



The investigation of drug or stimulant usage prevalence and related factors among university students in Mersin in Turkey

Tayyar Sasmaz, Aslıhan Ardiç Çobaner, Fügen Ozcanraslan, Murat Koç, Emel Bahar, Şenel Acar, Bengü Nehir Buğdaycı Yalçın, Derya Akıcı & Emine Öztosun

To cite this article: Tayyar Sasmaz, Aslıhan Ardiç Çobaner, Fügen Ozcanraslan, Murat Koç, Emel Bahar, Şenel Acar, Bengü Nehir Buğdaycı Yalçın, Derya Akıcı & Emine Öztosun (2022) The investigation of drug or stimulant usage prevalence and related factors among university students in Mersin in Turkey, *Journal of Substance Use*, 27:2, 168-173, DOI: [10.1080/14659891.2021.1916845](https://doi.org/10.1080/14659891.2021.1916845)

To link to this article: <https://doi.org/10.1080/14659891.2021.1916845>



Published online: 22 Apr 2021.



Submit your article to this journal [↗](#)



Article views: 219



View related articles [↗](#)











View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)



The investigation of drug or stimulant usage prevalence and related factors among university students in Mersin in Turkey

Tayyar Sasmaz ^a, Aslihan Ardiç Çobaner ^b, Fügen Ozcanraslan ^c, Murat Koç ^d, Emel Bahar ^e, Şenel Acar^f, Bengü Nehir Buğdaycı Yalçın ^g, Derya Akıcı ^g, and Emine Öztosun ^g

^aDepartment of Public Health, Mersin University Faculty of Medicine, Mersin, Turkey; ^bDepartment of Journalism, Mersin University Faculty of Communication, Mersin, Turkey; ^cNursing and Health Services Department, Toros University, Mersin, Turkey; ^dFaculty of Science and Arts, Çağ University, Mersin, Turkey; ^eDepartment of Office Management and Executive Assistance, Tarsus University, Mersin, Turkey; ^fDepartment of Psychiatry, Mersin University Faculty of Medicine, Mersin, Turkey; ^gFaculty of Medicine, Department of Public Health, Mersin University, Mersin, Turkey

ABSTRACT

Objective: This study aims to investigate the prevalence of drug use and related factors in university students. **Methods:** This study was carried out in Mersin, Turkey. Data forms were filled in by 1767 students.

Results: 905 (52.3%) of the 1767 participants were male. Their median age was 21.0, and 120 (6.8%) of the participants were found to have used drugs at least once in a life time; 77 (4.4%) of them once in the last year. The coefficients of the increase rates for having used drugs at least once in a lifetime can be listed as follows: Presence of friends in the social environment who use drugs, 10.55 times ($p < .001$); being an active smoker, 4.78 times ($p < .001$); active alcohol consumption, 13.36 times ($p < .001$). The following variables appear to be the coefficients of increase rates for using drugs at least once in the previous year: having somebody who uses drugs around, 12.71 times ($p < .001$); being an active alcohol consumer, 10.38 times ($p < .001$) and parental separation, 2.64 times ($p < .01$).

Conclusions: In this study it was determined that cigarette/alcohol use and the effects of social environment are the most important factors in drug use in university students.

ARTICLE HISTORY

Received 14 July 2020
Accepted 29 March 2021

KEYWORDS

Drug use; substance use; youth; students; university

Introduction

College years include an added level of stress upon young people including uncertainties about leaving home and family, adapting to a new environment, being a candidate for a profession, and finding a job eventually. This stage of life is a period when the youth are much more inclined to engaging in risky behavior and exposure to their negative consequences. The use of drugs/stimulants has an important place among the risky behaviors that threaten the stability of a young person's life. An important public health problem arises due to the prevalence of drug use among the youth, causing job losses, social problems, and various economic burdens (Tulchinsky & Varavikova, 2019).

Substance addiction affects not only the biological, psychological and mental state of the person, but also the social relationships and professional career negatively. Previous research reports that substance addiction harms socio-cultural and economic aspects of an individual's life (Polat, 2014). In addition to this, it is reported that the rates of theft, wounding, suicide, and other types of violence resulting in arrest and conviction increase among addicts (Tulchinsky & Varavikova, 2019).

