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The relationship of the smoking status of students in the school of health and vocational school of health services with the dependent personality trait

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Abstract

The purpose of this study is to investigate the relationship between the smoking prevalence and dependent personality trait of the students receiving health education in Bitlis Eren University. The students who were enrolled in and were continuing to attend Bitlis Eren University School of Health and Vocational School of Health Services in the 2011-2012 academic year were selected in the sample. The questionnaires were applied to the students under supervision between December 2011 and January 2012. The mean age of 413 students participating in the study was 20.8, and 49.9% of them were male, and 50.1% were female. While the smoking rate was 29.8% in the sample group, this rate was 45.6% in the male students and 14% in the female students. When the smokers and those who quit smoking were assigned to a group and compared with those who never smoked, the dependent personality scores of the students who were smoking or quit smoking were lower than those who never smoked before ($p < 0.05$). 48.8% of the students with dependent personality were the smokers, and those who quit smoking and 51.2% of the students were never smoked. As a result, it was observed that the smoking prevalence in university students receiving education in the health field was similar to the general population, and the smoking status was related to the dependent personality trait.

Keywords: Bitlis Eren University, smoking, dependent personality, university students

Introduction

Although tobacco use is a common type of addiction, the substances in its smoke have negative effects on human health, and therefore it becomes one of the most important and preventable public health problems of the world and Turkey [1]. According to the Turkey Report of Global Adult Tobacco Survey (2010), 31.2% of adults aged 15 years and over (approximately 16 million people) are smokers. The smoking rate is higher in males (47.9%) than females (15.2%). Approximately 12 million men and 4 million women smoke, and almost half of men (43.8%), and 11.6% of women smoke every day [2]. In the bulletin of the Turkish Health Survey 2016 of the Turkish Statistical Institute (TSI), the rate of the people who smoke every day is reported to be 27.3% in 2014 and 26.5% in 2016. This ratio was 40.1% in men and 13.3% in women in 2016 [3].

Nicotine in tobacco is a toxic, mutagenic, pharmacologically active, and carcinogenic substance causing high addiction due to its compounds. Tobacco use is one of the most important risk factors for many diseases, including chronic diseases, cancer, lung diseases, and cardiovascular diseases [4]. Today, smoking is associated with mental illnesses. It has been reported that smoking addiction is higher in individuals with psychiatric problems such as schizophrenia, depression, and anxiety disorder [5].

In ICD-10 (International Classification of Diseases), the section of mental and behavioral disorders associated with psychoactive substance use also includes the disorders caused by tobacco use [6]. In DSM-IV (The Diagnostic and Statistical Manual of Mental Disorders Fourth Edition), nicotine addiction is classified under the title of quitting nicotine in mental disorders associated with psychoactive substance use and psychoactive substance use disorder [7].

It is known that tobacco dependence is a global public health problem due to illness, disability, death, economic, environmental, and social damages. Scientific studies on cigarette addiction are important to shed light on the studies to combat tobacco addiction.

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This study was conducted to determine the smoking prevalence in the students of School of Health and Vocational School of Health Services in Bitlis Eren University, as well as the nicotine addiction level according to Fagerström Test for Nicotine Dependence (FTND) and their relationship with the dependent personality trait.

Material and Methods

This study was a cross-sectional and descriptive study. The population of the study was composed of 1st, 2nd, 3rd and 4th-year nursing, 1st and 2nd-year Child Development, 1st and 2nd-year Medical Laboratory, and 1st, and 2nd-year Pathology Laboratory Techniques students enrolled in the School of Health and Vocational School of Health Services in Bitlis Eren University in the 2011-2012 academic year. The researchers applied the questionnaire to 413 (91,3%) out of 452 students studying in Health School of Bitlis Eren University during the fall semester of the 2011-2012 academic year under observation.

