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THE RELATIONSHIP BETWEEN SMOKING STATUS AND TYPE D PERSONALITY AMONG STUDENTS OF THE FACULTY OF HEALTH SCIENCES

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ABSTRACT
Objectives behind the study was to investigate the association between type D personality and smoking status among students of health sciences in Eskişehir Osmangazi University. A cross-sectional descriptive study was conducted among 615 students of nursing, midwifery and management of health who had no communication problem and certain psychiatric diseases. Identification form and Type D personality scale were used in the study. The study was completed with the participation of a total of 615 students. Of the students, 77.4% were female, 3.1% had a fragmented family, 58.5% were studying at the department of nursery. Of the participant students, 20.8% were smoking and 60.2% had type D personality traits. There was no significant difference between the smoking status and presence of type D personality traits (p=0.686). The health sciences students in the present study did not choose to smoke despite their psychologically distressed personality traits. The environment is important for smoking and it is a negative reinforcement for the child to have a smoking role model of parents.

Keywords: Type D Personality, Smoking, Students of Health Sciences

INTRODUCTION
The frequency of tobacco products use is 27.1% in Turkey with the most commonly used tobacco product is being the cigarette (World Health Organization, 2016). Based on the number of cigarettes per day, one every 5 men and every 12 women are heavy smokers with an increasing frequency of smoking among young people (Turkey Public Health Agency, 2014; Ozcebe, 2008). Beginning and continuing the smoking for young people is influenced from the psychosocial structure of the individual, socioeconomic, cultural and behavioral effects of the family and the effects of friends, media and availability of the cigarette (Ozcebe, 2008).

Smoking prevention and cessation programs covering psychological, biological, social and pharmacological processes include interventions based on the needs and changes of the individuals (Tramontano *et al.,* 2016; Marcano *et al.,* 2012; Ozcebe 2008). Personality types allowing to understand the individuals, what and why they are doing, the limitations of individuals and the abilities and inabilities of the individuals can serve as a major determinant for the smoking prevention and cessation programs (Terracciano and Costa, 2004; Cui *et al.,* 2016; Grassi *et al.,* 2014; Leung *et al.,* 2013). Previous studies have showed that individuals who smoke cigarettes are extroverted individuals having neurotic personality features (He and Costa, 2004; Munafò *et al.,* 2007; Hakulinen *et al.,* 2015), while non-smokers have less responsibility and compliance with a higher level of anxiety and tension (Terracciano and Costa, 2004; Munafo *et al.,* 2007; Hakulinen *et al.,* 2015).

The term "distress" explains the exhaustion, anxiety and depression experienced by the individuals unable to develop coping methods for stress and concept of type D personality is named by the first letter of "distress" (Denollet *et al.,* 1996).

Individuals with type D personality are those usually having negative emotions against the situation and time, and supressing their behaviors and emotions in social events (Denollet *et al.,* 2006). Besides the previous studies reporting a relationship between type D personality and the risk of illness and death and the management of disease (Denollet *et al.,* 1996; Denollet *et al.,* 2006; Li *et al.,* 2016; Wu and Moser, 2014, Alçelik *et al.,* 2012), there are also some studies in the literature defining a relationship between

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smoking and stress (Lawrence and Williams 2016; Tate *et al.,* 1994; Capık and Cingil 2013). However, literature search revealed no studies examining the relationship between type D personality and smoking.

MATERİALS AND METHODS
This cross-sectional descriptive study was conducted at Faculty of Health Sciences in Eskişehir Osmangazi University, Eskişehir, Turkey. The study sample included 615 students from the departments of nursing, midwifery and management of health who had no communication problem or certain psychiatric diseases.

Data were collected by using identification form and Type D personality scale. Identification form includes a total of 22 items about socio-demographic characteristics and smoking status. Type D personality scale developed by Denollet *et al.,* (1996) aims to determine the characteristics of type D personality in individuals. The reliability and validity of the scale in Turkey has been established by Alcelik *et al.,* (2012). It is a 5-grade Likert-type scale (0-4 points) ranging from "false" to "true" and consists of a total of 14 items. The scale has two sub-dimensions of negative emotions and social suppression scored by the first and last 7 items, respectively with a total score of 0 to 28 for each sub-dimension. A score of 10 or over on each sub-dimension indicates the presence of type D personality traits (Alçelik *et al.,* 2012).

