

Prevalence and perceived risks of drug use among undergraduate students from Timis County: a cross-sectional study

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ABSTRACT. The aim of this study is to identify prevalence of drug use and to examine undergraduate students' perceived risks of substance use in Timis County area.

This study is part of a type A grant financed by the National University Research Council. We conducted a cross sectional study using a multistage stratified cluster sample design to produce a representative sample of undergraduate students for Timis County, Romania. A 126-item questionnaire was developed to investigate health-risk behaviours of young adults. Eighteen items regarding illicit drug use suggesting different intensity of use were listed. The response categories were “no risk”, “slight risk”, “moderate risk”, “great risk” and “don't know”.

KEYWORDS: drug use, perceived risks, undergraduate students

Introduction

Drug use by undergraduate students has become an increasing public health problem in many countries. The health behaviours of young adults are important because this group is in a transition between adolescence and early adulthood, a time during which unhealthy behaviours developed during adolescence may be malleable or may be consolidated into lifetime

patterns. It is important to understand the characteristics associated with illicit drug use in this population and the factors that might be used to influence students' behaviour [ET97, S+94, Gra93, GD90, MCC92, E+98].

1 Design and methods

This study is part of a type A grant financed by the National University Research Council. We conducted a cross sectional study using a multistage stratified cluster sample design to produce a representative sample of undergraduate students for Timis County, Romania.

A 126-item questionnaire was developed to investigate health-risk behaviours of young adults. A pilot test was conducted to establish the validity and reliability of the instrument. The students were asked: "How much do you think people risk harming themselves (physically or in other ways) if they..."

Eighteen items regarding illicit drug use suggesting different intensity of use were listed. The response categories were "no risk", "slight risk", "moderate risk", "great risk" and "don't know". Other 14 items were dedicated to the investigation of substance use. The study was carried out between May–June 2005. The selected Universities Boards approved this study. The questionnaire was administered in a regular classroom setting and it took students about 60 minutes to complete. No filter questions were used. By doing this, comparable amounts of time are required to complete the questionnaire, regardless of risk behaviour status and students cannot detect the risk behaviours of their colleagues simply by looking at the pattern of responses. Only students present the day of the survey were eligible for participation. Trained public health residents and undergraduate medical students conducted the survey. The data collectors read aloud scripts that explained the survey procedures.

Students were told that they do not have to put their names on answer sheets, and that obtained data would be used only for general assessment of the situation in the city and would not be ever associated with their institution or grade. The size of classes ranged from 7 to 100 depending upon the field of study and the institution. A total of 118 classes (clusters) participated to the study. Chi-square test assessed the associations between categorical data. A multivariate logistic regression analysis was done to find out the most important beliefs significantly associated with drug use. A p-value <0.05 was considered statistically significant, and odds

ratios with their respective 95% confidence interval (CI) were calculated. Anonymity was assured. We used the Epi Info 3.4.3 (CDC Atlanta) and SPSS 10.0 (SPSS Inc, Chicago, Il) software packages for data management and analysis.

2 Results

A total of 2076 students (aged 18-25) were included in the analysis. The overall response rate was 40.0%. Demographic characteristics of the sample are shown in Table.1. A proportion of 9.5% of the students (6.8% of female vs. 14.2 % of male students, $p < 0.001$) have ever used any form of drug and 1.3% (0.7% of female vs. 2.3 % of male students, $p = 0.004$) used drugs in the previous 30 days as shown in **Fig. 1**.

Marijuana is by far the most widely used illicit drug (90.81% of those ever using any form of drug during their lifetime and 92.0% of those using drugs in the previous 30 days). Among those who have ever used any form of drug during their lifetime, ecstasy (11.22%) and tranquilizers (5.61%) followed marijuana. Of all the respondents who said they had tried an illicit drug, 79.18% had initiated use at the age of 17 or more.

The most commonly used methods of illicit drug administration are: smoked (69.07%), injected (6.70%) and oral (6.70%).