In a study conducted among university students in Iran, the rate of cannabinoid use at least once in a lifetime was 7.1%, opium 5.5%, sedative-hypnotic drugs 6.9% and tramadol use 2.8% (Mozafarina et al., 2017). In another study conducted periodically in Belgium in 2005, 2009 and 2013, it was reported

that the rates of cannabis use at least once in a lifetime were 50.4%, 51.9% and 53.3%, respectively. These rate of using cannabis at least once in the previous year were reported to be 24.5, 23.0, and 19.2%, respectively (Van Wel et al., 2016). A study conducted with university students in Kosovo found that 16.0% of the students used drugs at least once in their lifetime (Gazibara et al., 2018). A similar study conducted with college students in Kırıkkale University, Turkey revealed that the drug trial rate at least once in a lifetime was 10.4%. In this study, drug use was found to be related with smoking, alcohol use and education level of the parents (Uluoca et al., 2013). A study conducted in Ege University, Turkey reported that 12.5% of university students used cannabis, 2.0% ecstasy, 0.6% cocaine and 0.1% heroin (Atlam & Yüncü, 2017). A similar study Aydın University reported that 7.5% of the students use drugs and the most used drug was cannabis (Güner, 2019).

This study aims to investigate the prevalence of drug or stimulant use and related factors in the students of Turkish universities in Mersin: Mersin University, Tarsus University, Çağ University and Toros University in the 2018–2019 academic year.

Materials and methods

With the approval from Mersin University Faculty of Medicine Clinical Research Ethics Committee, research permits were

obtained from the Rectorship of Çağ University, Mersin University, Toros University and Tarsus University. The study population consisted of a total of 50,499 students enrolled in these universities (Mersin University: 40,859, Tarsus University: 2029, Çağ University: 4658, Toros University: 2953). When population size is taken as 50,499, confidence interval as 95%, prevalence as 8%, margin of error as ± 1.5 and design effect as 1.0, the minimum sample size was calculated to be 1227. Since the number of the students of Tarsus, Çağ and Toros universities was less than the others, the number of students included from these universities was determined to be twice as much as the total number calculated. Each university determined the schools and classes that would participate in the study randomly. Only volunteers in the selected classes were included in the study.

A total of 1767 people from the four universities mentioned agreed to participate in our research. The dependent variable of the study is determined as the state of using a drug or stimulant in the last year and the last month, and independent variables were determined as the sociodemographic characteristics of the participants and the characteristics of their parents.

A literature review was conducted to prepare the data form to be used in the study. In the light of the literature, a data form consisting of two parts was prepared. In the first part, there was socio-demographic information about the student's age, gender, place of residence, monthly expenditure and parents. In the second part, there was information on their drug use. The pilot study of the data form consisting of 29 questions was conducted in Mersin University was not be included in the study.

The data were collected between March 15 and April 15, 2019. After the departments and classes to be included in the study had been determined randomly, the researchers informed the students about the study. The students who voluntarily accepted to participate in the study were given the data form and asked to fill in the forms themselves. Data control was performed after they were uploaded to the computer. In data analysis, the compatibility of continuous variables to normal distribution was checked with the Kolmogorov Smirnov test. Since continuous data were not suitable for normal distribution, they were given as Median (Minimum-Maximum). Categorical data were given as numbers and percentages (%). Mann Whitney U test was used in comparison of groups in univariate continuous data that did not conform to normal distribution and chi-square and Fischer's exact test were used to compare categorical variables. Binary Logistic Regression Model was used to determine risk factors. The significance level was accepted as $p \leq 0.05$ in all statistical analyses.

Results

A total of 1767 students, 1114 (63.0%) from Mersin University, 180 (10.2%) from Tarsus University, 189 (10.7%) from Toros University, and 284 (16.1%) from Çağ University participated in the study. It was determined that 52.3% of the participants in the study were male and the average age was 22.1 ± 3.2 ; 8.3% of the students were remedials; 86.2% of their parents were alive and lived together, and 13.2% of them worked in an income

generating job (Table 1). In addition, the average number of siblings included in the study was 3.5 ± 2.0 , and the monthly average expenditure was 1183 ± 940.2 TL.

It was determined that 120 (6.8%) of the students used drugs at least once in a lifetime and 77 (4.4%) of them once in the previous year. While 22.8% of the participants stated that it was impossible to access drugs and stimulants, 15.1% reported that it was very easy to access these substances. 24.6% of the students stated that they had a friend who used drugs around them (Table 2).