The Ethics Committee approval of the study was obtained. Approval was received via the decision of Bitlis Eren University Ethics Committee Directorate dated 01.11.2011 and numbered 2011/153. A pre-test was carried out before the research. Before conducting the study, permissions from the Rectorate of Bitlis Eren from University and Directorates School of Health and Vocational School of Health Services were obtained, and the students who would fill out the questionnaires were informed about the purpose of the study. After conducting the preliminary test of the questionnaire between 14 and 25 November 2011, the questionnaire was applied under supervision between December 2011 and January 2012. In the questionnaire, there are 29 questions including six questions constituting the Fagerström Test for Nicotine Dependence along with the questions about the socio-demographic characteristics of the students as well as eight questions determining the dependent personality trait in SCID II Questionnaire. SCID II Personality Questionnaire was developed by Spitzer and Williams in 1985. It is a form consisting of 120 questions prepared according to diagnostic criteria of personality disorders found in DSM-III-R classification. In this form, 5 and more items answered as “yes” are taken into evaluation. Soria et al. conducted its Turkish translation., in 199, and its validity and reliability study was conducted by Coskunol et al., in 1994 [8,9]. The Statistical Package for the Social Sciences (SPSS) 17.0 packaged software was used to assess the data. Percentage distribution and chi-square significance test were used for the statistical analysis. Mann Whitney U test was used for comparison of two groups since the data do not have a normal distribution and Kruskal Wallis Analysis of Variance tests were used for the comparison of three groups. Correlation of the sum of the total points indicating the dependent personality disorder in SCID II Questionnaire and an overall score of the Fagerström Test for Nicotine Dependence was analyzed by Spearman's rank correlation analysis. $P < 0.05$ values were considered statistically significant. Cronbach Alpha is 0.843.

Results

Of the students participating in the study, 206 (49.9%) were male, and 207 (50.1%) were female. The minimum age of the students was 17, and their maximum age was 37 (Average:20.8±2.7). Of the students participating in the study, 228 (55.2%) were studying in the nursing department, 70 (16.9%) in child development department,

54 (13.1%) in medical laboratory techniques department, 45 (10.9%) in pathology laboratory department, and 16 (3.9%) in the first and emergency aid department. Of the students, 176 (42.6%) were the 1st-year students, 140 (33.9%) were the 2nd-year students, 47 (11.4%) were the 3rd-year students, and 50 (12.1%) were the 4th-year students (Table 1).

Table 1. Sociodemographic characteristics

	n	%
Gender		
Female	207	50.1
Male	206	49.9
Department		
Nursing	228	55.2
Child Development	70	16.9
Medical Laboratory Techniques	54	13.1
Pathology Laboratory Techniques	45	10.9
First and Emergency Aid	16	3.9
Class		
1	176	42.6
2	140	33.9
3	47	11.4
4	50	12.1

Table 2. Results related to smoking and quitting

Current Smoking Status	n	%
Those who never smoked	274	66.3
Those who were smoking	123	29.8
Those who quit	16	3.9
Total	413	100.0
Starting period		
Primary School	11	8.9
Secondary School	19	15.4
High School	61	49.6
University	32	26.0
Total	123	100.0
Worry of the Smokers about their Health (According to their reports)		
A lot	34	27.6
Quite	24	19.5
A little	41	33.3
None	24	19.5
Total	123	100.0
Quitting time of those who have quit smoking		
Less than 6 months	10	62.5
Between 6 months-1 year	1	6.3
More than one year	5	31.3
Total	16	100.0
Reason for quitting		
Disease concern	10	62.5
The effect of family, friends, and environmental	3	18.8
Worry about being dependent	1	6.3
Smell of cigarette	1	6.3
Economic reasons	1	6.3
Total	16	100.0
Quitting Type		
By themselves – without any medication (No other option was marked)	16	100.0

Of the students who participated in the study, 274 (66.3%) never smoked before, 123 (29.8%) were current smokers, and 16 (3.9%) quit smoking. Of the students who participated in the study, 11 (8.9%) started smoking in primary school period, 19 (15.4%) in secondary school period, 61 (49.6%) in high school period, and 32 (26%) in university period. When the health concern statuses of the smokers were examined, 34 (27.6%) of them had a lot, 24 (19.5%) had quite, and 41 (33.3%) had some concerns. 24 (19.5%) stated that they had no concerns. Of those who have quit smoking, 10 (62.5%) stated that they quit for less than six months, 1 (6.3%) between 6 months and one year, and 5 (31.3%) more than one year. Of those who had quit smoking, 10 (62.5%) stated that they quit smoking due to disease concern, 3 (18.8%) due to the effect of family, friend, and environmental, 1 (6.3%) due to the addiction concern, 1 (6.3%) due to the smell of the cigarette, and 1 (6.3%) because of economic reasons. All of 16 (100%) students who quit smoking indicated that they quit smoking by themselves (Table 2).

