

Tobacco, alcohol and illegal substances: experiences and attitudes among Italian university students

LENKA KRAČMAROVÁ¹, HANA KLUSOŇOVÁ², FABIO PETRELLI³, IOLANDA GRAPPASONNI⁴

¹Hospital Pharmacist, Regional Hospital of T. Bata in Zlín, Czech Republic, Cooperating with Charles University in Prague, Czech Republic, and with the University of Camerino, Italy

²Professor of Cell Biology, Charles University in Prague, Faculty of Pharmacy in Hradec Králové; Member of the Teaching Board, PhD Course in Bioorganic Chemistry, Czech Republic

³Researcher of Hygiene and Public Health, School of Pharmacy, University of Camerino; Vice-President, Directive Board of the Italian Society of Hygiene and Public Health, Marche Region, Italy

⁴Associate Professor of Hygiene and Public Health, School of Pharmacy, University of Camerino; Member of the Teaching Board of the PhD Course in Environmental Sciences and Public Health, University of Camerino, Italy

SUMMARY

Objective: The purpose of this research was to assess the prevalence of addictive drug use among students of University of Camerino (Italy) and to verify aspects related to substance use in this population. **Methods:** The survey was carried out in the form of anonymous questionnaires completed by 345 participants. Chi-square test was used for statistic evaluation. **Results:** Most students have experienced legal addictive substances: 28.0 % of participants smoke cigarettes regularly and 23.2 % of respondents have admitted regular alcohol consumption. In addition, 50.4 % of subjects have already tried an illegal drug; the most used substance was cannabis (46.7 %), followed by cocaine (13.3 %). **Conclusion:** Our results confirmed the increased experimental use of cannabis among young people in Europe and showed a long-term use of drugs, particularly cocaine, among university students.

Keywords: Students; alcohol drinking; consumption of tobacco-derived products; psychotropic drugs; experienced; Italy.

RESUMO

Tabaco, álcool e substâncias ilegais: experiências e posicionamento entre estudantes universitários italianos

Objetivo: O objetivo desta pesquisa foi avaliar o uso de drogas que causam dependência entre os estudantes da Universidade de Camerino, Itália, e verificar os aspectos relacionados ao uso de substâncias psicoativas nesta população. **Métodos:** A pesquisa foi realizada por meio de um questionário anônimo composto por 345 participantes selecionados aleatoriamente entre os alunos da universidade. O questionário tem sido utilizado, para esse tipo de estudo na República Tcheca, desde 2002. O teste qui-quadrado foi utilizado para a avaliação estatística dos fatores, conforme o uso da substância. **Resultados:** A maioria dos alunos entrevistados teve alguma experiência com substâncias legais que causam dependência: 28,0% dos participantes fumam cigarros regularmente e 23,2% dos entrevistados admitiram consumo regular de álcool. Além disso, 50,4% dos indivíduos já experimentaram uma droga ilícita; a substância mais experimentada foi cannabis (46,7%), seguida da cocaína (13,3%). Dos estudantes que experimentaram drogas, 19% admitiram o uso da substância no último mês (cannabis 87,5%). **Conclusão:** Nossos resultados confirmam o aumento experimental do uso de drogas cannabis entre os jovens na Europa e revelam um longo tempo de uso de drogas, principalmente de cocaína, entre os estudantes universitários.

Unitermos: Estudantes; consumo de bebidas alcoólicas; consumo de produtos derivados do tabaco; psicotrópicos; experimentador; Itália.

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Correspondence to:
Lenka Kračmarová
Charles University in Prague,
Faculty of Pharmacy in
Hradec Králové
Department of Biological and
Medical Sciences,
Heyrovského 1203
50005 - Hradec Králové,
Czech Republic
lenystka@centrum.cz

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INTRODUCTION

Alcohol, tobacco, and psychotropic drug use is a worldwide health problem. Use of both legal and illegal substances can noticeably affect the lives of people. They have been shown to affect many aspects of health (including growth and development of children, general health status, cancer, and quality of life) and to have major socioeconomic consequences¹.

World-wide, half of the total adult population (2 billion people) uses alcohol². 185 million adults are estimated to have used illicit drugs and 146.2 million adults (3.7% of population) used cannabis. Cannabis is used across all countries of the world, while opiate use is concentrated in Asia and Europe and cocaine use is concentrated in Americas and to a lesser extent in Europe^{3,4}.