Before commencing the study, verbal and written approvals were obtained from ethical committee, faculty administration and students. Data collection for research started on March 1, 2016 and continued until March 20, 2016. Data were analyzed by using IBM SPSS 21.0 package program. The categorical data were expressed as frequency and percentage. Pearson chi-square, Yates chi-square and Fisher Exact chi-square analyses were used to test the difference between two groups. $P<0.05$ was set as the significance level.

RESULTS AND DISCUSSION
Results
The study was completed with the participation of a total of 615 students. Of the students, 77.4% were female, 3.1% had a fragmented family, 13.5% had a patriarchal family and 21.8% had a low income level of the students, 58.5% were studying at the department of nursery and only 0.5% reported that they are studying at this school for 5 years or more. Of the participant students, 20.8% were smoking and 60.2% had type D personality traits.

As seen in Table 1, smoking was significantly more common among males and among students whose parents were both smokers ($p<0.05$) (Table 1). There was no significant difference between the smoking status and the school department, educational year and family income level. Most of the students report that they have started the smoking in order to prove that they grew, to cope with the stress, to satisfy their curiosity, to enjoy, to keep in shape and/or to increase their popularity.

Type D personality traits were significantly more common among nursery students and those with a low level of income ($p<0.05$). On the other hand, there was no relationship between Type D personality traits and gender, educational years and family type (Table 2).

The academic average was 2.55±0.50 and 2.54±0.46 for students with and without type D personality traits respectively, with no significant difference between the two groups of students. There was no significant difference between the smoking status and presence of type D personality traits ($p=0.686$) (Table 3).

Discussion
This study evaluating the relationship between smoking status and type D personality traits in the students from school of health sciences found that 20.8% of the students were smoking and 60.2% had type D personality traits with no significant difference in having type D personality traits between smokers and non-smokers.

Previous studies in the field of Health Sciences in Turkey, smoking rates varies from 12.9% to 31.3% (Capık and Cingil, 2013; Pıçakçıefe *et al.,* 2007; Mayda *et al.,* 2007). Although it is expected for

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undergraduate students of health sciences to take care to have behaviors promoting the health, it is a paradoxical situation to continue to smoke.

Similar to our findings, the students studying at health sciences in our country have been reported to smoke because of peer influence, parental influence, curiosity, affectation, loneliness, anxiety and distress (Mayda *et al.,* 2007; Pıçakçıefe *et al.,* 2007; Çapık and Cingil, 2013).

In our study, smoking rate was higher in students whose both parents were smoking compared to all other students.

As noted in previous studies, the environment is important for smoking and it is a negative reinforcement for the child to have a smoking role model of parents and smoking friends having social and emotional sharing.

Thus, it is important to be cautious in behaviors for parents to transmit messages to their children and for students in their friendship.

Grassi *et al.,* (2014) have reported a negative relationship between smoking status and the positive personality traits associated with ability to cope with the negativity in life and future expectations (Grassi *et al.,* 2014).

Accordingly, Leung *et al.,* (2013) have found that easy-going individuals have more prone to cessation of smoking and better adapt to the smoking cessation programs. Lawrence and Williams (2016), and Tate *et al.,* (1994) have reported that smoking individuals are psychologically distressed and they smoke to reduce their anxiety and tension (Tate *et al.,* 1994; Lawrence and Williams, 2016). On the other hand, Tekin *et al.,* (2016) found no relationship between smoking status and type D personality traits among health professionals while emotionally exhausted and insentient individuals has been reported to exhibit type D personality traits.

In our study, although there was no difference in smoking status according to the type D personality traits, it is noteworthy that more than half of the young students (60.2%) exhibited type D personality traits. On the other hand, smoking rate was only 20.8%.