Of the students who were smoking and quit smoking, 65 (46.8%)

started to smoke due to family, friend, environmental effect, wannabe, curiosity, and proving themselves, 53 (38.1%) due to stress, problems, seeing benefits, and 21 (15.1%) due to pleasure and enjoying reasons (Table 3).

Table 3. The reason to start smoking

The reason to start smoking	n	%
Family, friend, environmental effect	28-90	48.87±7.54
Wannabe, Curiosity, proving him/herself	65	46.8
Stress, problems, seeing the benefit	53	38.1
Enjoy, pleasure	21	15.1
Total	139	100.0

When those who were smoking and quit were considered together, there was a statistical difference between smoking status and the status of having a dependent personality in students ($p=0.026$) (Table 4).

Table 4. Comparison of smoking status in terms of having a dependent personality (in the group who were smoking and quit)

	Those who were smoking and quit		Those who never smoked		Total	
	n	%*	n	%*	n	%**
With dependent personality	21	48.8	22	51.2	43	10.4
Without dependent personality	118	31.9	252	68.1	370	89.6
Total	139	33.7	274	66.3	413	100

X²=4.954 sd:1 p=0.026 * row % **column %

The Fagerström score of the male students who participated in the study was significantly higher than the Fagerström scores of female students ($p=0.001$) (Table 5).

The age of those who never smoked was lower than those who smoked and quit ($p=0.001$) (Table 6).

Table 5. Comparison of Fagerström Scores based on gender

Gender	n	AM	SD	P
Male	94	3.4	2.7	0.001
Female	29	1.4	1.9	

Mann-Whitney U:755.000, +Fagerström test is Max 10 points, AO: Arithmetic mean, SS: Standard Deviation

Table 6. Comparison of ages according to smoking status

Smoking status	N	AM±SD
Smoking	123	21.5±2.8
Quit	16	21.2±2.4
Never smoked*	274	20.5±2.5

Kruskal Wallis X²: 17.096, p:0.001, AM: Arithmetic mean, SD: Standard Deviation, *The group that created the difference with Mann Whitney U test in binary comparisons

As is seen in the table, 33 (78.6%) of the students who were drinking alcohol stated that they were smoking, 2 (4.8%) quit smoking, and 7 (16.7%) never smoked before. Of the students who did not drink alcohol, 90 (24.3%) stated that they were smoking, 14 (3.8%) have quit smoking, and 267 (72%) never smoked before. The difference between the smoking status and the status of drinking alcohol in the students was statistically significant ($p=0.001$) (Table 7).

Table 7. Comparison of smoking status by the status of drinking alcohol

	Smoking		Quit smoking		Never smoked		Total	
	n	%*	n	%*	n	%*	n	%**
Drinking	33	78.6	2	4.8	7	16.7	42	10.2
Not drinking	90	24.3	14	3.8	267	72.0	371	89.8
Total	123	29.8	16	3.9	274	66.3	413	100.0

X²=54.856 sd:2 p=0.001 * row % **column %

There was no statistically significant correlation between the addiction scores and Fagerström scores of the participants ($p=0.756$) (Table 8).

Table 8. The relationship between dependence scores and Fagerström scores

	Correlation	Dependence score	Fagerström
Dependent personality score	Spearman correlation coefficient (r)	1.000	-0.028
	P		0.756
	N	413	123
Fagerstrom	Spearman correlation coefficient (r)	-0.028	1.000
	P	0.756	
	N	123	123

