The Importance of Demographic Characteristics of Substance Use Disorders of University Students

Üniversite Öğrencilerinin Madde Kullanım Bozukluklarında Demografik Özelliklerin Önemi

Esra ERTEMÜR DEMİRARSLAN[1], Zeynep ARABACI[2], Atila ÇAĞLAR[3]

ABSTRACT

Substance use disorders (SUDs) have been linked to physical and mental health problems as well as socioeconomic impacts which can also affect the perioperative period. This study aimed to analyze the SUDs rates and sociodemographic characteristics of university students. The population of the study included 12,841 students who were enrolled in the university in the 2012-2013 academic year. The sample included 1,284 students continuing education on the campuses of the university. The sample represented 10.0% of the research population, and its participants were selected using easy sampling. For the statistical analysis, the study used descriptive statistics as well as the Kolmogorov-Smirnov test, Chi-Square, ANOVA, and the Games-Howell posthoc test. Of the participants, 60.4% reported SDU at least once. The onset of substance use (SU) was younger than 15 years old. The female students reported a higher rate of SU than the male students. Marijuana was the first substance that the participants declare that they tried at least one substance. The participants who reported SDU had low academic grade averages. The rate of SUDs increased when the students had substance users around them and peer influence was immense. The study results suggest that the migration effects of universities should be studied.

Keywords: Adolescence, Abuse/addiction, Prevention, students

ÖZ

Madde kullanım bozuklukları (MKB), perioperatif dönemi de etkileyebilen fiziksel ve zihinsel sağlık sorunlarının yanı sıra sosyoekonomik etkilerle ilişkilendirilmiştir. Bu çalışmada üniversite öğrencilerinin MKB oranları ve sosyodemografik özelliklerinin incelenmesi amaçlanmıştır. Araştırmanın evrenini 2012-2013 eğitim-öğretim yılında üniversiteye kayıt olan 12.841 öğrenci oluşturmaktadır. Örneklem, üniversite kampüslerinde eğitime devam eden 1.284 öğrenciyi içermektedir. Örneklem, evrenin %10.0'unu temsil etmektedir ve katılımcılar kolay örnekleme yöntemi ile seçilmiştir. İstatistiksel analizde, tanımlayıcı istatistiklerin yanı sıra Kolmogorov-Smirnov testi, ki kare, ANOVA ve Games-Howell post-hoc testi kullanılmıştır. Katılımcıların %60,4'ü en az bir kez MKB bildirmiştir. Madde kullanımının (MK) başlangıcı 15 yaşından küçük olarak bulunmuştur. Kız öğrenciler erkek öğrencilere göre daha yüksek MK oranı bildirmiştir. En az bir madde denediğini beyan eden katılımcıların ilk kullandıkları madde esrar olmuştur. MKB bildiren katılımcıların akademik not ortalamalarının diğer öğrencilerin ortalamalarından düşük olduğu belirlenmiştir. Öğrencilerin etraflarında madde kullanıcıları olduğunda ve akran etkisi çok büyük olduğunda, MKB oranının arttığı saptanmıştır. Araştırma sonuçları, üniversitelerin göç etkilerinin araştırılması gerektiğini düşündürmektedir.

Anahtar Kelimeler: Ergenlik, İstismar/Bağımlılık, Önleme, Öğrenciler

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[1] Dr. Öğr. Üyesi, Esra ERTEMÜR DEMİRARSLAN, Cerrahi Hastalıkları Hemşireliği, Kastamonu Üniversitesi Sağlık Bilimleri Fakültesi Hemşirelik Bölümü, eertemur@kastamonu.edu.tr, ORCID: 0000-0001-5531-9439
[2] Öğr. Gör. Dr. Zeynep ARABACI, Halk sağlığı hemşireliği, Kastamonu Üniversitesi Tosya Meslek Yüksekokulu Sağlık Bakım Hizmetleri Bölümü Evde Hasta Bakımı Pr, zarabaci@kastamonu.edu.tr, 0000-0003-2273-6812
[3] Prof. Dr, Kastamonu Üniversitesi Eğitim Fakültesi Temel Eğitim Bölümü Okul Öncesi Eğitimi Anabilim Dalı, acaglar@kastamonu.edu.tr, 0000-0003-0749-2688

İletişim / Corresponding Author: Esra DEMİRARSLAN
e-posta/e-mail: eertemur@kastamonu.edu.tr

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INTRODUCTION

The rates of SDU are growing rapidly in TURKEY and around the world, and the age of starting SDU is falling. SDU has negative effects on individuals' bio-psycho-social lives.[1, 2] SUDs have been linked to an array of physical and mental health problems as well as socioeconomic impacts. For example, alcohol and other psychoactive substances can cause various problems in the perioperative period in the case of surgical intervention in individuals with chronic diseases and with SUD, both with their psychoactive properties and their interactions with drugs/anesthetics. SDU is among the key social problems of today. At first, glance, although SDU seems to be a personal preference of the individual, it affects both the user and his/her immediate surroundings and poses serious risks for other members of society. In addition, The fact that SU as a social problem becomes more visible in places where the urbanization process continues reveals the importance of the migration-urbanization relationship.[3] The province where this research was conducted is an area with a high internal/external migration rate and a mosaic of Turkey because of the university's effect on internal migration.

