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Brief report

Prevalence and sociodemographic correlates of substance use in a university-student sample in Turkey

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Abstract

Background: Limited data is available on substance use among university students in Turkey. This study aims to determine the prevalence of substance use among this target group.
Methods: A total of 1,720 students were surveyed to assess substance use, and relationships between sociodemographic variables and substance use were assessed using both univariate and multivariate analyses.
Results: Of the recorded student sample, 6.4 % reported having used a substance; 2.8 % used one within the past year. Prevalence of cannabis use at least once during life-time was 5.9 %. Males living alone, or students with families residing abroad increased the risk of substance use.
Conclusion: Preventive interventions for substance use problems should consider factors related with family relations of the youth.

Keywords: Substance use – Prevalence – University students – Sociodemographic factors.

Turkey's centralized location exposes the country to crosscurrents of international drug trafficking. Opioid substances from the Asian countries are transported to Europe, and synthetic drugs are transported from Europe to the Middle East through Turkey (Turkish International Academy Against Drugs and Organized Crime 2006). Due to the political orientation of its government and its geographical proximity to Europe, Turkey is exposed to the influence of the Western culture, where substance abuse is highly prevalent.

There is a wide variation in the prevalence rates of substance use among different countries. According to the 2005 Annual report of the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)[1], cannabis is by far the most commonly used illegal substance in Europe. After cannabis, amphetamines, including ecstasy, were reported to be in the second place in Europe and among young adults (15–34 years), 0.6–13.6 % reported experience of ecstasy use[1].

University students may be at risk for illicit substance use because of the extraneous influences that manifest in the social climate of university life. Young adults seeking to cultivate their identities are notably more susceptible to peer-pressure.[2] After entering the university, students experience a change in life structure, the characteristics of which commonly include a departure from home, reduced parental supervision, increased social contact with peers in the campus community, all of which may play a role in the initiation of substance use. Studies also showed that the first use of substance corresponds to this age range.[3]

In Turkey, students enter the university by passing a central exam after high school and it is usually the first time that youths leave their protective parental home environment. Many of the students either rent a house with friends or reside in student dormitories during their university years. In Turkey, close relationships with the family generally persist despite separation from home. These typical sociocultural circumstances besides strict intolerance of the family towards substance use may play a protective role against substance use in the Turkish culture. In this sociocultural context, the extent of substance use in Turkey can be expected to differ from many European countries.

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Results of the limited number of studies done in Turkey indicated that 4.7 % of college students had ever used cannabis, and 5 % used inhalants,[4] and prevalence of lifetime ecstasy use was 3.3 % among students.[5] This study aims to determine the prevalence of substance use among university students in Turkey, so that appropriate prevention and intervention programmes can be instituted.

Methods

This study employed a survey of a random sampling of 2000 students in the political science departments of five selected universities. These schools were chosen for their ease of access. A homogeneous sample of the faculty facilitated sound comparability and interpretation of the findings in itself.

The questionnaire, prepared by the authors, comprised of a self-rating form. It consisted of questions including sociodemographic status, academic status, parental education, economic status, and place of birth. Usage was assessed by frequency and substance type. The option choices included cannabis, solvent, ecstasy, heroin and cocaine; timelines or occasions for each variant were 'past year,' 'past month,' or 'one time only.' Questionnaire forms were distributed to the participants by lecturers while they were in attendance of a required course. The lecturers were instructed about the introduction of the questionnaire forms. Students were assured that their responses would be confidential, and they were informed that they were not obliged to complete the questionnaire. The respondents were instructed to place the completed questionnaire forms in a communal envelope before the forms were retrieved.

A total of 1720 participants, or 86 % of the sample took part in the study. Males constituted 50.2 % (n = 864), and females constituted 49.7 % (n = 854) of the sample, and two (0.1%) of the students did not state their gender. The mean age of the sample was 21.5±1.8. Distribution of the subjects according to the academic year was as follows: 332 (19.3 %) were first-year students, 375 (21.8 %) were second-year students, 382 (22.2 %) were third- and 532 (30.9 %) were forth-year students; and 99 (5.8) did not report their academic year. Family income was stated as low by 156 (9.1 %), as moderate by 962 (55.9 %), as above average by 522 (30.4 %), and as very high by 73 (4.2 %) of the students, while the rest seven (0.4 %) did not answer the relevant question.