Latest studies indicate a levelling off in the number of problem drug users (drug addicts) in Europe, in contrast to the group of occasional experimenters whose number is increasing⁵⁻⁸. Young people focus mainly on substances that carry acceptable risk, formerly called “soft” drugs⁹, which can, in fact, be risky because their occasional users underestimate them¹⁰.

University students make up a young section of the population that will belong to the elite of the future. Their approach to addictive drugs (AD) is generally responsible, and therefore they are mindful of their health and can exercise self-discipline in relation to their future life. Nevertheless, high levels of psychical stress during studies and consequences of social life can lead to higher vulnerability to AD^{1,11}.

Prevalence and mode of substance use among young people have to be investigated because these surveys provide useful epidemiologic data and they are potentially useful for planning intervention helping to remove possible background or behavioural risk factors.

This study aimed to analyse the prevalence and mode of AD use among Italian university students, their attitudes to AD, to assess the eventual risk factors and identify the characteristics of the users.

METHODS

DESIGN OF THE STUDY

The questionnaire-based survey was performed from March to October 2006 at an university in the region of Marche, central Italy. Anonymous questionnaires were personally given to students during their seminars and lectures with obligatory participation of students. The aims of the study were explained to the present students, the anonymity was emphasized and they were invited to participate in the survey. Despite of voluntariness the questionnaires were completed by all students presented. Later the filled-out questionnaires were checked for data integrity.

The sample randomization procedure consisted of the following steps: first, two out of five faculties of the uni-

versity were randomly selected: Faculty of Pharmacy and Faculty of Science; in addition, study classes of students from each branch were randomly selected.

STUDY POPULATION

Participants were 345 randomly chosen students of a central Italian university.

Subjects were students of the Faculty of Pharmacy and the Faculty of Sciences. One hundred fifty (43.4%) participants were males, 195 (56.6%) females. The average age of the respondents was 23.7 ± 4.4 years.

Students come from all regions of Italy covering north, center and south; 289 (83.8%) of students are of Italian nationality. For more detailed information regarding the subjects' region of origin, see Table 1, which compares the examined sample with the total number of the Faculty of Pharmacy and the Faculty of Sciences students.

Table 1 – Participants' region of origin compared with all university students

Region of origin	Study participants		All univ. students	
	Nr.	%	Nr.	%
North Italy	18	5.2	160	3.8
Central Italy	210	60.9	2,897	69.6
South Italy	61	17.7	787	18.9
Foreign country	51	14.8	316	7.6
No answer	5	1.4	-	-

Nr., number.

TOOLS

A self-administered anonymous questionnaire developed at the Faculty of Pharmacy of Charles University in Prague, which has been used for these studies in Czech Republic already since 2002¹², was used for monitoring university students' drug manners in Italy. The only concrete data were the age, nationality, regional affiliation and the grade of respondents, and his/her parents education. The questionnaire consisted of following parts: socio-economic data, a section about experiences and opinions on legal AD, a section concerning experiences and opinions on illegal AD and a last part remarking the viral hepatitis and HIV incidence among university students, for example, in coincidence with intravenous substance use. The questionnaire consisted of 58 closed-ended questions. A few questions were semi-closed or open (the age of first use etc.).

ANALYSIS FORMS

The results were processed in Microsoft Excel and presented as descriptive statistics, e.g. sample numbers and percentages. The dependence of two qualitative characters was statistically evaluated with a chi-square test at $p < 0.05$ significance level. The statistics were used mainly for the evaluation of possible risk factors consistent with drug use.

RESULTS

LEGAL SUBSTANCES: ATTITUDES AND EXPERIENCES

Almost half of the respondents are non-smokers (46.9%); regular smoking has been reported by 28.0% of students. On average, the subjects smoked their first cigarette at the age of 15.1 ± 3.0 , with 12 cigarettes smoked a day. Nevertheless, the subjects tried alcohol for the first time at the average age of 15.4 ± 2.6 years. Students' attitudes to legal substances are shown in Table 2.