Youth represents a period of transition from childhood to adulthood, is a dynamic period with great risks, involving increased rates of SDU, and is one of the most important periods of life. In their youth, individuals experience bio-psycho-social changes and assume adult roles and responsibilities. Relative to adults with SUD, adolescents have a more rapid progression from first use to a diagnosable disorder and more co-occurring problems. Alcohol is one of the most commonly used substances in late adolescence/early adulthood. There is also frequent use of other illicit drugs (IDs).[4-8] The stages of SDU are alcohol, followed by nicotine, then cannabis, and finally other IDs. In addition, adolescents who initiate SDU at an early age have an increased risk of acquiring SUDs, poor academic performance, and impaired social functioning.[9] However, there is no strong evidence that starting to drink earlier leads to adult alcohol problems and more research is needed to address this important question. [10]

SDU is related to many other problems among students in particular.[11] The influence of friends, the attempt to prove oneself, and the negative or neglecting attitude of families push young people towards dangers such as SDU.[4, 12, 13]

Five percent of individuals in the age range of 15 to 64 years are at risk of SDU. It is commonly known that SUDs and health-related problems caused by SDUs create a heavy burden on public health in terms of prevention, treatment, and care. There are remarkable deficiencies in the provision of services in many countries. Only one of every six problematic individuals in the world involved in SDU has access to treatment. In general, individuals involved in SUDs die as a result of overdose (OD) even though OD deaths are preventable.[7] Economic burdens related to the cost of health problems caused by SUDs are also preventable.[7]

In Turkey, the frequency of SUDs among university students is in the range of 2,0–7,0%.[6-8, 12, 14-17] According to Turhan et. al, the rate of alcohol use (AU) among students was 47,9%, the rate of tobacco use (TU) was 27,3%, and 6,6% of students had a binge alcohol drinking habit.[17] Of the students that participated in their study, 11,7% considered using IDs, and 6,7% tried them. Another study conducted with freshmen found that the rate of life-long tobacco use(LLTU) was 64,0%, the rate of AU was 30,4%, and the rate of ID use was 2,3%.[12] In the United States (US), 61,0% of persons older than 12 years reported TU, 80,3% reported AU, and 50,2% reported ID use in their lifetime.[18] These studies showed that SUDs plays an important role during university education.

In European School Survey Project on Alcohol and Other Drugs (ESPAD)

countries, 41% of students had TU at least once in their lifetime, and one-fifth of the sample could be considered smokers at the time of reporting. Over half of the students reported AU at least once during their lifetime and the ESPAD average was 79% (range of 29-95%). The average prevalence of lifelong use of IDs was 17%, with considerable variation across ESPAD countries. It should be noted that this mainly relates to cannabis use (average lifetime prevalence of 16%).[19] Among some studies conducted in Ethiopian universities and colleges, lifelong SUD prevalence was between 14,1% and 33,1%, AU was between 31,4% and 36,4%, and LLTU prevalence was between 8,7% and 21,3%.[20] According to the literature, in T, which is a European country according to the World Health Organization (WHO), lifelong SUDs was lower than in the US, in ESPAD countries, and in Ethiopia; LLTU was lower than in the US but higher than in ESPAD countries and Ethiopia; AU was lower than in the US but higher than in ESPAD countries and Ethiopia; and the percentage of persons who tried IDs was lower than in the US and in ESPAD countries (there were no statistics available for Ethiopia).[11, 21, 22]. SUD is a chronic disease with no permanent treatment. It has high financial and health costs, and it should be brought under control using preventive intervention before young people acquire SUDs. Considerable research has demonstrated a link between SUDs and incidences of cancer, sexually transmitted infections, cardiovascular disease, strokes, overdose, hepatitis, injuries, mood disorders, and other health problems, which are serious since it is a chronic disease and a threat to the physical, mental and economic health of the individuals, families, and society.[1, 5, 18, 19] As health professionals that provide primary health care, nurses should also screen persons, in particular, to identify and protect against SDU/SUDs and perioperative nurses also should be aware of the interactions between substances and medications used in the perioperative period. Drug addicted patients undergo surgery either for reasons as trauma or for other pathologies. [23] A significant part of the admissions to hospitals, and the clinical prognosis of patients who have undergone diagnostic or surgical processes consist of the problems aroused by alcohol consumption.[24] The patient load created by this active substance especially in emergency services, perioperative process management and the healthcare services is an important problem. Because of that alcohol presents a toxic property, it is needed special approaches and practices in diagnosis, treatment and examination processes of individuals who are detected as drunk in the admissions to healthcare institutions.[25] SU generally affect the evaluation of the patient by causing unconsciousness and mood disorders in the preoperative period. They cause prolongation of the effect of anesthetics during the intraoperative period, may increase the risk of infection as a result of decreased immune system functions and increased bleeding in the postoperative period. In addition, the negative effects of withdrawal syndrome due to the inability to use the substance in the perioperative period have a delaying effect on wound healing.

MATERIAL AND METHODS

Aim

This study aims to examine the rates of SUDs among university students as well as their socio-demographic characteristics, and the results are important for planning suitable actions in a high internal/external migration rate province. On the other hand, as geographical and cultural factors can affect SUDs, city statistics could be effective for policymakers of Turkey and the world.

Location and Characteristics of the Place Where the Research Conducted

This study was conducted in a province with a population of about 100,000 people. It has the broadest seashore in the central Black Sea Region, as its main sources of income are agriculture and animal husbandry which result from external migration and there is an

internal migration of youth through the university.

Universe Sample and Sampling Method

The population of the study included 12,841 students at Kastamonu University in the 2012-2013 academic year.[4] The sample was calculated as 1,284 students who constituted 10,0% of the study population and who were selected using random sampling from Taşköprü, Tosya, and Central campuses. The researchers contacted 1,463 students.

Data Collection Tools

The research was conducted in December 2013 and presented sociodemographic data that were collected using the "University Students' Attitudes and Behaviors Towards SDU" form.[16, 23]

Limitations

This study has some limitations. These data were obtained from students studying at a university in T. Therefore, it cannot be generalized to young people who are not enrolled in other colleges or universities. In addition, some selection bias may have occurred, as well as the bias that is inherent in self-reported data.