Statistical analysis

Univariate analyses were carried out on the relationships between socidemographic variables and the use of any of the substances mentioned in the questionnaire form. Relationships between substance use and gender, school, academic year, subjective evaluation of academic performance, place of habitation of the family during the last ten years, place of residence of the student, education of the parents, subjective evaluation of the family income and frequency of drinking in the past year were examined using chi-square analysis.

The significant relationships identified by the univariate analyses were reassessed using logistic regression models. The use of any one substance was implemented as the dependent variable in the logistic regression analysis.

All statistical analyses were executed by using SPSS 13.0.

Results

Cannabis was the most widely used substance among the university students; 101 (5.9 %) of the whole sample have ever used cannabis during life-time, while 45 (2.6 %) were past-year, and 21 (1.2 %) were past-month cannabis users. After cannabis ecstasy was the second most widely used substance among students; 29 (1.7 %) of the students had a history of life-time ecstasy use, 12 (0.7 %) used ecstasy in the last year- and 5 (0.3 %) used it in the last-month period. Prevalence rates of life-time, past month use of heroin were 0.2 % and 0.1 % respectively, and the corresponding figures were 0.4 % and 0.2 % for cocaine. Eleven (0.6 %) of the students reported to have ever used solvents during life-time. Only one (0.1 %) of the students was last-month cocaine user, whereas none has used heroin during last month, and none has used solvents in the last year- or in the last-month period.

A greater percentage of the male students used substances compared with the females. A significantly higher proportion of students who were living at home alone than those who were living with their family or with friends or in student dormitory were found to be substance users in the univariate analysis. Low academic performance, as subjectively stated by the student, was related with a greater probability of substance use (Tab. 1).

The statistically significant relationships were additionally tested by constructing logistic regression model. Place of habitation of the family was also taken in the logistic regression analysis, since its relationship with substance use was near statistical significance (p = .060) in the chi square analysis. In general both the univariate and the multivariate analyses revealed similar results except the relationship between subjective evaluation of academic performance and substance use, which did not appear to be significant in the multivariate in contrast to the univariate analysis (Tab. 2).

Table 1. Relationships between life-time substance use and sociodemographic factors – univariate analysis.

	Presence of life-time substance use			
	n	%	χ^2	p
Gender				
Male	87	10.1***		
Female	22	2.6	40.515	.000
Place of living (last 10-year)				
Urban	82	6.1		
Rural	21	6.9		
Foreign country	5	16.7	5.613	.060
School				
Istanbul	20	6.9		
Ankara	43	7.8		
Izmir	10	4.0		
Mersin	21	7.7		
Mugla	16	4.6	6.942	.139
Academic year				
Year 1	15	4.5		
Year 2	26	7.0		
Year 3	24	6.3		
Year 4	33	6.2	1.918	.590
Subjective evaluation of academic performance				
Poor	27	17.3		
Average	56	5.9		
Good	21	4.0		
Very good	4	5.6	36.761	.000
Residence				
At home with family	41	6.1		
At home with friends	41	7.9		
At home alone	10	12.8		
In student dormitory	12	3.3		
Other	6	8.1	13.679	.008
Education of the father				
Illiterate	0	0		
Primary school	26	4.6		
High school	33	7.3		
Colllege/univ	41	7.3	5.267	.153
Education of the mother				
Illiterate	3	5.0		
Primary school	39	5.0		
High school	35	7.8		
Colllege/university	23	8.0	5.462	.141
Subjective evaluation of family income				
Poor	5	6.9		
Average	66	7.8		
Good	35	5.0		
Very good	3	3.4	6.223	.101

[a] Substances questioned include cannabis, solvents, ecstasy, heroin and cocain

Discussion

Although Turkey is located on the way between the West and the East in the drug traffic, prevalence rates of substance use has not reached the levels reported for Europe. In the present study prevalence of ever use of cannabis was found to be 5.9 % which is even lower than the lowest rates reported for Europe (7.6 % in Portugal and 7.7 % in Poland).[1] Considering the university student samples, prevalence of life-time cannabis use was found as 59 % in the United Kingdom,[6] 53.4 % among high school students in Crotia.[3] Prevalence of life-time use of marijuana among the youth is around 40–50 % in the United States.[7,8] Again, prevalence rate of past year use of cannabis

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Table 2. Relationship between substance use and sociodemographic factors-multivariate analysis.

