

# A Screening Study on Alcohol Consumption Characteristics of Ordu University Students

## Ordu Üniversitesi Öğrencilerinin Alkol Tüketimi Üzerine Bir Tarama Çalışması

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### Abstract

**Objective:** Mental and sociocultural factors have an inarguable effect on substance use starting in adolescence. Thus, studies that are conducted to find out risk factors are very important.

**Material and Method:** CAGE (Cutdown, Annoy, Guilt, Eyeopener) scale was given to the students who have previously used alcohol for some times (consuming alcohol more than once) or still continuing to use alcohol and registered in Ordu University. The results were concluded from the answers of 779 students who agreed to answer the scale and met the aforementioned criteria. Univariate and multivariate logistic regression analysis was conducted to assess the characteristics that were thought to be associated with alcohol use.

**Results:** The results of the logistic regression analysis showed that the risk of having problems with alcohol use in students was 1.768 times higher in male students when compared with female students; 4.304 times higher in students staying with friends when compared with those staying with relatives. Moreover; risk of having problems related with alcohol consumption was found to be 2.115 times higher in students who had someone using substance among circle of friends.

**Conclusion:** It is very important to determine major factors stimulating, causing and increasing alcohol use in planning and imposing the future precautions to be taken for alcohol usage.

**Key words:** Addiction, adolescence, alcohol, student

### Özet

**Amaç:** Ruhsal ve sosyokültürel faktörlerin ergenlik döneminden başlayarak madde kullanımı üzerinde tartışmasız bir etkisi vardır ve bu nedenle risk faktörlerini bulmak için yapılan çalışmalar çok önemlidir.

**Gereç ve Yöntem:** Ordu Üniversitesi'ne kayıtlı olan, daha önce bir süredir alkol kullanan (bir kereden fazla alkol tüketen) ya da halen alkol kullanmaya devam eden öğrencilere, CAGE (Cutdown, Annoy, Guilt, Eyeopener) ölçeği uygulanmıştır. Sonuçlar, ölçeğe cevap vermeyi kabul eden ve yukarıda belirtilen kriterleri karşılayan 779 öğrencinin cevaplarından çıkarılmıştır. Alkol kullanımı ile ilişkili olduğu düşünülen özellikleri değerlendirmek için tek değişkenli ve çok değişkenli lojistik regresyon analizi yapılmıştır.

**Bulgular:** Lojistik regresyon analizinin sonuçları, erkek öğrencilerde alkol kullanımı ile ilgili sorun yaşamamanın kız öğrencilerle karşılaştırıldığında 1,768 kat, akrabalarda kalanlarla karşılaştırıldığında arkadaşlarıyla kalan öğrencilerin 4,304 katı olduğunu göstermiştir. Ayrıca, arkadaş çevresi arasında madde kullanan öğrencilerin alkol kullanımı ile ilgili sorun yaşama riski 2,115 kat daha yüksek bulunmuştur.

**Sonuç:** Alkol kullanımının planlanmasında ve kullanılmasında alınacak önlemlerin uygulanmasında ve kullanılmasında alkol kullanımını teşvik eden, yol açan ve artan ana faktörleri belirlemek çok önemlidir.

**Anahtar kelimeler:** Bağımlılık, adolesan, alkol, öğrenci

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## **Introduction**

Increase in alcohol consumption is an important health problem worldwide (1). There has been an increase in alcohol use and the problems caused by this in the last thirty years and this increase is at the same time proportional to the increasing amount of alcoholic drink worldwide (2). Alcohol use is a social problem which is very common in Turkey, too (3). Alcoholism starts at young ages and becomes chronic in most of the users (4). The most dangerous period in using substance for the first time is adolescence. During the beginning of substance use, the most preferred is alcohol (5).

In their study, Chorlian DB et al. stated that genetic and neurophysiological factors were age specific and associated with the development of the brain in adolescence (6). Substance use starting in adolescence has an undeniable effect on mental and sociocultural factors. For this reason, studies conducted to find out risk factors are very important (7). When the reasons for alcohol use are investigated; it can be seen that there are reasons such as using alcohol as a tool to overcome problems, the need to get a place in the social domain, to feel socially safe, to feel pleased emotionally and existing psychiatric symptoms (8,9).