Statistical Analysis

The statistical analysis was conducted using descriptive statistics (means, medians, standard deviations, percentages, and variance). The distribution of the variables was determined using the one-sample Kolmogorov-Smirnov test, which showed that all the variables in the study had different distributions from a normal distribution (p=0.005). The comparison of two groups was made using χ^2, while one-way ANOVA was used to compare more than two groups. The Games-Howell post hoc test (GH) was also used to determine the difference between the groups. All analyses were conducted in SPSS 20 program.

Ethics

This study was designed using the framework of the cooperation protocol between the university and the provincial security directorate for the 2013-2018 goals of the national drugs policy and strategy document. This study received financial support from Kastamonu University's Scientific Research Projects Coordination Office. Part of the study data was presented at an international conference in the form of posters.[15] The project was approved by the Scientific Research Projects Commission where the study was conducted.

RESULTS AND DISCUSSION

Table 1 shows that the participants were aged between 17 and 22 years (98,7%, *p*=0,000), where more than half the participants were females (55,7%, *p*=0,000), and some of the participants were sophomores (41,3%, *p*=0,000). The rates of the participants from the Tosya, Taşköprü, and Central campuses were 20,6%, 22,6%, and 23,3%, respectively. The academic average ranged between 0,00 and 0,99 in 40,8% of the participants (*p*=0,005). 60,4% of the participants reported SDU, while 38,7% reported TU. The participants were younger than 15 years old when first-time TU (48,4%, *p*=0,000), LLTU (65,6%, *p*=0,005), and AU (70,2%, *p*=0,000) occurred

Table 1. The Distribution of the Participants by Sociodemographic Characteristics

Sociodemographic Characteristics	n	%	Mean* ±standard deviation	Test Statistics (TS)	
AGE					
17-22	1444	98.7	0.01±0.11	t=4.38	p=0 .00
23-33	19	1.3			
GENDER					
male	648	44.3	0.56±0.49	t=42.88	p=0.00
female	815	55.7			
GRADE					
Not stated (NS) (1)	107	7.3	1.63±0.84	t=73.93	p=0.00
Freshman (2)	549	37.5			

Table 1. (Continued)

Sociodemographic Characteristics	n	%	Mean* ±standard deviation	Test Statistics (TS)	
Sophomore (3)	604	41.3			
Junior (4)	183	12.5			
Senior (5)	20	1.4			
CAMPUSES					
Not Stated (1)	490	33.5	1.36±1.16	t=44.41	p=0.00
Tosya (2)	301	20.6			
Taşköprü (3)	331	22.6			
Central(4)	341	23.3			
GPA					
0.0-0.99 (1)	597	40.8	2.30±1.16	t=75.30	p=0.00
1.00-1.99 (2)	73	5.0			
2.00-2.99 (3)	545	37.3			
3.00-3.99 (4)	247	16.9			
SDU					
never	565	38.6	0.61±0.48	t=47.59	p=0.00
At least once	884	60.4			
Smoking					
yes	566	38.7	0.61±0.48	t=48.09	p=0.00
no	896	61.2			
FIRST SMOKING AGE					
never	130	8.9	1.50±0.87	t=65.19	p=0.00
Before 15	708	48.4			
16-18	415	28.4			
19-21	190	13.0			
22 or older	20	1.4			
Age of Beginning to Smoke Everyday					
never	158	10.8	1.25±0.82	t=58.11	p=0.00
Before 15	960	65.6			
16-18	185	12.6			
19-21	140	9.6			
22 or older	20	1.4			
Age of Getting Drunk with Alcohol for the First Time					
never	100	6.8	1.29±0.78	t=62.76	p=0.00
Before 15	1027	70.2			
16-18	168	11.5			
19-21	152	10.4			
22 or older	16	1.1			

*: The values are the means of the categorized data.

Table 2 shows the SDU, TU, first TU, first AU, LLTU, and getting drunk with alcohol time statistics according to age, gender, classes, campuses, and academic grade. According to the statistics, there were significant differences between all variables except for the age groups and SDU (p=0,450), TU (p=0,520), first-time TU (p=0,760), and LLTU (p=0,500).

Table 3 shows the reasons that triggered SDU, the attitudes toward SDU, and whether there was any substance user around the participants. Most of the students at the Tosya campus said that they tried IDs as "an attempt to forget about their problems". On the other hand, most of the students at the Taşköprü and Central campuses "did not remember why they tried these substances". Central Campus students tried IDs "to adapt to their friends because they were curious about it" and "to forget about their problems". In the distribution of the reasons that triggered SDU at the different campuses, the difference among the groups was statistically significant (p=0,000), and this difference was created by the difference between the Tosya and Taşköprü campus groups (p=0,040). In the central campus, there were education sciences faculty, health sciences faculty, faculty of sports, faculty of forestry, faculty of tourism and a vocational school including departments not related to health sciences. In Tosya there were there were departments both related to health (patient homecare, anesthesia technician, first and emergency aid technician) and not related to health (computer programming,

alternative energy sources technology, electric).

Table 2. The Distribution of the Participants' Frequency of TU/AU/SDU by Demographic Characteristics