Discussion

Of the students who participated in the present study, 274 (66.3%) never smoked, 123 (29.8%) were still smokers, and 16 (3.9%) quit smoking. 2010 Turkey Report of Global Adult Tobacco Survey points out that 31.2% of the adults aged 15 years and over in Turkey are current smokers [2]. According to the results of TSI Turkey Health Survey 2016, the rate of individuals who smoke every day was 27.3% in 2014, and 26.5% in 2016 and this rate was 40.1% in men and 13.3% in women in 2016 [3]. The results of the present study showed similarity with the overall smoking prevalence in Turkey, and this also revealed that receiving health education did not prevent smoking in students [10-12]. The rate in the study of Göktahtay and Kılıç is quite higher than the rate found in the present study and also higher than the rates reported in Turkey [13,14]. However, there are also lower rates than those found in the present study [15,16]. WHO reports that 22% of the population over 15 years of age in the world are using tobacco [17]. The result of the present study (29.8%) is higher than the smoking rate of the world population. In the MPOWER 2011 Report, it is seen that the smoking prevalence of health students in Egypt, Brazil, India, Thailand and Vietnam listed in 14 countries having the highest smoking prevalence and including Turkey is lower compared to Turkey [18]. When the accessed studies conducted in the world are examined, the rates found in the present study are similar with Lebanon, Lithuania, Serbia, Slovakia, Chile, Costa Rica, Cuba, Peru, Uruguay and Bangladesh, lower than Nigeria, Albania, Bosnia-Herzegovina, Croatia, Kyrgyzstan, Russia, Argentina, Bolivia, and Mexico, and very higher than Algeria, Kenya, Uganda, Egypt, Gaza Strip, Iran, Iraq, Saudi Arabia, Sudan, Syria, Tunisia, Armenia, Czech Republic, Slovenia, Brazil, Guatemala, Jamaica, Panama, Paraguay, Indonesia, Myanmar, Nepal, Sri Lanka, Thailand, Cambodia, South Korea, Vietnam, Japan, America, and the UK [19-22].

Of the students who participated in the present study, 11 (8.9%) started smoking in primary school period, 19 (15.4%) in secondary school period, 61 (49.6%) in high school period, and 32 (26%) in university period. According to the Turkey Report 2010 of the Global Adult Tobacco Survey, the mean age of starting to smoke is 16.6 in men and 17.8 in women [2]. The age of starting to smoke corresponds to the high school period in the studies of Tanrikulu,

Mayda, Kutlu, Kılıç, and Gür [10,12,14,23,24]. In the present study, nearly half of the students started smoking in high school period, and this result is in parallel with the study results in the world and Turkey [15,25,26]. This rate reveals the importance of the studies to be conducted in preventing smoking and initiating a fight against smoking in adolescent age before students start smoking and become dependent. In their study, Kaya et al. reported that the depressive symptoms developing after quitting to smoke increased the risk of smoking again [27]. All of the students who quit smoking in the present study quit smoking by themselves. This may cause the person to be alone with his/her will and to start smoking again when the causes that will initiate smoking again appear in those who quit smoking without any professional help. Nonpharmacological treatment methods or medication may prevent recurrence of smoking when the situation that leads students to smoke again arise.

All of 16 (100%) students who quit smoking stated that they quit smoking by themselves. Similar to the present study, the self-quitting has had the highest rate in the studies found in the literature [11,25,28]. This may indicate that there are problems in terms of accessibility of professional assistance in the fight against smoking or the importance of professional assistance is not emphasized enough.

Of the students who were smoking and quit smoking, 65 (46.8%) stated that they started smoking due to family, friend, environmental effect, wannabe, curiosity, self-proving, 53 (38.1%) due to stress, problems, seeing benefits, and 21 (15.1%) due to pleasure and joy.

Social environment effect (family, friend, environmental effect, wannabe, curiosity), stress, problems, pleasure, joy are the most common starting cause of smoking determined in other studies mentioned above as in the present study [13-15,23-25]. The mentioned starting reasons can be asserted to be associated with the acceptance of young people in social environments, belonging to a group and friend pressure. These factors, which are effective for students to start smoking, can be prevented with the training.

When the participants who smoked and quit smoking were assigned into a group and compared with those who never smoked, dependent personality scores of those who were still smoking or quit smoking were lower than those who never smoked ($p=0.026$).

In the study conducted by Baysal et al., in Medical faculty students in Anadolu University using the dependent scale of Minnesota Multiphasic Personality Inventory, no statistically significant difference was found between the smoking status and dependent personality [29].