Cannabis was the most frequently used drug among those who used drugs at least once in a lifetime and in the past year, followed by ecstasy and volatile substances, respectively. It has been determined that the rate of those who used cannabis 10 times or more throughout their life was 33.9% and that of those who used ecstasy was 8.3%. The rate of those who used cannabis and ecstasy 10 times or more in the past year was

Table 1. Sociodemographic characteristics of the participants.

Variables	n	%
Gender (n = 1731)		
Female	826	47.7
Male	905	52.3
University (n = 1767)		
Mersin University	1114	63.0
Tarsus University	180	10.2
Toros University	189	10.7
Çağ University	284	16.1
Class (n = 1767)		
1st Class	579	32.8
2nd Class	505	28.6
3rd Class	422	23.9
4th Class	261	14.8
Grade Retention (n = 1733)		
Yes	143	8.3
No	1590	91.7
Parental Information (n = 1757)		
Alive, together	1514	86.2
Alive, separate	131	7.5
Others	112	6.4
With whom they live (n = 1717)		
Dormitory	521	30.3
Alone	131	7.6
With their family	707	41.2
With friends	358	20.9
Income generating occupation (n = 1762)		
Yes	232	13.2
No	1530	86.8
Mother's educational status (n = 1763)		
Illiterate	173	9.8
Primary school graduate	711	40.3
Secondary school graduate	302	17.1
High school graduate	409	23.2
University and above	168	9.5
Father's educational status (n = 1754)		
Illiterate	38	2.2
Primary school graduate	560	31.9
Secondary school graduate	342	19.5
High school graduate	512	29.2
University and above	302	17.2
Smoking habits (n = 1729)		
Active smoker	558	32.3
Quitter	133	7.7
Nonsmoker	1038	60.0
Alcohol consumption habits (n = 1738)		
Active alcohol consumer	678	39.0
Quitter	242	13.9
Non-alcohol-consumer	818	47.1

Table 2. Participants' attitudes and behaviors regarding drug use.

At least once in a lifetime (n = 1767)	n	%
Yes	120	6.8
No	1647	93.2
At least once in the past year (n = 1767)		
Yes	77	4.4
No	1690	95.6
Accessibility (n = 1745)		
Impossible	397	22.8
Very hard	92	5.3
Quite hard	107	6.1
Easy	261	15.0
Very easy	264	15.1
Don't know	624	35.8
Presence of a peer who uses drugs (n = 1739)		
Yes	424	24.4
No	1315	75.6
Education on drug harms (n = 1764)		
Yes	434	24.6
No	1330	75.4

Table 3. Frequency of drug use by drug types.

Drugs Used	At least once in a lifetime (n = 109*)			At least once in the past year (n = 72**)		
	Never %	1–9 times %	10 and above %	Never %	1–9 times %	10 and above %
Cannabis	7.3	58.7	33.9	6.9	75.0	18.0
Ecstasy	81.7	10.1	8.3	83.3	12.5	4.2
Volatile substance	88.1	17.5	3.6	86.1	9.8	4.2
Cocaine	85.3	11.9	2.8	91.7	7.0	1.4
Bonzai and its derivatives	88.1	9.2	2.7	88.9	9.8	1.4
Amphetamine	91.7	6.4	1.8	88.7	9.9	1.4
Heroin	91.7	7.3	0.9	95.8	4.2	-
Others	87.2	10.2	2.7	86.1	9.7	4.2

* 11 students who have used a substance at least once throughout their life did not answer this question, ** 5 students who have used a substance at least once in the past year did not answer this question.

18.0% and 4.2%, respectively. The frequency of using drugs is shown in Table 3.

In bilateral analysis, there was a statistically significant and reasonable relationship between the use of drugs at least once in a lifetime/in the past year and gender, university, grade retention, people with whom the participants lived, working in an income generating job, parents' coexistence, the presence of a friend who used drugs around, smoking and drinking alcohol ($p < .05$, Table 4). A statistically significant correlation was found between age, monthly average expenditure, the age of starting alcohol and starting smoking, and drug use at least once in a lifetime/in the past year ($p < .05$).

Variables with statistically significant relation in binary analysis were included in Binary Logistic Regression Model. After the analysis, it was determined that drug use at least once in a lifetime increased 10.55 times ($p < .001$) with the presence of a friend who used drugs around students; 4.78 times ($p < .001$) and 3.36 times ($p < .01$) for the active smokers and quitters, respectively; 13.36 times ($p < .001$) and 6.76 times ($p < .01$) for the active alcohol consumers and quitters, respectively; 2.55 times (<0.001) with friends living. The use of drugs at least once in the past year increased 12.71 times ($p < .001$) with the presence of a friend who used drugs around students,

Table 4. Categorical variables related to substance use at least once in a lifetime and in the past year.