Demographic Characteristics		SDU		smoking		First smoking age					Age of beginning to smoke every day					Age of getting drunk with alcohol for the first time				
		never	At least once	yes	no	Never	<15	16-18	19-21	>22	never	<15	16-18	19-21	>22	never	<15	16-18	19-21	>22
AGE																				
17-22		556	874	560	883	127	698	411	188	20	155	946		185	138	20	97	1017		164	152	14
23-33		9	10	6	13	3	10	4	2	0	3	14		0	2	0	3	10		4	0	2
Statistics (X^2/ p)		0.56/0.45		0.41/0.52					1.82/0.76						3.35/0.50					22,30/ 0.005
GENDER																				
male		342	302	240	407	24	260	263	93	8	34	357		141	104	12	17	401		116	102	12
female		223	582	326	489	106	448	152	97	12	124	603		44	36	8	83	626		52	50	4
Statistics (X^2/ p)		97.06 /0.00		1.28 /0.25					114.64 /0.00						182.30/0.00					121.54/0.00
GRADE																				
0.0-0.99 (1)		69	35	64	43	50	22	27	8	0	63	23		17	4	0	42	39		15	9	2
1.00-1.99(2)		199	349	195	353	3	300	188	52	6	3	397		84	53	12	3	437		68	35	6
2.00-2.99(3)		224	375	228	376	43	312	133	102	14	53	419		63	61	8	28	421		63	84	8
3.00-3.99(4)		64	114	71	112	34	64	59	26	0	39	109		17	18	0	27	114		22	20	0
Not stated(5)		9	11	8	12	0	10	8	2	0	0	12		4	4	0	0	16		0	4	0
Statistics	$\chi 2$	36.00		22.59					309.61						365.54					269.85
	p	0.00		0.00					0.00						0.00					0.00
	GH	P>0.05		P>0.05		P>0.05					(1-2): md=0.14 p=0.01 (1-3):md=0.33 p=0.00					P>0.05				
CAMPUSES																				
1		215	261	414	75	130	172	127	57	4	158	256		43	29	4	100	283		62	43	2
2		92	209	4	297	0	166	94	38	3	0	230		41	30	0	0	240		33	27	1
3		129	202	4	327	0	187	91	46	7	0	233		51	37	10	0	246		33	45	7
4		129	212	144	197	0	183	103	49	6	0	241		50	44	6	0	258		40	37	6
Statistics (χ2,p)		16,81 0 0.0		810.46 0.00					292.28 0.00						367.98 0.00					230.25 0.00
	GH	(1-3): Md= 0.14 p=0.00		(1-3): Md= 0.83 p=0.00 (3-4): Md= 0.40 p=0.00 (2-4): Md= 0.41 p=0.00		(1-3): Md= 0.34 p=0.00 (1-2): Md= 0.36 p=0.00 (1-4): Md= 0.39 p=0.00					(1-3): Md= 0.42 p=0.00 (1-4): Md= 0.54 p=0.00					(1-3): Md= 0.18 p=0.00 (1-2): Md= 0.32 p=0.0 (1-4): Md= 0.27 p=0.00				
GPA																				
1		537	50	198	398	14	322	192	61	8	19	418		92	56	12	11	450		79	51	6
2		64	3	26	47	1	29	18	25	0	2	45		9	17	0	1	44		12	16	0
3		461	77	252	293	63	228	161	87	6	82	326		78	53	6	45	352		66	78	4
4		221	26	89	158	52	128	44	17	6	55	170		6	14	2	43	180		11	7	6
Statistics (χ2, p)		20.71 0.00		21.63 0.00					145.60 p=0.00						127.84 p=0.00					125.31 p=0.00
	GH	(1- 3): Md= 0.09 p=0.00 (4- 3): Md= 0.15 p=0.00		(1-3): Md= 0.13 p=0.00		(1-4): Md=0.36 p=0.00 (1-2): Md=0.37 p=0.00 (2-3): Md=0.38 p=0.00 (2-4): Md=0.74 p=0.00					(1-3): Md=0.15 p=0.01 (1-4): Md=0.43 p=0.00 (2-3): Md=0.34 p=0.01 (2-4): Md=0.62 p=0.00					(1-4): Md=0.31 p=0.00 (1-3): Md=0.58 p=0.00 (3-4): Md=0.34 p=0.00				

Md= Mean Difference

Also in Taşköprü there were departments both related to health (medical documentation and secretary) and not related to health (banking and insurance). All participants said that their families would severely object to their SDU. The difference among the groups was significant regarding their families' approaches toward SDU (*p*=0,000). The Central campus students were seriously against the people who smoked occasionally, and the Taşköprü group were against them as well, while the Tosya and not stated groups were not against them. The difference between the groups was statistically significant (p=0,000). Marijuana was the first tried substance (*p*=0,000). All the participants said that they acquired the substance they tried first from their friends or from persons that they knew about but never met personally (*p*=0,000).

Table 3. The Reasons that Triggered SDU, Families' Approaches Towards SDU, Attitudes Toward SDU Regarding the Campuses

CAMPUSES	1	2	3	4	Statistics
THE REASONS THAT TRIGGERED SDU					
I have never used the substances in question	419	43	12	4	χ^2=60.33 p=0.00
I tried it because I was curious about it	271	12	6	3	(2-3):
I tried to forget about my problems	240	71	9	0	MD=0.17 p=0.04
I tried it to accompany my friends	276	47	9	0	
I don't remember the reason why	12	9	11	9	
FAMILIES' APPROACHES TOWARDS SDU					
They would seriously object to it	239	234	189	235	χ^2 =115.00 p=0.00
They would object to it	126	41	101	74	(1-3):
They would slightly object to it	74	15	13	15	Md= 0.74 p=0.00
My family would never learn such behavior from mine	36	9	20	14	(1-4):
They would not object at all	15	2	8	3	Md= 0.63 p=0.01
					(2-3):
					Md= 0.30 p=0.00
					(2-4):
					Md= 0.19 p=0.02
ATTITUDES TOWARDS SDU					
I am not against it	41	103	74	130	χ^2 ==176.57 p=0.00
I am against it	131	94	119	118	(1-3):
I am seriously against it	195	58	89	60	Md= 0.66 p=0.00
I don't know	123	46	49	33	(1-2):
					Md= 0.47 p=0.00
					(1-4):
					Md= 0.82 p=0.00
					(2-4):
					Md= 0.35 p=0.00
FIRST TRIED SUBSTANCES					
Marijuana	427	281	238	273	χ^2 ==69.30 p=0.00
LSD	44	17	75	54	(2-3): Md= 0.34 p=0.00
Crack	6	0	7	4	(2-4): Md= 0.22 p=0.00
Cocaine	1	0	0	0	
Ecstasy	1	0	0	1	
Unprescribed ataractic or sedative drugs	4	0	4	4	
I tried the substances without knowing what they were	7	3	7	5	
THE METHODS THAT THE PARTICIPANTS USED TO ACQUIRE THE SUBSTANCES THEY TRIED					
I tried none of the substances mentioned in the previous question	402	270	240	271	χ^2 =81.181 p=0.00
It was given to me by a person I knew about but never met personally	42	9	64	39	GH for all groups p>0.05
It was given to me by my older sister or brother	2	2	3	1	
It was given to me by a person that I did not know	0	0	0	1	
It was given to me by an older family member	2	4	2	2	
It was given to me by a friend of mine	8	9	12	17	
I purchased it from a friend	3	2	2	1	
I purchased it from a person that I did not know	4	1	4	2	