It has been shown by studies that alcohol abuse, which has become an intermediary diagnostic category within the diagnosis range from “risky drinking” to alcoholism, has been shown to have a much lower validity and reliability when compared with the diagnosis of alcoholism. “Risky drinking”, which is a more emphasized concept recently, is defined as more than 14 standard drinks a week or more than 4 standard drinks at once for men, while it is defined as more than 7 standard drinks a week or more than 3 standard drinks at once for women. Standard drink is a unit which includes about 10 dr ethyl alcohol (10).

Various tests and tools have been developed to find out alcohol use disorders. Cutdown, Annoy, Guilt, Eye Opener (CAGE), Michigan Alcoholism Screening Test (MAST), Alcohol Use Disorders Identification Test (AUDIT) are only some of the tests used for this purpose (11).

In this study, alcohol consumption characteristics of an university students were tried to be found.

## **Material and Method**

### Research model

This study, which was conducted to find out whether students of Ordu University had problems about alcohol use, has a descriptive screening model.

### Universe of the study

Universe of the study consisted of students who were registered Ordu University during 2017-2018 academic year, used alcohol for some time (consuming alcohol more than once) or still continuing to use alcohol.

### Sample of the study

In the study, cluster sampling method was used to find out the sample. Since the number of students within the campus was limited for screening model; researchers tried to reach the whole universe with complete inventory technique. However, since the questionnaire was not filled in for various reasons (being abroad, being on leave, or not wanting to participate in the study) the sample of the study consists of 779 students.

### Data collection tool

The questionnaire used in the study was developed by the Ministry of Health Ordu Public Health Directorate specialists and conducted on high schools and their equivalents in Ordu province (Public Health Definitive Result Report 2016). The questions were updated so that they could become applicable to university students.

Before the questionnaire was applied; those applying the questionnaire were trained by experts.

In order to find out whether an individual has problems about alcohol use, a scale called CAGE (Cutdown, Annoy, Guilt, Eye Opener) was applied. Those who answered all four questions with “no” were coded as “0: no problems about alcohol use”, while those who answered at least one with “yes” were coded as “1: may have problems”.

Statistical Analyses

All statistical calculations were made with SPSS 22.0 V statistical program (SPSS Inc., Chicago, IL, USA). Chi-square analysis and Fisher’s exact test were used to find out whether the state of having problems with alcohol use differed according to some

sociodemographic features. Univariate logistic regression analysis was conducted to assess the characteristics associated with alcohol use. In these analyses, multi variable logistic regression analysis was conducted for variables which had a significance of less than  $p < 0,20$ . Research findings were given as OR or confidence interval (95%).

**Results**

Results of the study show that alcohol use related problems of students can differ in terms of their gender and lifestyle ( $p < 0.01$ ). Table 1 shows descriptive statistics and analysis results of whether university students have problems about alcohol use in terms of some socioeconomic characteristics or not.

**Table 1.** Problems about alcohol use in terms of socio-demographic characteristics [n(%)]\*

Characteristics	Problems about alcohol use		Total	$\chi^2$ -value	P-value
	None	May have			
<b>Gender</b>					
Female	189 (59.6)	128 (40.4)	317 (100)	14.656	<b>&lt;0.001</b>
Male	209 (45.2)	253 (54.8)	462 (100)		
<b>Are your parents separated?</b>					
Yes	40 (55.6)	32 (44.4)	72 (100)	0.742	0.389
No	344 (50.2)	341 (49.8)	685 (100)		
<b>Life-style</b>					
Living with family	108 (54)	92 (46)	200 (100)	12.093	<b>0.007</b>
Staying in dormitory	164 (51.3)	156 (48.8)	320 (100)		
With friends	105 (44.7)	130 (55.3)	235 (100)		
With relatives	19 (79.2)	5 (20.8)	24 (100)		
<b>Family’s income-expense</b>					
Income>Expense	70 (51.5)	66 (48.5)	136 (100)	0.842	0.656
Income=Expense	234 (51.8)	218 (48.2)	452 (100)		
Income<Expense	89 (47.8)	97 (52.2)	186 (100)		
<b>Place of secondary education</b>					
Village	9 (60.0)	6 (40.0)	15 (100)	7.191	0.126
Town	3 (30.0)	7 (70.0)	10 (100)		
District	123 (45.7)	146 (54.3)	269 (100)		
City centre	197 (52.7)	177 (47.3)	374 (100)		
Metropolis (İstanbul etc	54 (57.4)	40 (42.6)	94 (100)		