Variables	Drug/Substance					
	At least once in a lifetime			At least once in the past year		
	n	%	p	n	%	p
Male (n = 826)	82	9.9	<0.001	49	5.9	<0.001
Female (n = 905)	35	3.9		25	2.8	
University;						
Mersin University (n = 1114)	83	7.5	<0.05	56	5.0	<0.05
Tarsus University (n = 189)	17	9.0		12	6.3	
Toros University (n = 180)	11	6.1		5	2.8	
Çağ University (n = 284)	9	3.2		4	1.4	
Grade Retention						
No (n = 1590)	95	6.0	<0.001	61	3.8	<0.01
Yes (n = 143)	22	15.4		13	9.1	
With whom they live						
Dormitory (n = 521)	21	4.0	<0.001	14	2.7	<0.001
Alone (n = 131)	12	9.2		8	6.1	
With their family (n = 707)	29	4.1		14	2.0	
With friends (n = 358)	55	15.4		38	10.6	
Income generating occupation						
Yes (n = 232)	30	12.9	<0.001	21	9.1	<0.001
No (n = 1530)	90	5.9		56	3.7	
Parental Information;						
Alive, together (n = 1514)	91	6.0	<0.01	55	3.6	<0.001
Alive, separate (n = 131)	18	13.7		15	11.5	
Others (n = 112)	8	7.1		4	3.6	
Mother's educational status;						
Illiterate (n = 173)	18	10.4	<0.05	13	7.5	>0.05
Primary school (n = 711)	34	4.8		21	3.0	
Secondary school (n = 302)	22	7.3		16	5.3	
High School (n = 409)	29	7.1		18	4.4	
University and above (n = 168)	16	9.5		8	4.8	
Presence of a peer who uses drugs;						
Yes (n = 424)	94	22.2	<0.001	64	15.1	<0.001
No (n = 1315)	24	1.8		12	0.9	
Smoking habits;						
Active smoker (n = 558)	87	15.6	<0.001	61	10.9	<0.001
Quitter (n = 133)	12	9.0		5	3.8	
Nonsmoker (n = 1038)	17	1.6		9	0.9	
Alcohol consumption habits;						
Active alcohol consumer (n = 678)	98	14.5	<0.001	66	9.7	<0.001
Quitter (n = 242)	15	6.2		7	2.9	
Non-alcohol-consumer (n = 818)	4	0.5		2	0.2	

5.11 times ($p < .001$) for being an active smoker, 10.38 times ($p < .01$) for being an active alcohol consumer, 2.64 times ($p < .01$) with parents living separately and 6.27 times ($p < .05$) for being a student of Mersin University, 3.3 times (<0.01) with friends living (Table 5).

Discussion

In our study, the prevalence of drug use amongst university students at least once in a lifetime and in the past year was 6.8% and 4.4%, respectively. In a study conducted by Tot et al. (2004) with university students in Mersin in 2004, the prevalence of lifetime cannabis use was 4.7%, the prevalence of volatile substance use was 5.0%, and the use of other drugs was 3.9%. In studies conducted with university students in our country, the prevalence of drug use at least once in a lifetime is reported to vary between 1.8 and 13.4% (Atlam & Yüncü, 2017; Altıntaş et al., 2004; Gerçek et al., 2010; Görgün et al., 2010; Güner, 2019; Şimşek et al., 2007; Turhan et al., 2011). In studies

Table 5. Risk factors associated with drug use at least once in a lifetime and in the past year.