	Substance use		
	Exp(B)	95 %CI	p
Gender			
Female	1		
Male	3.724	2.260–6.134	.000
Residence			
At home with family	1		.011
At home with friends	.916	.565–1.486	.722
At home alone	2.345	1.080–5.090	.031
In student dormitory	.478	.235– .973	.042
Other	1.723	.673–4.411	.257
Residence (family)			
Rural	1		.060
Urban	1.207	.714–2.042	.483
Foreign country	3.547	1.227–10.252	.019

in the present study (2.6 %) is much lower than that reported for Europe. Among 15 to 24-year-old Europeans, past year use of cannabis was reported by 4–32 % with rates in most European countries being in the range 9–21 %,[1] this figure is between 23.2 % and 29.7 % among the United States college level students.[8]

After cannabis, amphetamines, including ecstasy, were reported to be in the second place which is also true for the results of the present study. Among the young adults (15–34 years), 0.6–13.6 % reported experience of ecstasy use.[1] The prevalence rates of lifetime ecstasy use are again higher among the youth in many European countries than in Turkey (1.7 %), for instance 11.3 % in Crotia,[3] 13 % in the United Kingdom.[6]

Looking at the lower prevalence rates of substance use among students in Turkey compared with many other countries, it can be suggested that close family bonds of the youth with his/her family and strictly intolerant attitude of the family toward substance use may play a protective role against substance use in Turkey society.

Prevalence of use of cannabis at least once during life-time was 5.9 %. Ecstasy (1.7 %), solvent (0.6 %), cocaine (0.4 %), and heroin use (0.2 %) followed cannabis use. Tot et. al.[4] reported that in Mersin, in Turkey, 4.7 % of college students had ever used cannabis, and 5 % used inhalants. Çorapçıoğlu & Ögel[5] found prevalence of life-time ecstasy use as 3.3 % among students in nine cities of Turkey. The higher figures reported in these two studies probably reflect the geographical and social heterogeneity of substance use in Turkey, which necessitates an investigation of factors related to substance use in the country.

A consistent relationship was found between gender and substance use in many studies, the prevalence rates being higher among males.[3,9,10,11] The male-female ratio for life-time experience of cannabis varies from 1.25:1 to 4:1.[1] Males have more unhealthy lifestyles and a higher tendency to engage in drug use than women.[12]

The male student who lives alone and whose family lives in a foreign country has the highest risk of substance use. Çorapçıoğlu and Ögel[5] also found that the prevalence of ecstasy use among Turkish students was higher among those who were living alone or whose parents were living abroad. Other studies concluded on the protective effect of living with one's parents[10,11] and having good family relations.[3,13] Staying in student dormitories in Turkey, which have some rules such as strictly determined entrance hours and being unable to stay out without permission, appeared to be protective against substance use. However, living with friends or alone reduces parental controls and increases exposure to peer influences, resulting in opportunities to engage in substance use behavior. Proximity to parents appear to play a role in protecting the student from problem behaviours such as substance use as indicated by our results and those of others. Low academic performance was found to be related with substance use as in other studies;[3,10] there is probably a reciprocal causal relationship which requires further studies. We found that there were no significant relationships between social background and the substance use of university students, findings concurrent with several other studies.[3,4,9,10,14,15,16]

There may be some underestimation of the prevalence of substance use as a result of the absentees being omitted from the student population and possibly some incorrect answers about personal substance use because this is illegal in Turkey. As any other targeted study, there are limitations about the representativeness of the sample of the present study, but while the prevalence indicators of substance use may vary in other universities in Turkey, the factors associated to substance use are unlikely to differ, and this is the first large-scale multicenter university survey which investigated correlates of substance use problems.

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