\*: Total n numbers are different since some of the participants did not answer some of the questions.

Alcohol use related problems of students differ in terms of the state of substance use among family and friends ( $p < 0.01$ ). Having individuals using substance increases students' problems related with using alcohol (table 2).

There were no significant differences in terms of having problems related with alcohol use ( $p: 0.131$ ). However, students in colleges had approximately 8% (56-48,2) higher lifelong alcohol use problems than faculty students.

According to univariate logistic regression analysis results, the risk for experiencing problems related with alcohol use in students was found 1,759 times higher in male students and 4,705 times higher in students staying with friends when compared with students staying with relatives (Table 3).

Among these sociodemographic characteristics, those except for parents' being separated and income level ( $p < 0,20$ ) were analyzed with multivariate logistic regression analysis and the results were given in Table 3. According to final model results of multivariate logistic regression analysis, the risk of having problems related with alcohol use in students was 1,768 times higher in male students when compared with female

students, 4,304 times higher in students staying with friends, 3,616 times higher in students staying in dormitory and 3,301 times higher in students staying with family when compared with students staying with relatives (Table 3).

According to univariate logistic regression analysis results, the risk for having problems related with alcohol use was found to be higher in the presence of substance users around. Students' risk of having problems related with alcohol use was 2,419 times higher in the presence of substance users in family and 2,087 times higher in the presence of substance users in the friend circle. Thus, all the characteristics found to be significant ( $p < 0,20$ ) were included in multivariate logistic regression analysis and the results of the study were given in table 4. According to the final model results of multivariate logistic regression analysis, the risk of having problems related with alcohol use in students was found to be 2,115 times higher when there were substance users in friend circle (Table 4). According to univariate logistic regression analysis results, the risk for having problems related with alcohol use in student was found to be 1,368 times higher in students studying in faculties.

**Table 2.** Problems about alcohol use in terms of some habits of family and friend circle [n(%)]\*

Characteristics	Problems about alcohol use		Total	$\chi^2$ -value	P-value
	None	May have			
<b>Cigarette use in the family</b>					
Yes	269 (48.6)	285 (51.4)	554 (100)	3.576	0.059
No	125 (56.1)	98 (43.9)	223 (100)		
<b>Alcohol use in the family</b>					
Yes	200 (52.9)	178 (47.1)	378 (100)	1.428	0.232
No	194 (48.6)	205 (51.4)	399 (100)		
<b>Substance use in the family</b>					
Yes	11 (30.6)	25 (69.4)	36 (100)	6.057	0.014
No	381 (51.6)	358 (48.4)	739 (100)		
<b>Cigarette use among friends</b>					
Yes	384 (50.3)	379 (49.7)	763 (100)	3.617	0.057
No	10 (76.9)	3 (23.1)	13 (100)		
<b>Alcohol use among friends</b>					
Yes	370 (50.1)	368 (49.9)	738 (100)	2.598	0.107
No	23 (63.9)	13 (36.1)	36 (100)		
<b>Substance use among friends</b>					
Yes	75 (37.3)	126 (62.7)	201 (100)	19.485	<0.001
No	318 (55.4)	256 (44.6)	574 (100)		

\*: Total n numbers are different since some of the participants did not answer some of the questions.

