ortalama, sayı ve yüzdelik, Mann-Whitney U ve Kruskal Wallis-H testleri, ki kare testi, Student t testi ve tek yönlü varyans analizi (ANOVA), öğrencilerin nargile içme durumları için risk faktörlerinin belirlenmesinde Lojistik Regresyon Analizi kullanılmıştır. Anlamlılık düzeyi, $p<0,05$ olarak kabul edilmiştir. Araştırma yapılmadan önce, etik kurul onayı ve araştırmanın yapılacağı kurumdan yazılı izin alınmıştır.

Bulgular

Araştırmaya katılan öğrencilerin %96,3'ü 18-25 yaş arasında ve yaş ortalaması 21,25±2,16 yıl olup, %50,6'sı erkek, %81,8'inin geliri giderine denktir. Öğrencilerin %32,2'sinin nargile içtiği, %65,2'sinin erkek olduğu, nargile içen öğrencilerin %80.5'inin 11-19 yaş arasında ilk kez nargile içmeye başladığı, %74,6'sını nargile içmeye arkadaş çevresinin yönlendirdiği, öğrencilerin %32,1'inin nargilenin zararsız ya da sigaradan daha az zararlı olduğunu düşündüğü, %35,5'inin nargilenin bağımlılık yapmadığını ve %7,8'inin nargilenin hastalık bulaştırmadığını düşündüğü belirlenmiştir. Nargile kullanımının erkek öğrencilerde (%41,5), ekonomik durumunu gelir giderden fazla olarak tanımlayan öğrencilerde (%43.8) ve öğrenci evinde kalan öğrencilerde (%51,5) daha yüksek olduğu belirlenmiştir ($p<0,05$). Sigara içen öğrencilerin %60,1'inin nargile içtiği, sigara içme ile nargile içme arasında anlamlı bir ilişki olduğu belirlenmiştir ($p<0,05$). Lojistik regresyon analizine göre, öğrencilerin halen sigara içiyor olmalarının nargile içme olasılığını (odds oranını) 3,053 kat artırdığı (%95 GA: 1,119-8.333) saptanmıştır. Nargilenin bulaşıcı hastalık yapması konusundaki düşüncelerinde bir birimlik algı artışı öğrencilerin nargile içme olasılığını %75 [(1-0,250)*100)] düşürmektedir.

Tartışma

Çalışmaya katılan öğrencilerin %32,2'sinin nargile içtiği, nargile içenlerin %65,2'sinin erkek ve %34,8'inin kız öğrenci olduğu saptanmıştır. Öğrencilerin %86,4'ü nargilenin zararlı olduğunu, %38,1'i sigaradan daha zararlı olduğunu, %40,5'i bağımlılık yaptığını, %72,5'i hastalığı ilettiğini ve % 72.3'ü sigara ve nargile riskleri hakkında bilgi aldıklarını bildirmiştir. Üniversite öğrencilerine yönelik yürütülen diğer çalışmalarda da çalışma bulgularıyla paralel olarak öğrencilerin nargile içmeyi sigara içmeye nazaran daha az zararlı buldukları ortaya çıkmıştır. Çalışma ve literatür bulguları, toplumda nargilenin sigaradan daha az zararlı bir madde olarak kabul gördüğünü ortaya koymaktadır. Toplumdaki bu algının, sigara içenlerin nargile içme alışkanlığına doğru bir geçiş yapmasına ve dolayısıyla gelecekte nargile içme oranlarının artmasına yol açabileceği düşünülebilir.

Çalışmada öğrenci evinde kalan (%51,5) ve ekonomik durumunu yüksek olarak tanımlayan öğrencilerin (%43,8) nargile içme sıklığı anlamlı olarak yüksek bulunmuştur. Ekonomik durum yükseldikçe nargile içme sıklığının artmasının, öğrencilerin nargilenin ücretini

daha rahat karşılayabilmeleri ile ilişkili olabileceği düşünülmektedir. Nargile kullanımının yaygınlaşmasında, kafelerde arkadaşlarla beraber içilmesi ve bu anlamda sosyal bir aktivite olması önemli bir risk faktörüdür. Ayrıca öğrenci evlerinde kalan öğrencilerin aile birlikteliğinden uzaklaşmasının, çevre ve arkadaş etkenlerinin nargile içme sıklığı üzerinde belirleyici olduğu söylenebilir.

Çalışmada öğrencilerin Nargilenin Sağlığa Etkileri Algı Ölçeğinden aldıkları toplam puan ortalamasının 60,83±9,96 (Min:22; Max:75) olduğu saptanmıştır. Bu sonuç öğrencilerin nargilenin sağlığa etkileri ile ilgili algılarının yükseğe yakın düzeyde olduğunu göstermektedir. Çalışma bulguları, diğer çalışmaların bulgularına benzerdir. Çalışmaya katılan öğrencilerin nargilenin sağlığa etkilerine yönelik algılarının yükseğe yakın düzeyde olmasında, öğrencilerin büyük çoğunluğunun nargile ve sigaranın zararları hakkında daha önce bilgi almış olmalarının etkili olduğu düşünülmektedir.

Çalışmada nargilenin sağlığa zararlı olduğunu düşünen öğrencilerin (61,88±9,36), zararsız olduğunu düşünen (51,48±10,94) ve zararı konusunda bilgisi olmayan öğrencilere (57,62±10,32) göre Nargilenin Sağlığa Etkileri Algı puanlarının daha yüksek olduğu saptanmıştır. Nargilenin bağımlılık yaptığını düşünen öğrencilerin, nargilenin bağımlılık yapmadığını düşünen ve bu konuda bilgisi olmayan öğrencilere göre Nargilenin Sağlığa Etkileri Algı puanlarının da daha yüksek olduğu belirlenmiştir. Literatür ve çalışma bulguları öğrencilerin algılarının davranışları üzerinde etkili olduğunu, nargileyi zararlı bir alışkanlık ve bağımlılık yapıcı bir madde olarak düşünen öğrencilerin sağlık üzerindeki etki algılarının daha yüksek olduğunu ortaya koymaktadır.