Variables	At least once in a lifetime		At least once in the last year	
	Exp(B)	%95 CI	Exp(B)	%95 CI
<i>Presence of a peer who uses drugs;</i>				
Yes	10.55 ^c	6.11–18.22	12.71 ^c	6.13–26.33
No	1.00		1.00	
<i>Smoking habits;</i>				
Active smoker	4.78 ^c	2.49–9.17	5.11 ^c	2.25–11.58
Quitter	3.36 ^b	1.35–8.35	1.61	0.43–6.04
Nonsmoker	1.00		1.00	
<i>Alcohol consumption habits;</i>				
Active alcohol consumption	13.36 ^c	3.92–45.56	10.38 ^b	2.38–45.29
Quitter	6.76 ^b	1.77–25.76	3.67	0.68–19.79
Never used	1.00		1.00	
<i>Mother's educational status;</i>				
Illiterate	1.00			
Primary school	0.35 ^a	0.15–0.80		
Secondary school	0.53	0.21–1.28	-	-
High school	0.40 ^a	0.17–0.95		
University and above	0.69	0.26–1.81		
<i>With whom they live;</i>				
Dormitory	1.20	0.59–2.44	2.30	0.89–5.92
With friends	2.55 ^c	1.43–4.53	3.37 ^b	1.49–7.61
Alone	1.00	0.40–2.49	0.98	0.28–3.37
With their family	1.00		1.00	
<i>Parental Information;</i>				
Alive, together			1.00	
Alive, separate	-	-	2.64 ^b	1.18–5.90
Others			1.20	0.35–4.16
Mersin University			6.27 ^a	1.29–30.44
Tarsus University	-	-	4.81	0.86–26.75
Toros University			2.63	0.41–16.59
Çağ University			1.00	

^a*p* < .05, ^b*p* < .01, ^c*p* < .001.

conducted abroad, it was reported that drug use among university students varied between 4.5 and 51.1% (Ansari et al., 2015; Gazibara et al., 2018; Gebremariam et al., 2018; De la Torre et al., 2019; Yi et al., 2017). When our results are compared with other studies conducted in the country, it is evident that the use of drugs among university students in Mersin is at medium level (Tot et al., 2004). The fact that the limits of drug use among university students in studies conducted abroad are very wide and can be dependent upon socioeconomic and cultural differences in the countries involved.

Cannabis is reported to be the most used drug both in our study and national/international studies (Gazibara et al., 2018; Gebremariam et al., 2018; Görgün et al., 2010; Güner, 2019; Hynes et al., 2015; De la Torre et al., 2019; Tot et al., 2004; Van Wel et al., 2016). This result may be related to cannabis being both easily accessible and cheap. There may also be a tolerance of parents, society, or governments regarding cannabis, with the notion that it is “less harmful” to use than other drugs.

Ease of access to drugs is an important factor for drug use. 30.1% of the students participating in our study stated that it was easy or very easy to access drugs. This result can be interpreted from different perspectives. Primarily, the presence of an environment where university students can easily access drugs can be considered as an important risk factor for drug use in our region. Despite the fact that approximately one in every three university students can easily access substances in our region, the use of drugs one in every 20 university students

in the last year may show that university students are not sensible toward drug use.

There are plenty of national publications (Atlam & Yüncü, 2017; Dayı et al., 2015; Görgün et al., 2010; Güner, 2019; Koca & Oğuzöncül, 2015; Turhan et al., 2011; Yalçın et al., 2009) and international (Ansari et al., 2015; Gebremariam et al., 2018; Hynes et al., 2015; De la Torre et al., 2019; Van Wel et al., 2016) in the literature about the relationship between being male and drug use. There is a great consensus that being male is a key risk factor for an increase in drug use. There is little evidence contradicting this view. For example, in a study conducted in Southeast Asian countries, it was reported that drug use was higher for women (Gebremariam et al., 2018). In our study, being male is in proportional and univariate analysis is a variable that increases drug use, while being male in multivariate analysis is not a risk factor on drug use. Our findings are contrary to the literature and show that male and female college students use drugs in similar levels. This result can also be evaluated as an indicator of an increase in drug use among women in Turkey.

Few studies have been found in the literature regarding the relationship between age and drug use among university students. In a study conducted with university students in Spain, it was reported that the increase in age in both men and women increased the use of drugs (De la Torre et al., 2019). Similarly, a study conducted with university students in Aydın reported that the increase in age increased the use of drugs (Güner, 2019). In our study, while age increases the use of drugs in univariate analysis, it was found that age increase has no effect on drug use in multivariate analysis. Unlike a small number of studies in the literature, our study findings support that age increase does not enhance the use of drugs in university students. This result can be explained by the fact that university students are in the young adult (emerging adult) group. The age of starting using drugs generally coincides with the early mid-adolescence. Although an increase trend is expected with increasing age, entering into adulthood after twenties and adult responsibilities may stop this trend. Nevertheless, we recommend that our age-related study results be evaluated with caution, as it includes 4 distinct age intervals.