In the study conducted by Temel et al., to investigate the relationship between smoking and dependent personality properties of healthcare professionals using Minnesota Multiphasic Personality Inventory, the mean addiction score of the group who quit smoking was reported to be lower than the group who never smoked and the smoking group [30].

In the study conducted by Piper et al., in 2010, they reported that the risk of having psychiatric disorder was high in smokers compared to the non-smokers [31].

Psychological causes play an important role in starting smoking and addiction. Smoking usually begins in the adolescent period. Among the factors that affect adolescents to start smoking, dependent personality, inadequacy in coping with stress, lack of self-confidence, failure to say no, mental disorders with some personality disorders are also effective. Individuals with psychiatric problems have higher rates of smoking addiction than the general population. 50-80% of schizophrenic patients have smoking addiction [5].

In the study conducted by Nehir et al., with the nurses working in the city center of Manisa, having a mental disease that requires treatment caused 2.83 times higher risk in terms of past or present smoking status in nurses [32].

In the review study of McNeil on smoking and mental health, smoking was associated with many psychiatric disorders [33].

In another study conducted by Serman et al. in the United States and Greece, smoking, alcohol and substance use was determined to be higher in those who reported personality disorder than those who had no personality disorder [34].

In the study by Black et al., the rate of mood, anxiety, substance abuse, and personality disorders were reported to be high in smokers [35].

The fact that no correlation was found between smoking and dependent personality in the study by Baysal could be due to the small sample size. Other related studies support the results of the present study. This relationship may suggest that the individuals who are included in the smoking cessation program should be evaluated in terms of mental health along with the cigarette cessation treatment.

The Fagerström score of the men participating in the present study was significantly higher than the women ($p=0.001$). The results in the study by Boyacı and Öncel are similar to the present study [36,37].

The age of those who never smoked was lower than those who smoked and quit smoking ($p=0.001$). Studies of Sahin and Thompson support the results of the present study [21,28]

Of the students who were drinking alcohol and participated in the

present study, 33 (78.6%) were smoking, 2 (4.8%) quit smoking, and 7 (16.7%) stated that they have never smoked before. Of the students who did not drink alcohol, 90 (24.3%) were smoking, 14 (3.8%) quit smoking, and 267 (72%) never smoked before.

The difference between the alcohol usage and smoking statuses of the students was statistically significant ($p=0.001$). The related studies support the presence of a significant relationship between alcohol usage and smoking as in the present study [37,38].

There was no statistically significant relationship between the addiction scores and Fagerström scores of those who participated in the present study ($p=0.756$). In the study of Dierker, Gross, Piper, and Temel, a relationship was found between the addiction scores and Fagerström scores [30,31,39,40]. However, there was no correlation between addiction scores and Fagerström scores in the present study. As in the present study, Sahin did not found a significant relationship in his study [28]. This may be due to differences in the scales used or in the average age.

Conclusion

In our study, 45.6% of males and 14% of females were smoking in Health High School and Health Services Vocational School students. The fact that 26% of the students start smoking during their university years requires special efforts for this period. It is noteworthy that a high rate of 74% of those who started smoking before coming to university. All the students who quit smoking have left to themselves. Alcohol users are more than those who do not smoke. The relationship between smoking and dependent personality has been illuminating the personality characteristics of smokers. The results of this study are valuable for shedding light on smoking prevention and cessation studies. In our study, the similarity of smoking ratio with the general population is a problem that should be emphasized for the health students who are expected to be role models in the future. Smoking in alcohol users who are more than non-smokers may show that similar mechanisms may play a role in the etiology of addiction. Quitting smoking is a very difficult process. It is unacceptable for health students not to benefit from smoking cessation services.

As a result; smoking prevention and cessation studies; Student, family, social environment, health, and social services, media studies in cooperation with the comprehensive work. Smoking can be prevented through psychological counseling and educational and managerial studies. Information activities integrated into the education curriculum can be made. Psychological prevention studies can be given the ability to say no to smoking. Short public service advertisements can be made aware of the issue. Awareness can be provided for all smokers to use all smoking cessation services, especially for medico-social services.

Conflict of interest

The authors declare that there are no conflicts of interest.

Financial Disclosure

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Ethical approval

Approval was received via decision of Bitlis Eren University Ethics Committee Directorate dated 01.11.2011 and numbered 2011/153.

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