Illicit drugs for consumption were offered to approximately one third of the students (Fig.2).

Students were also asked in which context they usually consume drugs. The response alternative “at someone else’s home” scored highest in comparison to the others (31.6%). The second most frequent choice was “at home” (17.3%) and “in a disco” was the third (11.7%).

Perceived risks of drug use vary substantially between different substances. The highest value is denoted for regular injections of drugs, which 85.1% of the students associate with a great risk. Little lesser students thought that regular use of cocaine (81.8%) or regular use of ecstasy (78.2%) would put people at high risk.

Table 1. Demographic Characteristics of the Sample

Characteristics (n=2076)		95%CI
Age, y		
Mean	21.09	
SD	1.48	
Range	18-25	
Sex, %		
Male	37.5	35.4-39.6
Female	62.5	60.4-64.6
Ethnicity, %		
Romanian	95.0	93.9-95.9
Hungarian	2.0	1.4-2.7
Serbian	0.7	0.4-1.2
Moldavian	0.7	0.4-1.2
German	0.5	0.2-0.9
Ukrainian	0.5	0.2-0.9
Other	0.6	0.4-1.1

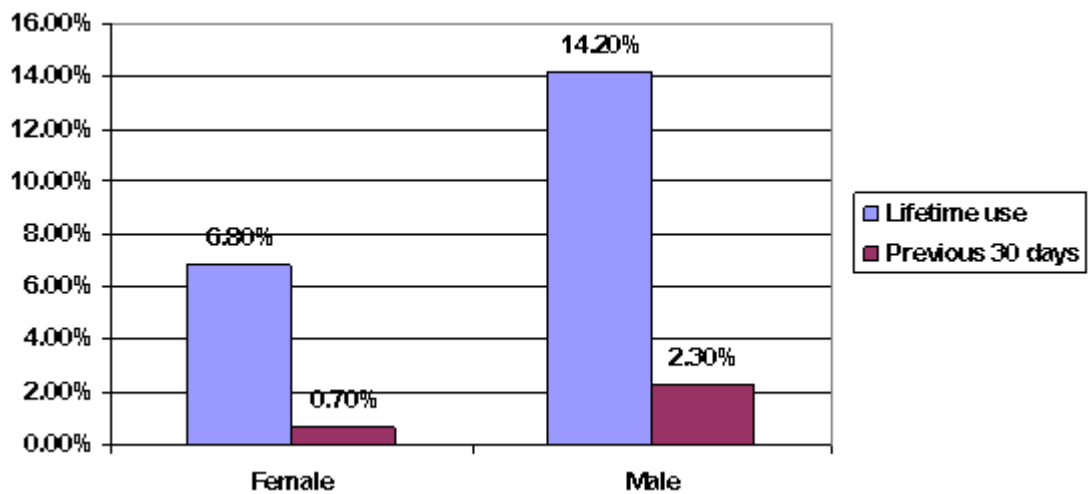


Figure 1. Prevalence of Lifetime and Previous 30 Days Drug Use Among Students

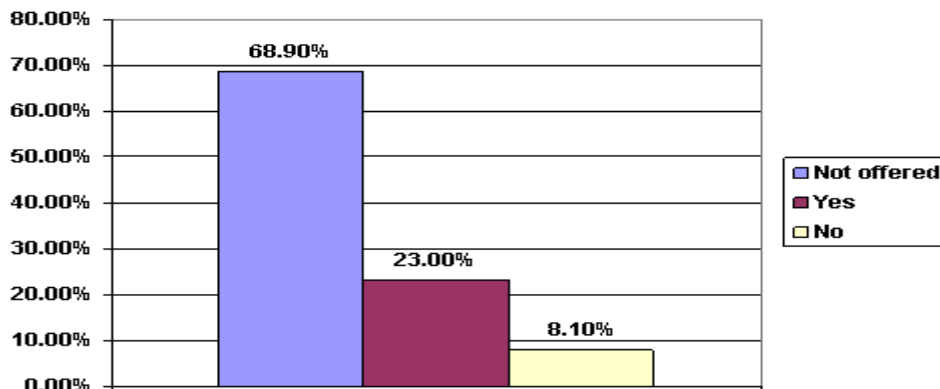


Figure 2. Illicit drugs for consumption offered and accepted by the students

Using backward elimination procedures, the most parsimonious multivariate logistic model was produced to find out the most important beliefs significantly associated with drug use. Significant beliefs associated with drug use are: perceived risks about trying marijuana once or twice ($p < 0.001$), about trying LSD once or twice ($p = 0.001$), about regular use of cocaine ($p = 0.003$), about using a needle to inject any illegal drug once or twice ($p < 0.001$), and about inhaling any paints, glue or sprays once or twice ($p = 0.011$).

Model chi-square test was 393.31 with 20 degrees of freedom ($p < 0.001$). Nagelkerke's R^2 value, an estimate of variations in outcome variables explained by a logistic regression model was calculated. Its value is 0.38, indicating that 38% of the variance in drug use was explained by the logistic regression model.

There are studies indicating that a cognitive-behavioural substance abuse prevention approach is effective which emphasizes that teaching of social resistance skills within the larger context of an intervention designed to enhance general social and personal competence. Results indicate that this type of prevention strategy, when implemented by peer leaders and when additional booster sessions are provided later, can reduce drug use [MH99, B+90, Cal98].