Cigarettes and alcohol are the most commonly used legal addictive substances in the world among young people and adults, and are reported to increase drug use in the literature (Ansari et al., 2015; Gazibara et al., 2018; Görgün et al., 2010; Yalçın et al., 2009; Yi et al., 2017). It is even known that smoking and alcohol consumption are starting materials for the transition to drugs. In our study, our results support the literature and support that both smoking and consuming alcohol are important independent risk factors that increase drug use.

Koca et al. stated that drug use of the participants was higher when they had family members and friends who used substance. In a study conducted in Trabzon, the presence of a drug user in the family increased the use of drugs significantly (Görgün et al., 2010). In a study conducted in Hatay, it was reported that having a drug user among relatives increased the use of drugs (Turhan et al., 2011). In a study conducted in Ethiopia, it was reported that the strongest factor in an increase in drug use was a drug user friend that the participants had

(Gebremariam et al., 2018). This was also supported in the results of a study conducted in Iran (Taremiyan et al., 2018). Our study results support that the presence of drug-using friend is an important independent risk factor that increases drug use among university students. This is an expected result and the presence of drug users among friends or family members can motivate young people to use drugs.

Atlam et al. reported that the risk of using drugs increased in young people whose parents are divorced. Yalçın et al. also reported a higher risk of drug use in those whose parents lived separately or got divorced. In a study conducted in Spain, the decrease in family support was reported to increase the use of drugs (De la Torre et al., 2019). In our study, the risk of substance abuse is found to be higher in students whose parents live separately. This result can be explained that the parents, when separated, lose their control over the life of the child.

In a study conducted in England, it was reported that accommodation of young people in the family home reduced the use of drugs (Ansari et al., 2015). In another study conducted in Southeast Asian countries, it was reported that living away from the family reduced the use of drugs (Yi et al., 2017). A study conducted in Spain reported that, although there was no difference in boys, girls' accommodation with their families reduced drug use (De la Torre et al., 2019). In our study, it is found that staying with friends in the same house is an independent risk factor that increases drug use compared to other types of accommodation. When compared to other similar studies, our results show that living with the family reduces the use of drugs, yet that there are also opposite examples. Our results support that staying in the same house with friends increases the use of drugs. This result can be explained with the fact that the students find it easier to act more independently without parental control and that friends motivate each other to experience risky behaviors. Also these results can explain that the parents, when separated from their child, lose their control over the child's life.

In our study, low education level of the mother is determined as an independent variable that increases drug use. In a study conducted in Aydın, it was reported that a higher level of education of the father decreased the use of drugs (Atlam & Yüncü, 2017). In a study conducted in Iran, it was reported that higher economic standards of the family reduced the use of drugs (Jalilian et al., 2015). When the education level of the mother or father is considered as an indicator of the socioeconomic status of the family, our results and other studies support that better economic status of the family is a factor that reduces the use of drugs.

No study in the literature is conducted to investigate the correlation between being a student at a public or private university and drug use. In our study, it is found that being a student in Mersin University, a state university, increases the risk of using drugs. This result can be explained by the high number of students at the state universities, which increases the likelihood of contact with a potential drug user. However, we think that more studies are needed to corroborate this result.

Our study found out that the prevalence of drug use lifelong and in the past year among university students in Mersin is 6.8 and 4.4%, respectively, and the most frequently used drug is cannabis. Having a friend who uses drugs, smoking and drinking

alcohol, having parents living separately and living with friends have been identified as the main independent risk factors that increase drug use among university students.

The following precautions are recommended to prevent an increase in drug use among college students:

i) determining the places of drug supply and increasing the control of law enforcement forces to obstruct the possibilities of accessing drugs, ii) struggling against drug dealers and agents more effectively with the help of law enforcement agents iii) providing social and financial opportunities to university students with low socioeconomic status, iv) devoting more time for relevant educational and social activities related to drug use in state universities, v) providing adequate support to drug users within the university which includes social and medical rehabilitation and treatment processes, and finally, vi) repeating a similar study periodically every 4 years to monitor drug use among university students.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

No fund was provided from any institution or organization during this study.