These findings suggest that the health sciences students in our study did not choose to smoke despite their psychologically distressed personality traits. These students should be examined in terms of coping with their stressful events as well as social support should be provided to these students by giving information to their counselor.

Otherwise, students with type D personality traits and who do not share their thoughts and feelings in the social field, have negative affectivity and are psychologically distressed (Staniute *et al.,* 2015) will fail in the management of stressful events with the lack of social support which will continue in a vicious cycle. The support and counseling given to the students in this regard will help to break this vicious cycle.

Several previous studies have reported a relationship between type D personality and suicidal attempts and low income level (Yoon *et al.,* 2015; Michal *et al.,* 2010).

Accordingly, type D personality traits were more common among students with a low income level in our study. On the other hand, individuals with type D personality have been reported to have increased risk of cardiovascular disease and psychiatric disease with a poor disease management (Denollet *et al.,* 1996; Denollet *et al.,* 2006; Wu and Moser, 2014; Yoon *et al.,* 2015; Michal *et al.,* 2010). Because of the differences in the study design, we did not find such kind of result.

However, this is risky for the future. On the basis of all these results, nurses having a major role and responsibility in the protection and maintenance of health should plan the necessary interventions in order to protect the young people having type D personality from above-mentioned diseases.

Conclusion

It is important in terms of preventing the possible diseases in the future to increase the awareness of health sciences students –who are aware of the relationship between disease and smoking but do not behave as- about the smoking cessation programs and to support the students exhibiting type D personality traits and high levels of anxiety.

Limitations of the Study

Main limitations are the reliance on self report measures Type D personality scale and smoking.

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Table 1: Descriptive Characteristics of the Students According to the Smoking Status

Characteristics	Smoking Status				p
	Yes		No		
	n	%	n	%	
Gender					
Female	74	15.5	402	84.5	<0.001
Male	54	38.8	85	61.2	
Department					
Nursery	75	20.8	285	79.2	0.679
Midwifery	32	19.2	135	80.8	
Health Management	21	23.9	67	76.1	
Educational Year					
1	19	13.5	122	86.5	
2	33	21.3	122	78.7	0.112
3	45	25.7	130	74.3	
4	30	21.3	111	78.7	
5 or more	1	33.3	2	66.7	
Family Type					
Nuclear	99	19.3	414	80.7	
Fragmented	7	36.8	12	63.2	0.07
Patriarchal	22	26.5	61	73.5	
Family Income Level					
Low	38	28.4	96	71.6	0.055
Moderate	75	18.5	330	81.5	
High	15	19.7	61	80.3	
Smoking Status of Parents					
Only the Mother	6	24.0	19	76.0	
Only the Father	44	20.3	173	79.7	0.001
Both Yes	27	38.8	44	62.0	
Both No	51	16.9	251	83.1	

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Table 2: The Relationship between Descriptive Characteristics of the Students and Presence of Type D Personality Traits

Characteristics	Type D Personality Traits				p
	Yes		No		
	n	%	n	%	
Gender					
Female	281	59.0	195	41.0	0.29
Male	89	64.0	50	36.0	
Department					
Nursery	232	64.4	128	35.6	
Midwifery	90	54.5	77	45.5	0.036
Health Management	48	53.9	40	46.1	
Educational Year					
1	94	66.7	47	33.3	0.167
2	92	59.4	63	40.6	
3	108	61.7	67	38.3	
4	75	53.2	66	46.8	
5 or more	1	33.3	2	66.7	
Family Type					
Nuclear	303	59.1	210	40.9	0.086
Fragmented	16	84.2	3	15.8	
Patriarchal	51	61.4	32	38.6	
Family Income Level					
Low	92	68.7	42	31.3	0.034
Moderate	239	59.0	166	41.0	
High	39	51.3	37	48.7	

Table 3: The Relationship between Smoking Status and Type D Personality Traits

Smoking Status	Type D Personality Traits				p
	Yes		No		
	n	%	n	%	
Yes	79	61.7	49	38.3	0.686
No	291	59.8	196	40.2	

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