Among students more males were significantly found drinking alcohol several times a week or daily (34.4%) than females (14.9%) ($p < 0.05$). No significant differences were found compared with tobacco smoking. It has been examined whether the students consider themselves regular tobacco or alcohol users and, if so, for how long. 34.5% of respondents have admitted a regular tobacco smoking (in the past or present) for a average period of 7.5 ± 3.0 years; 42.0% of subjects considered themselves regular alcohol users for a average period of 7.3 ± 2.9 years.

Concerning the perceive of harmfulness of substances, two thirds of students (62.9%) considered the long-term use of alcohol harmful; long-term use of tobacco was considered harmful by 40.6%, and very dangerous by 56.8% of students. Students drinking alcohol several times a week or daily consider alcohol to be very dangerous in significantly less cases than abstainers (11.0% compared to 46.0%) ($p < 0.05$). Similarly, non-smokers consider tobacco significantly more dangerous than regular smokers (64.2% compared with 45.4%) ($p < 0.05$).

ILLEGAL ADDICTIVE SUBSTANCES: ATTITUDES AND EXPERIENCES

Illegal AD use was reported by 174 students (50.4%). The life-time prevalence of various illegal substances is summarized in Table 3.

The most frequently used substance was cannabis (46.7%). The life-time prevalence increases with age: 48.2% in the 15-24 age group and 55.0% in the 25-34 age group. Cannabis use was reported by 56.0% males in contrast to 39.5% females ($p < 0.05$).

Table 3 – Students' experiences with illegal substances: life-time prevalence

Substance	Nr.	%
Cannabis	161	46.7
Cocaine	46	13.3
Psychedelic mushrooms	25	7.2
Ecstasy	21	6.1
Amphetamine	18	5.2
LSD	13	3.8
Methamphetamine	5	1.3
Heroin	3	1.4
Solvents	2	0.6
Methadone	2	0.6

Nr., number.

Intravenous drug was not prevalent among the students. By their own accounts, students smoked, sniffed and ingested all substances. Our research revealed that heroin was also sniffed, as well as used intravenously.

Presently the drug-experienced students prefer the use of cannabis (23.6%) or cocaine (2.2%). 7.1% of drug-experienced subjects have used addictive substance more than 4 times a week. Last-month prevalence (LMP) of substance use was observed in 9.6% of students, that is, 19.0% of drug-experienced students (with marijuana accounting for 87.5%).

The first drug use occasion was mostly a rendezvous with friends (15.5% of drug-experienced), a celebration (13.2%) or in connection with school/university (9.2%). (The mentioned percentages correspond only with drug-experienced subjects.) An illegal addictive substance was used for the first time at the average age of 17.0 ± 2.3 years (from 14 to 26 years). Most frequently cannabis (53.4%) was the first substance used at the average age of 16.9 ± 2.2 years.

Obtaining drug was considered to be easy for 30.5% of the drug-experienced subjects. Only 10.3% of the drug-

Table 2 – Students' experiences with legal substances: frequency of use

	Frequency of alcohol drinking		Frequency of tobacco smoking		
	Nr.	%	Nr.	%	
Abstainer	50	14.4	Never	162	46.9
Rarely	120	34.7	Ex-smoker	23	6.6
Several times a month	85	24.6	Rarely	31	9.0
Several times a week	69	20.0	Occasionally	30	8.7
Every day	11	3.2	Regularly	97	28.1
No answer	10	2.9	No answer	2	0.6

Nr., number.

experienced subjects have admitted a negative influence of AD on their life. Among the drug-experienced respondents, 15.5% wanted to quit drugs, probably because they suffered no ill-health through their use (only one person developed psychical disturbs) and had no problems with police: only 7.5% of drug-experienced students have had problems with the police concerning drug use.

According to the students, obtaining substances in the town of residence was easy (70.7%), but not so in the university town; “only” 22.3% of students would buy an illegal substance in the area of their university.

The legalization of cannabis is frequently discussed. We have found that 52.1% of student prefer the cannabis to be legalized, however only 7.2% of students support the distribution to be legalized.