**Table 3.** Potential risk factors about students' problems related with alcohol use from sociodemographic characteristics in multivariate logistic regression model

Variables	B	S.H.	Wald	P-value	Exp (B)	95% CI for Exp (B)	
						Lower	Upper
<b>STEP 1 (Initial model)</b>							
Male	0.566	0.152	13.931	<0.001	1.761	1.308	2.371
Fixed	-0.350	0.117	8.922	0.003	0.705		
<b>STEP 2 (Final model)</b>							
Male	0.570	0.156	13.414	<0.001	1.768	1.303	2.398
Relative			8.31	0.040			
Family	1.194	0.532	5.035	0.025	3.301	1.163	9.369
Dormitory	1.285	0.526	5.969	0.015	3.616	1.289	10.139
Friends	1.459	0.530	7.595	0.006	4.304	1.524	12.151
Fixed	-1.632	0.525	9.671	0.002	0.196		

**Table 4.** Potential risk factors about students' problems related with alcohol use in terms of alcohol and substance use within family and friend circle in multivariate logistic regression model

Variables	B	S.H.	Wald	P-values	Exp (B)	95% CI for Exp (B)	
						Lower	Upper
<b>STEP 1</b>							
Substance use in friend circle	0.749	0.169	19.617	<0.001	2.115	1.518	2.946
Fixed	-0.225	0.084	7.131	0.008	0.799		

## Discussion

Students who begin university can start using alcohol due to many reasons (5). In their study of Ulukoca et al; they reported that the rate of alcohol use was higher in male students among Kırıkkale University (4). Tot et al. were studied on the prevalence of cigarette and alcohol use and related characteristics among Mersin University students; male/female rate was found as 2 and the result was statistically significant (12). Turhana et al. discussed the substance use, violence and some psychological characteristics in university students and the rate of alcohol use found higher in male students (13). Arslan et al. found the rates of having use an alcoholic drink at least once for life, having use alcoholic drink in the last month and getting drunk were found to be statistically significantly higher in male students when

compared with female students in the city center of Samsun (14). In our study, problems about alcohol use in male students staying with their friends was found to be higher when compared with other students. Univariate logistic regression analysis results were in parallel with the results of other studies conducted.

In their study Erhan et al. found a high rate of using alcohol in the students whose close friends have using alcohol, in the east of Turkey (15). Turhana et al. found that cigarette and alcohol use was higher in students whose father or brother using cigarette and alcohol (13). Again, in Tot et al.'s study, alcohol use was found significantly higher in students whose parents used alcohol (12). In our study, problems about alcohol use differs in terms of presence of substance use in family or around

friends of student and the results was found to be similar with other studies conducted.

Ulukoca et al. found the rate of cigarette, alcohol and substance use higher in male students and in students who have not good communication with their families. In the same study, cigarette and alcohol use was found higher in students whose families had high income (4). Another study compared the adolescents using alcohol in Australia and Holland; found a significant prevalent variation in adolescents who used alcohol most (16). In our study, no statistical difference was found between alcohol and their parents status, income levels and the place where they studied secondary school. It was thought that the parameters researched are changing according to the sociocultural status of the communities surveyed.

It has been reported that alcoholism starts and becomes chronic during young ages and in adolescence brain is more susceptible to substance use (4,5,6). Şafak et al. researched the association between the reason for alcohol use and anxiety susceptibility among university students and concluded that students with higher anxiety levels because of coping, adapting and socializing (17). When these reasons are taken into consideration, it is thought that these individuals use alcohol as a kind of self-meditation. Anxiety levels were not examined in our study; however, the fact that the risk of having problems about alcohol use was higher in college students, anxiety may be a factor in terms of education.

Toumbourou JW et al. found that the possibility of alcohol problems in young adults was higher in individuals who used alcohol in adolescence and presence of using alcohol around them (18). Trucco EM et al. supported the hypothesis that there are microsystems which influence the use of alcohol in adolescents. They examined neighbourhood, family and peer relations and used this as an ecological environment. They stated that these ecological models could be used in studies related with alcohol use (19).

The most risky group for alcohol use is adolescents. Alcohol used for various reasons has an undeniable relationship with spiritual and sociocultural factors. For this reason, it is important to find out students' socio-demographic characteristics and the factors that can cause alcohol use in terms of protecting the health of adolescents and the society.

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