

# Prevalence and Risk Factors of Alcohol Abuse among University Students from Eastern Croatia: Questionnaire Study

Maja Miškulin<sup>1,2</sup>, Goranka Petrović<sup>3</sup>, Ivan Miškulin<sup>4</sup>, Dinko Puntarić<sup>2</sup>, Josip Milas<sup>1,2</sup>, Danielle Dahl<sup>5</sup> and Stjepan Rudan<sup>1</sup>

<sup>1</sup> Institute of Public Health for the Osijek-Baranya County, Osijek, Croatia

<sup>2</sup> »J. J. Strossmayer« University, School of Medicine, Osijek, Croatia

<sup>3</sup> Croatian National Institute of Public Health, Zagreb, Croatia

<sup>4</sup> »J. J. Strossmayer« University, Faculty of Electrical Engineering, Osijek, Croatia

<sup>5</sup> College of Public Health, Iowa University, Iowa City, USA

## ABSTRACT

*The aim of the study was to examine the prevalence of alcohol abuse among university students in Osijek, Croatia and its possible interconnections with gender, year of study, repetition of year of study, faculty subject area, sources of financing and type of residence during study. A validated questionnaire was self-administered to cross-faculty representative student sample of »J. J. Strossmayer« University of Osijek in June 2006. General demographic data, as well as data on academic features and student socio-economical status were obtained. The Alcohol Use Disorders Identification Test (AUDIT) was used for assessing the extent of alcohol consumption, with cut off value of 8 indicating possible alcohol problems. The majority of study participants 90.9% (755/831) had tried alcohol at least once in their life. Among this group, 43.8% (331/755) had an AUDIT total score of 8 or more: 69.2% (229/331) were males and 30.8% (102/331) were females. Among the study participants who screened positive, 70.4% (233/331) responded positively to simple advice focused on the reduction of hazardous drinking (AUDIT 8–15), 14.5% (48/331) needed brief counseling and continued monitoring (AUDIT 16–19), and 15.1% (50/331) clearly warranted further diagnostic evaluation for alcohol dependence (AUDIT 20 and above). Significantly different statistical data was found within the following factors: gender, repetition of year of study, faculty subject area and type of residence ( $\chi^2=76.232$ ,  $p=0.0000$ ; Fisher exact test=31.828,  $p=0.0000$ ;  $\chi^2=11.667$ ,  $p=0.0086$  and  $\chi^2=6.639$ ,  $p=0.0362$  respectively). Alcohol consumption resulting in risk behaviors is common among university students from eastern Croatia. These findings emphasize the need for comprehensive and effective preventative strategies directed towards student population.*

**Key words:** students, alcohol drinking, risk factors, university, Croatia

## Introduction

Excessive alcohol consumption is not only a major medical, psychological and societal problem, but poses an important public health issue, as well<sup>1–5</sup>. Drinking problems and their direct and indirect consequences affect most age groups, including, adolescents and students<sup>1,4</sup>. Alcohol consumption can be classified into several drinking patterns which include: hazardous alcohol consumption, harmful drinking and alcohol dependence<sup>6,7</sup>. Hazardous alcohol consumption has been defined as a level of consumption or pattern of drinking that is likely to re-

sult in harm should present drinking habits persist<sup>6,7</sup>. Harmful drinking is defined as a pattern of drinking that causes damage to either physical or mental health, and alcohol dependence is defined as a cluster of physiological, behavioral and cognitive phenomena in which the use of alcohol takes on a much higher priority for a given individual than other behaviors that once had greater value<sup>6,7</sup>. Hazardous alcohol consumption increases the risk of harmful consequences for the person and others<sup>7</sup>. Unfortunately, many people, even medical staff, are ac-

customed to thinking alcohol dependence exists only when other issues related to alcohol are raised. It is a common belief that people with alcohol problems cannot be helped unless they »hit bottom« and seek treatment themselves<sup>7</sup>. However, a significant portion of alcohol-related harm occurs among low-risk drinkers simply because there are so many of them<sup>8</sup>. The specifically designed AUDIT questionnaire helps identify drinkers with various types and degrees of at-risk alcohol consumption, including the majority of excessive drinkers that usually remain undiagnosed<sup>7,9</sup>.

Social transition and war in Croatia have increased unemployment and rates of substance abuse, while a decrease in prevention programs have placed younger populations at increased risk for that abuse<sup>10</sup>; Croatian university students represent a significant portion of this population in which substance abuse has remained widely unreported up until now due to a lack of use of validated international questionnaires such as AUDIT. The hazardous and harmful alcohol use, as well as possible alcohol dependence among Croatian university students is related to personality types as well as influence of parents, primary family, dominant friends and social circumstances<sup>11</sup>. By identifying risk factors and correlating warning signs of alcohol abuse among students it may be possible to provide more effective strategies in prevention and intervention<sup>7,12,13</sup>.