Sniffing of addictive substances was considered by the students very dangerous (90.7%) as well as intravenous drug application (97.4%). Long-term drug smoking (e. g. marijuana) and medicaments abuse was thought by a third of the respondents as harmful (31.3% and 25.2% respectively) and by a majority as very dangerous (59.7% and 73.0% respectively). Interestingly, tobacco smoking was considered more harmful than illegal drug smoking: long-term tobacco smoking was considered harmful or very dangerous by 97.4% subjects, while long-term drug smoking was reckoned as harmful or very dangerous by 91.1% students ($p < 0.05$).

One third of subjects (30.7%) have considered themselves very well-informed on addictive drugs (AD), and 59.7% sufficiently informed; only 25.8% were informed on AD just by teachers during the academic year. Although the majority of subjects (90.4%) have considered themselves sufficiently informed on AD, only one quarter of them (25.8%) has known at least one organization or institution that helps people with problems caused by AD.

More than a half of the respondents (56.5%) had drug-experienced friends and more than a half have known somebody who is/has been a regular drug user (56.5%). In the future, 9.3% of the students want to use illegal drugs “for sure”, 10.1% of the subjects “maybe”, and 60.6% of the respondents “definitely not”.

RISK FACTORS AFFECTING DRUG USE

The consistency of diverse factors between the group of respondents without a drug experience (“the inexperienced”; 171; 49.6%) and the group with a drug experience (“the experienced”; 174; 50.4%) was evaluated through a chi-squared test for two qualitative characters. At the $p < 0.05$ level of significance, drug experience is correlated with the following aspects: to be male (e. g. cannabis use was admitted by 56.0% males in contrast to 39.5% females), from town with less than 5,000 inhabitants, to live together with friends and with a person who uses drugs.

It was found that drug-experienced students smoke more than inexperienced. They tried the first cigarette at a lower average age and smoked more cigarettes a week than the inexperienced. In addition, the drug-experienced students consumed alcohol more often than the second group; they tried alcohol for the first time at a lower average age. They considered alcohol, tobacco and use of illegal substances less dangerous than the other group. The drug-experienced students support the legalization of use and distribution of “soft” drugs as well as their controlled distribution.

The drug-experienced students spend their free time more likely on discos, at parties, with friends or in bars, in contrast to the inexperienced that rather go to cinema; they consider themselves well-informed on drugs and that obtaining drug in their town of residence was easy.

Drug-experienced subjects are significantly more likely than inexperienced to have friends who have tried an AD; likewise the drug-experienced subjects are more likely to try AD because of their association with AD regular users

They knew more frequently at least one institution/organization that helps people with drug related problems. Significantly more drug-experienced students wanted to use drugs in future “for sure” or “probably” than the inexperienced.

THE INFECTION DISEASE TEST

In 2006 there was a HIV (human immunodeficiency virus) awareness campaign in Italy, with posts on buses, trains etc, and stations. We were concerned if students have been tested to presence of infectious viral hepatitis (VH) and HIV. 26.2% of the subjects were tested to VH, with one person with a positive result of VH-A. 18.7% of the students were tested to HIV, all with negative results. 2.6% and 2.3% are tested regularly to VH and HIV respectively, mostly in connection with blood donation.

DISCUSSION

Tobacco smoking, alcohol drinking and psychotropic substances use are quite diffused among Italian young people¹³⁻¹⁵.

It is not surprising, that the most experienced substance, beyond legal tobacco and alcohol, was marijuana. Cannabis is the illegal substance most commonly used in all countries of the European Union (EU), with many countries reporting lifetime experience of the drug by more than 20.0% of the general population according to the EMCDDA – the European Centre for Drugs and Drug Addiction. The use of cannabis is increasing, mainly among young adults^{5,7,16}. The use among males is higher than among females¹⁷, what is confirmed also in our survey. (Our results are compared with EMCDDA data from the same period the survey was carried out, 2006, and similar to available data.)

The cannabis use is to a great extent occasional, or it is quit beyond a certain period. 20.0-40.0% of Europeans have used it during the last year and only 1.0-10.0% have used it during the last month⁷. Similarly among our subjects 9.3% have used cannabis during the last month. It was expected, that its prevalence increases in proportion to the age¹⁷: in our survey 48.2% of drug-experienced students were in the age group of 15-24 years, compared with 55.0% of those in the age group of 25-34 years.