Table 2. Beliefs associated with drug use determined by multivariate analysis

Variables	B coefficient	p value	OR	95,0% C.I. for OR	
				Lower	Upper
Trying marijuana once or twice		<0.001			
great risk			1 (ref)		
moderate risk	1.384	0.001	3.989	1.804	8.822
slight risk	2.763	<0.001	15.847	7.750	32.401
no risk	4.404	<0.001	81.768	38.172	175.155
don't know	1.325	0.039	3.762	1.067	13.262
Trying LSD once or twice		0.001			
great risk			1 (ref)		
moderate risk	0.010	0.965	1.010	0.640	1.596
slight risk	0.376	0.218	1.457	0.801	2.652
no risk	1.231	0.047	3.423	1.015	11.548
don't know	-1.044	0.002	0.352	0.182	0.681
Regular use of cocaine		0.003			
great risk			1 (ref)		
moderate risk	0.168	0.676	1.183	0.538	2.603
slight risk	1.149	0.042	3.154	1.044	9.526
no risk	-2.531	0.017	0.080	0.010	0.637
don't know	0.851	0.030	2.341	1.085	5.054
Using a needle to inject any illegal drug once or twice		<0.001			
great risk			1 (ref)		
moderate risk	-1.853	<0.001	0.157	0.076	0.324
slight risk	-1.569	0.007	0.208	0.066	0.658
no risk	0.122	0.907	1.130	0.147	8.663
don't know	-1.161	0.023	0.313	0.115	0.850
Inhaling any paints, glue or sprays once or twice		0.011			
great risk			1 (ref)		
moderate risk	0.429	0.065	1.536	0.973	2.424
slight risk	0.974	0.002	2.648	1.448	4.843
no risk	-0.867	0.297	0.420	0.082	2.141
don't know	0.076	0.821	1.079	0.559	2.081

Despite advances in other ways to measure drug use, self-report remains the most efficient way to assess the various dimensions of drug use [B+01]. Although survey methods have obvious advantages over indirect measures such as arrests and treatment admission, they are frequently criticized because they rely on the validity of self-reporting of sensitive and highly stigmatized behaviour [Har97a]. Biological assays cannot determine the age at which individuals initiated drug use, other factors that may covary with drug involvement, and even whether individuals have received treatment in the past [Har97b].

Conclusion

The overall drug use prevalence is small. However, use of some drugs once or twice such as marijuana and LSD is perceived as no risk at all. The development of effective interventions and substance abuse policies for colleges and universities is likely to help reduce the long term consequences.

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