ORCID

Tayyar Sasmaz  <http://orcid.org/0000-0002-3923-570X>
 Aslihan Ardiç Çobaner  <http://orcid.org/0000-0002-8634-8336>
 Fügen Ozcanraslan  <http://orcid.org/0000-0001-6698-4792>
 Murat Koç  <http://orcid.org/0000-0002-3848-3111>
 Emel Bahar  <http://orcid.org/0000-0001-6070-1835>
 Bengü Nehir Buğdaycı Yalçın  <http://orcid.org/0000-0002-5243-9790>
 Derya Akıcı  <http://orcid.org/0000-0001-9530-7360>
 Emine Öztosun  <http://orcid.org/0000-0003-2451-6581>

References

- Altıntaş, H., Temel, F., Benli, E., Çınar, G., & Gelirer, Ö. (2004). Tıp Fakültesi Birinci Sınıf Öğrencilerinin Madde Bağımlılığı İle İlgili Bilgi, Görüş Ve Tutumları. *Journal of Dependence*, 5(3), 107–114.
- Ansari, W. E., Vallentin-Holbech, L., & Stock, C. (2015). Predictors of illicit drug/s use among university students in Northern Ireland, Wales and England. *Global Journal of Health Science*, 7(4), 18–29. <https://doi.org/10.5539/gjhs.v7n4p18>
- Atlam, D. H., & Yüncü, Z. (2017). Üniversitesi Öğrencilerinde Sigara, Alkol, Madde Kullanım Bozukluğu ve Ailesel Madde Kullanımı Arasındaki İlişki. *Turkish Journal of Clinical Psychiatry*, 20(3), 161–170. <https://doi.org/10.5505/kpd.2017.88598>
- Dayı, A., Güleç, G., & Mutlu, F. (2015). Eskişehir Osmangazi Üniversitesi öğrencilerinde sigara, alkol ve madde kullanım yaygınlığı. *Dusunen Adam the Journal of Psychiatry and Neurological Sciences*, 28(4), 309–318. <https://doi.org/10.5350/DAJPN2015280402>
- De la Torre, J. A., Villa, T. F., Molina, A. J., Prieto, C. A., & Mateos, R. (2019). Drug use, family support and related factors in university students. A cross-sectional study based on the uniHcos Project data. *Gaceta Sanitaria*, 33(2), 141–147. <https://doi.org/10.1016/j.gaceta.2017.10.019>
- Gazibara, T., Milic, M., Parlic, M., Stevanovic, J., & Lazic, D. (2018). Illicit drug use and academia in North Kosovo: Prevalence, patterns, predictors and health-related quality of life. *PLoS One*, 13(7), e0199921. <https://doi.org/10.1371/journal.pone.0199921>