According to Table 4, the most used substance was tobacco in all ages (p=0,990) and females had more prevalent TU than males (p=0,000). The second preferred substance was marijuana (p=0,340). In the study's sample, as can be seen from Table 4, the SDU rate was 1.5%, the TU rate was 60,1%, the LLTU rate was 38,4%, and 93,2% of the students reported that they got drunk by alcohol at least once. Substances other than tobacco were preferred by males (0,00<p<0,02 for amphetamine, crack, cocaine, relevant, heroin, ecstasy, IDs with alcohol, steroids, and marijuana). Amphetamines (p=0,000) and cocaine (p=0,050) were preferred substances by participants in the 16-19 year age range. There was no gender difference for sedatives (p=0,089), LSDs (p=0,240), or biperidens (p=0,310). Grades were statistically meaningful only for relevine use (p=0,000). GPAs were affected by SDU in amphetamine (p=0,000), relevine (p=0,000), ecstasy (p=0,004), marijuana (p=0,005), and tobacco (p=0,000) users. Only for TU, there was a significant difference between campuses (p=0,000). The number of siblings affected sedative (p=0,000), steroid (p=0,000), and marijuana (p=0,009) use. Accommodation location affected SDU except for the use of ecstasy (p=0,562), IDs with alcohol (p=0,433), and tobacco (p=0,338), while the longest accommodation location affected all SDU except for tobacco (p=0,279) use.

Paternal relationships affected 7 of the 13 substances. Paternal education (PE) and maternal education (ME) levels affected 9 of the 13 substances. Only PE level affected IDs with alcohol (p=0,002). steroids (p=0,064, p=0,202), marijuana (p=0,083, p=0,254), and tobacco (p=0,262, p=0,836) use. Maternal working conditions (MWC) affected 9 of the 13 substances. Paternal working conditions (PWC) affected 10 of the substances.

Table 4 Distribution of the Substances Used by Students According to some Demographic Characteristics

Characteristics		Sedatives	Amphetamine	LSD	Crack	Cocaine	Relevine	Heroin	Ecstasy	IDs with alcohol	Biperiden	Steroids	Marijuana	Tobacco
Age (%)														
16-19		5.88	2.18	1.57	1.77	2.05	1.77	2.25	3.00	2.94	1.50	1.91	7.31	59.7
20-33		0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.20	0.6
Statistics(χ2)		1.66	13.86	11.2	12.0	7.65	18.7	8.09	8.21	10.2	13.7	12.8	6.71	1.0
(p)		0.89	0.00	0.01	0.01	0.05	0.00	0.08	0.14	0.06	0.00	0.01	0.34	0.9
Gender (%)														
Male		2.73	1.50	0.82	0.01	1.50	0.01	1.70	2.39	2.18	0.95	1.09	5.60	20.65
Female		3.28	0.82	0.88	0.68	0.68	0.68	0.68	0.75	0.88	0,68	0.96	1.91	39.80
Statistics(χ2)		5.09	13.93	4.19	11.2	12.6	11.3	16.8	25.0	18.2	3.52	12.5	55.9	106
(p)		0.40	0.00	0.24	0.02	0.00	0.02	0.00	0.00	0.00	0.31	0.01	0.00	0.00
Grade (%)														
(1)		0.27	0.13	0.13	0.13	0.13	0.13	0.20	0.13	0.13	0.13	0.20	1.09	2.94
(2)		2.25	0.54	0.47	0.68	0.82	0.41	0.75	1.09	0.95	0.41	0.54	2.18	24.07
(3)		2.66	1.09	0.95	0.82	1.0	0.82	1.09	1.23	0.01	0.95	0.95	0.02	25.64
(4)		0.68	0.54	0.13	0.41	0.20	0.54	0.34	0.54	0.34	0.13	0.34	0.95	7.59
(5)		1.36	0	0	0	0	0	0	0.13	0	0	0	0.27	0.82
Statistics	(F)	1,274	1,854	,600	,295	,406	7,058	,380	1,727	,826	,480	,207	1,214	0,53
	(p)	,27	,116	,662	,881	,804	,000	,823	,141	,508	,750	,935	,303	0,71
	GH	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05	3-4 p= 0.04	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05
GPA (%)														
(1)		2.53	0.54	0.47	0.54	0.82	0.41	0.68	0.95	0.95	0.41	0.61	2.18	25.99
(2)		0.20	0.47	0	0.27	0.13	0.27	0.13	0.27	0.13	0.13	0	0.34	2.94
(3)		2.18	1.02	0.95	0.95	1.02	1.09	1.29	22	25	0.95	1.29	4.10	19.97
(4)		1.09	0.27	0.27	0.13	0.20	0.13	0.27	0.41	0.27	0.13	0.13	0.88	11.55
Statistics	(F)	,071	9,40	,55	,89	,51	10,27	1,07	4,54	,97	,95	2,07	4,24	7,30
	(p)	,97	,00	,64	,44	,67	,00	,36	,00	,40	,41	,10	,00	0,00
	GH	p>.05	p>,05	p>.05	p>.05	p>.05	3-4 p= ,03	p>.05	p>,05	p>.05	p>.05	p>.05	3-4 p=,02	1-3 p=,00 1-4 p=,03
Campuses (%)														
(1)		1.36	0.61	0.27	0.34	0.54	0.47	0.68	0.75	0.54	0.34	0.54	2.87	32.55
(2)		0.95	0.34	0.20	0.06	0.20	0.06	0.20	0.27	0.27	0.13	0.20	0.95	20.58
(3)		1.91	0.82	0.68	0.88	0.82	0.82	0.82	1.16	1.23	0.68	0.75	1.98	22.64
(4)		1.77	0.54	0.54	0.61	0.61	0.54	0.68	0.95	1.02	0.47	0.54	1.70	23.32
Statistics	F	,378	,273	,174	,259	,193	,308	,163	,293	,548	,173	,338	,407	83,4
	p	,999	1,000	1,000	1,000	1,000	1,000	1,000	1,000	,980	1,000	1,000	,999	0,00
	GH(p)	>0.05	>0.05	>0.05	>0.05	>0.05	>0.05	>0.05	0.05	>0.05	>0.05	>0.05	>0.05	>0.05
Number of Siblings (%)														
(0) Any		0.34	0	0	0	0	0.06	0	0.06	0.13	0	0.06	0.47	5.60
(1)		5.19	2.32	1.70	0.65	2.18	1.84	2.39	3.07	2.94	1.64	1.84	6.56	54.37
(2) 9-16		0.47	0	0	0	0	0	0	0	0	0	0.13	0.41	0.41