The population research show that stimulants (amphetamines, ecstasy and cocaine) are the second abused group of substances after cannabis in the EU⁷. Cocaine use is abandoned at the young age or it is occasional. Its use was reported by 5.4% subjects (15-44 years) in Italy in 2003. 3.4% of Italians admitted having used amphetamine derivatives at least once in their life¹⁷. General population surveys note that the use of cocaine is steadily increasing in different countries indicating either a stability or upward trend of use in the 15-34 age group. The countries with the highest prevalence of cocaine use in this group are Italy, Denmark, Spain, Ireland and the UK¹⁸.

In our survey we have evidenced rather higher numbers: amphetamines LTP including ecstasy of 9.0%, and the cocaine LTP of 13.3%. Such a high prevalence of cocaine, undoubtedly a dangerous substance, among university students is perplexing and was not expected among them. This fact should not be underestimated and it should be shown that the use of cocaine in Europe is higher than it was suggested, what is confirmed also by some analytical studies¹⁹. These results confirm that central regions of Italy are highly affected by the drug phenomenon¹⁷.

Further, we have found rather higher prevalence of LSD and psychedelic mushrooms use (3.8% and 7.2% respectively) than the EMCDDA have indicated in Italy in 2003 (3.0% of subjects in the 15-24 and 25-34 age groups admitted experience with hallucinogens)¹⁷.

The age of the young people who reported their first experience with drugs ranges from 18 to 22 years¹⁷; the average age of our respondents at their first experience with drugs is lower: 17.0 ± 2.3 years. First use of cannabis is more precocious than the first use of other substances; the average first contact with cannabis was reported by EMCDDA at 18 years¹⁷, according to our results at average age of 16.9 ± 2.2 years.

An expected relation between use of legal and illegal substances was confirmed^{6,17,20-23}: drug-experienced students smoke cigarettes and drink alcohol more frequently than the inexperienced ones ($p < 0.05$).

The general population studies indicate that the perception of risk relating to the influence of illegal substances use affects consumption. Obviously for that specific population segment that considers drugs harmless, the risk of being exposed is much higher¹⁷. We have con-

firmed a distorted perception and underestimation of cannabis use by students that subconsciously classified it as a legal drug; we presume it because almost a half of the drug-experienced students have skipped questions determining drug experience. Undervaluation of cannabis use is also shown by students' altered perception of the harm caused by smoking drugs: tobacco smoking was considered to be more harmful than illegal drugs smoking. It is known, that the spread of cannabis is associated with a generalized underestimation of actual health risks and psycho-behaviour consequences. Subjects not perceiving cannabis use as dangerous are four times more likely to use it than those who perceive the risk¹⁷. This hypothesis was supported by the opinions of drug-experienced students regarding cannabis legalization rather than among inexperienced subjects ($p < 0.05$).

Substance use among university students in Italy was investigated also in other surveys. A similar survey was carried out at the University of Pisa²⁴. Addictive drug consumption has been reported by 37.0% of students (compared with our results of 50.4%). Similarly in Pisa, almost half of the students were smokers (41.0% in Pisa in contrast to 46.5% in our survey). As well as in the study carried out at the University of Cagliari at Sardinia, we found out a significantly higher number of males reporting alcohol drinking than females. It has confirmed that sex (male) is one of the risk factor of substance abuse^{21,22,25}.

Addictive drugs use, mainly legal tobacco and alcohol and illegal cannabis, is not an exception among central Italian university students. A disclosing result of our survey is a surprisingly high prevalence of cocaine. Student's opinions on illegal substances use are rather moderate; drug-experienced subjects prefer liberal attitudes regarding these substances. They do not admit negative consequences of drug use in particular because of rather experimental contact with drugs. Obtaining drugs is not considered to be a problem by students. Although they believe that they are acquainted with drug problems, the majority of them was not able to answer a concrete question. Therefore we suppose that preventive programs would have positive influence on young people awareness as well as decrease the use of high risk substances, such as cocaine.

CONCLUSION

Although the population of university students is a group of society expected to have quite conscious approach to addictive substances use, the survey confirms a widespread use of alcohol, tobacco and cannabis among them. Other drugs are used rather experimentally, but it is necessary to be aware of relatively high cocaine spread among central Italian students. Our data support the need of continuous education also among university students to advise them on the risks of drug misuse.

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