- Gebremariam, T. B., Mruts, K. B., & Neway, T. K. (2018). Substance use and associated factors among Debre Berhan University students, Central Ethiopia. *Substance Abuse Treatment, Prevention, and Policy*, 13(13), 1–8. <https://doi.org/10.1186/s13011-018-0150-9>
- Gerçek, Ç. G., Gümüş, G., Demir, S., Deniz, M., & Sürücü, Z. P. (2010). Düzce Üniversitesi Orman Fakültesi Öğrencilerinde Sigara, Alkol Ve Madde Kullanımı Sıklığı Ve Kullanmaya Başlama Nedenleri. *Duzce Medical Journal*, 12(3), 7–14. <https://dergipark.org.tr/tr/download/article-file/793450>
- Görgün, S., Tiryaki, A., & Topbaş, M. (2010). Üniversite öğrencilerinde madde kullanma ve anne babaya bağlanma biçimleri. *Anatolian Journal of Psychiatry*, 11(4), 305–312. <https://app.trdizin.gov.tr/publication/paper/detail/TVRFEE16QXpNdz09>
- Güner, B. (2019). Üniversite Öğrencilerinde Uyuşturucu Madde Kullanım Alishkanliklari ve Yayginligi: Aydın Adnan Menderes Üniversitesi Örneği. *Aydın Adnan Menderes University Journal of Institute of Social Sciences*, 6(2), 81–95. <https://dergipark.org.tr/tr/download/article-file/935174>
- Hynes, M., Demarco, M., Araneda, J. C., & Cumsille, F. (2015). Prevalence of Marijuana use among university students in Bolivia, Colombia, Ecuador, and Peru. *International Journal of Environmental Research and Public Health*, 12(5), 5233–5240. <https://doi.org/10.3390/ijerph120505233>
- Jalilian, F., Matin, B. K., Ahmadpanah, M., Ataee, M., & Jouybari, T. A. (2015). Socio-demographic characteristics associated with cigarettes smoking, drug abuse and alcohol drinking among male medical university students in Iran. *Journal of Research in Health Science*, 15(1), 42–46. <https://www.sid.ir/en/Journal/ViewPaper.aspx?ID=525482>
- Koca, B., & Oğuzöncül, A. F. (2015). İnönü Üniversitesi Sağlık Yüksekokulu Öğrencilerinin Sigara, Alkol, Madde Kullanımı, Madde Kullanımına Etki Eden Etmenler ve Aileden Aldıkları Sosyal Desteğin Etkisi. *Kocaeli Medical Journal*, 4(2), 4–13. https://jag.journalagent.com/kocaelitip/pdfs/KTD-73645-RESEARCH_ARTICLE-KOCA.pdf
- Mozafarinia, R., Assarian, M., & Ziaaddini, A. (2017). Prevalence of substance abuse among students of Tehran University of medical sciences, Iran. *Addict Health*, Spring, 9(2), 103–109. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5742417/>
- Polat, G. (2014). Madde bağımlılığı tedavisinde sosyal hizmet mesleği. *Okmeydanı Tıp Dergisi*, 30(2), 143–148. <https://doi.org/10.5222/otd.supp2.2014.143>
- Şimşek, Z., Koruk, İ., & Altındağ, A. (2007). Harran Üniversitesi Tıp Fakültesi ve Fen-Edebiyat Fakültesi Birinci Sınıf Öğrencilerinin Riskli Sağlık Davranışları. *Bulletin of Community Medicine*, 26(3), 19–24. http://www.thb.hacettepe.edu.tr/arsiv/2007/sayi_3/baslik4.pdf
- Tareman, F., Yaghubi, H., Pairavi, H., Hosseini, S. R., Zafar, M., & Moloodi, R. (2018). Risk and protective factors for substance use among Iranian university students: A national study. *Substance Abuse Treatment, Prevention, and Policy*, 13(46), 2–9. <https://doi.org/10.1186/s13011-018-0181-2>
- Tot, Ş., Yazıcı, A., Yazıcı, K., Erdem, P., & Bal, N. (2004). Mersin'de ergenler arasında sigara, alkol ve yasa dışı madde kullanım oranlarının yaygınlığı: ortaokul, lise ve üniversite öğrencilerinin karşılaştırılması. *New Symposium*, 42(2), 77–81. <http://yenisympoium.com/Pdf/TR-YeniSempozyum-b94ac38f.pdf>
- Tulchinsky, T., & Varavikova, E. (2019). Aile Sağlığı: Okul ve Ergen Sağlığı (T.D. Yılmaz, Trans). In S. A. Vaizoğlu (Ed.), *Yeni Halk Sağlığı* (pp. 355–364). Palme Yayınevi. (Original work published 2014).
- Turhan, E., İnandı, T., Özer, C., & Akoglu, S. (2011). Üniversite öğrencilerinde madde kullanımı, şiddet ve bazı psikolojik özellikler. *Turkish Journal of Public Health*, 9(1), 33–44. <https://doi.org/10.20518/tjph.173053>
- Ulukoca, N., Gökgöz, Ş., & Karakoç, A. (2013). Kırklareli Üniversitesi öğrencileri arasında sigara, alkol ve madde kullanım sıklığı. *Fırat Medical Journal*, 18(4), 230–234. <https://dergipark.org.tr/tr/download/article-file/72030>
- Van Wel, J. H. P., Rosiers, J. F., & Van Hal, G. (2016). Changes in drug use among Belgian higher education students: A comparison between 2005, 2009, and 2013. *Substance Use & Misuse*, 51(9), 1232–1238. <https://doi.org/10.3109/10826084.2016.1162811>
- Yalçın, M., Eşsizöglü, A., Akkoç, H., Yaşan, A., & Gürgen, F. (2009). Dicle Üniversitesi öğrencilerinde madde kullanımını belirleyen risk faktörleri. *Klinik Psikiyatri*, 12(3), 125–133. https://jag.journalagent.com/kpd/pdfs/KPD_12_3_125_133.pdf
- Yi, S., Peltzer, K., Pengpid, S., & Susilowati, I. H. (2017). Prevalence and associated factors of illicit drug use among university students in the association of southeast Asian nations (ASEAN). *Substance Abuse Treatment, Prevention, and Policy*, 12(9), 1–7. <https://doi.org/10.1186/s13011-017-0096-3>