Table 4. (Continued)

Statistics	F	33,08	1,84	1,12	1,37	1,48	,34	1,55	,84	,24	1,02	17,38	4,71	,51
	p	2,000	,158	,326	,254	,227	,706	,213	,428	,781	,359	,000	,009	,597
	GH	(1)-(2) p=,003	p>0,05	p>0,05	p>0,05	p>0,05	p>0,05	p>0,05	p>0,05	p>0,05	p>0,05	p>0,05	(1)-(2) p=,00 (1)-(3) p=,05	p>,05
Accommodation Place (%)														
(1) with family		0.82	0.13	0.13	0.13	0.13	0.13	0.13	0.41	0.41	0.13	0.13	0.82	7.18
(2) In dormitory		1.70	0.68	0.75	0.82	1.09	0.60	1.02	1.43	1.29	0.68	0.75	2.66	27.30
(3) in a house with friends		2.12	0.82	0.27	0.54	0.34	0.60	0.60	0.88	0.82	0.27	0.61	2.94	20.65

(4) alone in a house		0.95	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.95	3.69
(5) in relatives' house		0.13	0	0	0	0.06	0	0	0	0	0	0.13	0	0.60
(6) in apartment rooms		0.27	0.27	0.13	0	0.13	0	0.13	0	0.13	0.13	0	0.13	0.88
Statistics	F	7,96	5,15	6,21	4,57	5,64	2,47	2,47	,78	,97	5,25	7,12	2,69	1,13
	p	,00	,00	,00	,00	,00	,03	,03	,56	,43	,00	,00	,02	,33
	GH	p>0,05	(3)-(5) p=,01	(2)-(5) p=,04	(2)-(5) p=,02 (2)-(6) p=,02	p>0,05	(3)-(5) p=,02 (3)-(6) p=,02	(2)-(5) p=,02			(2)-(5) p=,00 (2)-(6) p=,00 (3)-(5) p=,04 (3)-(6) p=,04	(2)-(5) p=,005	(2)-(5) p=,00 (3)-(5) p=,00 (4)-(5) p=,00	p>,05
Longest Accommodation Place (%)														
village		0.27	0	0	0	0.13	0	0	0.13	0	0	0.13	0.54	9,98
Town		1.09	0	0	0	0	0	0	0.13	0.13	0	0	0.82	8.54
City		2.25	0.95	0.54	0.95	0.88	0.95	1.23	1.50	1.29	0.68	0.88	3.21	28.18
Metropolitan city		2.12	1.23	1.02	0.82	1.02	0.82	1.02	1.23	1.36	0.82	0.88	2.53	13.06
Another country		0.27	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.27	0.13	0.13	0.41	0.68
Statistics	F	10,06	11,39	19,16	16,21	17,16	5,88	9,65	3,93	5,83	13,08	5,03	5,20	1,27
	p	,000	,00	00	,00	,00	,00	,00	,00	,00	,00	,00	,00	,27
	GH	p>0,05	(1)-(3) p=,00 (1)-(4) p=,00 (2)-(3) p=,00 (2)-(4) p=,00	(1)-(4) p=,00 (2)-(4) p=,00	(1)-(3) p=,00 (1)-(4) p=,00 (2)-(3) p=,00 (2)-(4) p=,00	(2)-(3) p=,01 (2)-(4) p=,00	(1)-(3) p=,01 (1)-(4) p=,02 (2)-(3) p=,01 (2)-(4) p=,02	(1)-(3) p=,00 (1)-(4) p=,00 (2)-(3) p=,00 (2)-(4) p=,00	p>0,05	(1)-(3) p=,00 (1)-(4) p=,00 (2)-(3) p=,01 (2)-(4) p=,01	(1)-(4) p=,00 (2)-(4) p=,00	(2)-(3) p=,02 (2)-(4) p=,00	(1)-(4) p=,04	p>0,05
Parental Relationship (%)														
(1) living together		3.14	0.95	0.34	0.54	0.82	0.41	0.88	1.57	1.43	0.27	0.47	3.89	44.59
(2) living separate		1.77	0.68	0.68	0.68	0.68	0.68	0.68	0.82	0.82	0.68	0.68	1.36	7.66
(3) divorced		0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.27	2.46	18.81
(4) mother is death		0.68	0.13	0.41	0.41	0.41	0.41	0.41	0.54	0.41	0.41	0.54	2.05	14.74
(5) father is death		0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.27	1.70	6
Statistics	F	5,747	2,227	3,456	3,045	3,167	2,591	3,560	1,881	4,042	3,743	3,769	2,093	1,791
	p	,000	,064	,004	,010	,008	,024	,005	,086	,001	,002	,002	,064	,098
	GH	(1)-(2) p=,004	p>,05	(1)-(3) p=,049	p>,05	(1)-(4) p=,023	(1)-(2) p=,024	p>,05	p>,05	(1)-(3) p=,026	(1)-(2) p=,035	p>,05	p>,05	(2)-(3) p=,010
						(3)-(6)	(4)-(6)							
Maternal Education Level (%)														
1. nonliterate		0,68	0,020	0.13	0.13	p=,006	0.13	p=,002	0.13	0.20	p=,033	p=,026	0.13	0.13	0.68	9.84
2. primary school		2(3)	(3)-(6)	0.68	9	8	12	7	14	(3)-(6)	18	6	12	51	497
3. secondary school		12	p=,022	12	0.68	0.68	12	0.68	0.68	p=,007	12	0.68	0.68	28	157
4. High school		19	6	0	4	0.13	5	0.20	(4)-(6)	4	8	0.13	0.06	14	56
5. graduate		8	4	4	4	4	4	5	p=,014	6	4	4	5	7	26
6. postgraduate		4	0	0	0	0	0	0	0	0	0	0	0	0	4
Statistics	F	6,155	5,085	3,088	3,488	2,857	5,846	3,402	3,249	1,019	2,310	1,454	1,317	,419
	p	,000	,000	,009	,004	,014	,000	,005	,006	,405	042	,202	,254	,836
	GH	(1)-(4) p= ,025	(2)-(6) p=,019 (3)-(6) p=,036	(2) -(4) p=,032 (2) -(6) p=,032	(2) -(6) p=,052	(2) -(6) p=,007	p>0,05	(2) -(6) p=,013	(2) -(6) p=,002 (3) -(6) p=,032	(2) -(6) p=,004	p>0,05	p>0,05	p>0,05	p>0,05
Paternal Education Level (%)														
1.		0.13	0.13	0.13	0.13	0.13	0.13	0.13	0	0.20	0.13	0.13	6	44
2.		16	4	0.20	0.13	4	0.13	9	7	4	0.13	5	32	364
3.		22	14	12	0.68	0.68	0.68	0.68	18	16	0.68	0.68	25	215

Table 4. (Continued)

Maternal Work Condition (%)														
(1) not works		44	0.68	4	6	13	6	16	19	19	6	11	69	635
(2) works		38	20	21	18	19	18	19	19	24	18	19	39	203
(3) retired		6	4	0	4	0	4	0	8	0.13	0	0	0.13	46
Statistics	F	7,465	13,007	12,121	10,735	7,495	19,792	4,091	28,040	1,058	5,315	1,525	1,441	,291
	p	,001	,000	,000	,000	,001	,000	,017	,000	,347	,005	,218	,237	,747
	GH	(1)-(2) p=,019	(1)-(2) p=,013	(1)-(2) p=,005 (2)-(3) p=,001	(1)-(2) p=,008	(1)-(2) p=,031 (1)-(3) p=,004 (3)-(2) p=,003	(1)-(2) p=,019	(3)-(1) p=,003 (3)-(2) p=,003	(3)-(1) p=,030 (3)-(2) 433 p=,048	p>,05	(2)-(1) p=,044 (2)-(3) p=,004	(3)-(1) p=,008 (3)-(2) p=,003	p>,05	p>,05
Paternal Work Condition (%)														
(1)		11	6	6	6	6	6	6	8	6	6	8	13	128
(2)		27	0.68	0.20	8	8	8	12	20	15	0.13	8	60	526
(3)		50	18	16	14	18	14	16	18	24	16	14	36	227
Statistics	(F)	6,773 ,001	,714 ,490	2,565 ,077	1,708 ,182	1,853 ,157	,004 ,996	,402 ,669	,449 ,638	,530 ,589	3,892 ,021	4,467 ,012	,152 ,859	1,4 ,24
	GH	(2)-(3) p=,002	p>,05	p>,05	p>,05	p>,05	p>,05	p>,05	p>,05	p>,05	p>005	p>,05	p>,05	p>,05

DISCUSSION AND CONCLUSION

This study analyzed the SDU rates and sociodemographic characteristics of university students according to the literature.

Briefly, the general sense about SDU was using substances such as heroin, although it contains tobacco, alcohol, IDs, and other substances. A study conducted by the T Monitoring Center for SDU found that the frequency of lifelong SDU was 2,7%. In the current study, SDU at least one time is 60,4%. The factors that caused a significant increase in SDU included being in the age range of 15-24 years, being male and single, having an income of $200 or lower, TU, AU, and using IDs. Studies conducted in T determined that 65,1% of the high school students reported TU.[8] Studies conducted with university students in T also found that 62% reported AU and 42,0% reported TU, while the rate of the students involved in SDU was 2,0%.[14] In the current study, the TU rate was 49%, and the rate of other substances was between 1,50% (biperiden) - 7,50% (marijuana). Turhan et al. found that SDU was more common among males than females (p=0,001).[17] Zengin also found that SDU was higher among males (36,8%) than females (5,9%) (p=0,005), which are compatible results with those of the ESPAD countries.[18, 25] The overall rates of SDU/SUDs for most drugs tend to be higher among males than females.[22] In contrast to the literature, there were more females than males who reported SDU at least once (p=0,000) in the current study. In ESPAD countries, on average, 19% of boys and 14% of girls take IDs at least once during their lifetime.[19]

Cannabis (2,4%) was the most widely used ID in all ESPAD countries at the age of 13 years or younger.[19] In contrast to the ESPAD countries, marijuana was the substance that the students on all campuses tried for the first time (86,2%) in the current study and 16% of the students used cannabis at least once in their lifetime, which is also higher than the rate in ESPAD countries. Muderrisoglu determined that participants tried marijuana for the first time (52,1%), which is consistent with the results of the current study.[16] It was seen that the percentages of first-tried substances in the current study were higher than the results in the literature. Similar results were found for the early onset of ecstasy and cocaine/crack use.

All the participants said that they acquired the substance for the first time from their friends or people that they knew about but never met personally (10,8%) and their families would severely object to their SDU. These situations are general characteristics of substance users.[3]

In the case of IDs other than cannabis, 1-2% of the ESPAD youth reported having used them at least once.[19] Muderrisoglu reported that the reasons for trying any substance were that "they were curious about it" (54,5%), ”to forget about their problems” (17,1%), and “to conform with their friends” (14,9%).[16] He also found that 58,6% of the participants said that they took a substance they tried from a friend.[16] The results of these two studies are consistent, and they both demonstrate the importance of peer influence. The current study’s results are also consistent with the results of this study.

Among the students who reported SDU, 46,85% had high GPA (2,00-2,99) scores. Zengin determined that the use of IDs was least common among students with high achievement levels (11,4%) and most common among those with low achievement levels (57,1%).[25] The difference between GPAs and SDU was statistically significant, which supports the results of the current study but in contrast, the percentage of SDU among students with high GPAs was higher in the current study.

The students who smoked the most were in the group with the lowest GPAs. They were followed by the students with high achievement levels. The difference was between the students with very low and high GPAs (p=0,000). The researchers categorized the students’ GPAs and found that most of the participants were younger than 15 years when they smoked their first cigarettes (p=0,000), began to smoke every day (p=0,000), and got drunk with alcohol for the first time (p=0,000). The rate of LLTU was 38,7%, which was lower than in T (65,1%). In the US, 67,7% of 18-25-year-olds reported LLTU, which is higher than in T and in the results of the study's sample.[18] They were younger than 15 years when they smoked for the first time (48,4%, p=0,005) (while in the US, 35,2% of them first used tobacco before the age of 15 years and began to smoke every day (65,6%, p=0,005).[18] Müderrisoğlu found that nearly half of the participants smoked and 40,4% were younger than 15 years with their first TU, which is higher than both the US and the current study’s statistics.[16] According to Turhan et al., LLTU was 73,2% and 30,7% of the students tried tobacco for the first time when they were 18 years or older.[17] These statistics showed that in the current study’s sample, smoking rates before 15 years were similar to the rates in T and higher than the rates in the US. There was no statistically significant difference between TU and gender (p=0,005). In the current study, more females reported their first TU before the age of 15 years than males, and as the age of the first TU gets smaller, the rate of LLTU in females becomes higher than in males. The study by Çuhadaroglu et al. determined that the rate of LLTU was higher among male students than females; however, the difference between them was not statistically significant, which is similar to the findings of this study.[13]

In ESPAD countries, 18% of students smoked cigarettes at the age of 13 years or younger.[19] On average, 4% of the students began TU daily at the age of 13 years or younger.[19] It was calculated that 47,71% of participants in the current study reported TU before 15 years old and 64,66% reported LLTU before 15 years old.

As Karam, Maalouf, and Ghandour mentioned, the earlier the experimentation with alcohol, the higher the risk of developing a clinical alcohol use disorder (AUD).[20] Moreover, alcohol use at a young age is considered by many as a ‘gateway’ or a ‘stepping-stone’ for future SDU. Despite different methodologies and instruments, all international studies agreed that alcohol is the substance of choice in the 18-25 years age group, with males being more likely than females to use alcohol (similar to the current study’s sample), to start at an earlier age, to follow a heavier pattern of use, to report more alcohol-related problems, and to have a higher prevalence of AUDs. [21] In a study by Turhan et al., 47% of participants reported AU at the age of 13 years or younger. The students were younger than 15 years when they got drunk with alcohol for the first time in the current study’s sample (70,2%, p=0,005), which was higher than in the

literature.[17] There was a significant difference between the age when the participants first got drunk with alcohol by age group (p=0,000), while the difference between the age groups and other variables was not significant (p=0,005). There was a statistically significant difference in AU by gender (p=0,005). In a study by Muderrisoglu, 30,7% of the participants said that they drank beer before they were 15 years old.[16] In a study by Turhan et al., 26,7% of the students tried beer for the first time when they were 18 years or older, and the frequency of drinking was higher among male students than female students (p=0,001), which is also consistent with the results of the current study.[17]

CONCLUSION AND SUGGESTIONS

To conclude, the students smoked and got drunk before they were 15 years old. The fact that the age to start smoking is younger than 15 suggests that addiction prevention programs for primary school students should be emphasized. There was no statistically significant difference between TU and gender. Since substance use, which used to be more common in men, is now seen in both sexes, it may be recommended to focus on women's studies on women who use substances. Cigarettes were the easiest substance to access, which was shown by the lack of a significant difference between male and female students in smoking. Most of the students who tried SDU said they did it because they wanted to forget about their problems, to accompany their friends, or because they were curious about it. This result showed that the presence of SDU in the environment increases students' rate of using these substances, and that peer influence is powerful. This study suggests that university students should be seen as a risk group and the migration effects of universities should be studied. Also there should be further studies designed with qualitative research methods.

SDU percentages were higher than in other cities of Turkey in Kastamonu. Almost all of the participants (84%) declared that they tried marijuana for the first time. Female participants have more SU than male participants except for tobacco. The effect of internal/external migration on SDU should be explored. Regular follow-ups of university students with more standardized measuring tools are necessary.

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