The aim of our study was to examine the prevalence of alcohol abuse among university students in Osijek and possible correlation with gender, year of study, repetition of year of study, faculty subject area, sources of financing, and type of residence during study.

## Subjects and Methods

A cross-sectional survey using an anonymous self-reporting questionnaire was conducted in June 2006 among undergraduate students at »J. J. Strossmayer« University of Osijek, Croatia.

### Subjects

Participation in the survey was voluntary. The questionnaire was distributed to twelve faculties of »J. J. Strossmayer« University of Osijek, which enrolled 16.922 students during the time of the study. A total number of 1.230 questionnaires were delivered randomly to university students in their second or fourth year of study. The study was carried out before the Bologna process and we chose second and fourth year students as study subjects in order to explore possible connection between the duration of student life and the prevalence of alcohol abuse among university students who were students for two or three years and those who were students for four or more years. The overall response rate was 68.7% (845/1230). Out of a total 845 completed questionnaires, 14 had to be excluded from further statistical analyses because they were not completed. The final sample size of 831 study participants represented 4.9% of total student population at Osijek University, and was a representative cross-

-faculty sample. Among study participants, there were 50.4% (419/831) males and 49.6% (412/831) females with a mean age 22.0±1.6 years. 45.6% (381/831) were in their second year of study (mean age 20.8±1.2 years) and 54.2% (450/831) were in their fourth year (mean age 23.1±1.1 year). The sample was stratified according to gender, year of study, repetition of year of study, faculty subject area, sources of financing, and type of residence during the study.

### Questionnaire

The questionnaire used to conduct the survey was the Alcohol Use Disorders Identification Test (AUDIT), developed at the World Health Organization as a screening instrument to detect alcohol abuse and early drinking problems rather than alcohol dependence<sup>7</sup>. The questionnaire contained additional questions regarding gender, year of study, repetition of year of study, faculty subject area, sources of financing and type of residence during study. The questionnaire was validated on a small group of university students from eastern Croatia during previous (2004/2005) academic year.

The AUDIT has proven to be accurate in detecting alcohol dependence among university students<sup>9</sup>. It consists of 10 questions about recent alcohol use, alcohol dependence symptoms, and alcohol-related problems (Table 1).

The AUDIT questions were scored from 0 to 4 according to published guidelines, with the highest possible score of forty<sup>7</sup>. The proper choice of optimal cut-off point for the AUDIT was crucial for the validity of study results and depended on the population and the purpose of the screening program<sup>14</sup>. A standard cut-off score of 8 was used to identify general risk level among study participants since many studies found it a reasonable approximation optimum for a variety of endpoints. Study participants which scored 8 or higher on AUDIT were classified as having presumptively hazardous or harmful alcohol intake. To achieve better insight in subgroups of study participants that were classified as having presumptively hazardous or harmful alcohol intake, all participants were also classified into four categories (0–7, 8–15, 16–19 and 20–40) indicating the specific level of risk for drinking problem.

### Statistics

Descriptive statistics were used for data processing and analyzed using SPSS Statistical Package for Windows, version 13.0 (SPSS Inc., Chicago, IL, USA). The subsequent results are presented in tables. Normality of data distribution was tested with the Kolmogorov-Smirnov test; the  $\chi^2$ -test and the Fisher exact test were used to determine differences in the distribution of qualitative variables. On all statistical analyses, two-sided p-values of 0.05 were considered significant.

**TABLE 1**  
THE CONTENT OF ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT)

AUDIT Questions	0*	1*	2*	3*	4*
1. How often do you have a drink containing alcohol?	Never	Monthly or less	2–4 times a month	2–3 times a week	4 or more times a week
2. How many drinks <sup>†</sup> containing alcohol do you have on a typical day when you are drinking? <sup>‡</sup>	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
3. How often do you have six or more drinks <sup>†</sup> on one occasion? <sup>‡</sup>	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
4. How often during the last year have you found that you were not able to stop drinking once you had started? <sup>§</sup>	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
5. How often during the last year have you failed to do what was normally expected of you because of drinking? <sup>§</sup>	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session? <sup>§</sup>	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
7. How often during the last year have you had a feeling of guilt or remorse after drinking? <sup>¶</sup>	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
8. How often during the last year have you been unable to remember what happened the night before because of your drinking? <sup>¶</sup>	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
9. Have you or someone else been injured because of your drinking? <sup>¶</sup>	No		Yes, but not in the last year		Yes, during the last year
10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down? <sup>¶</sup>	No		Yes, but not in the last year		Yes, but not in the last year

\*Number of points attributable to the each answer

<sup>†</sup>Standard drink equivalent to 10 grams of alcohol (1 can beer, 1 glass wine or 1 shot spirits at 5%, 12% and 40% volume respectively)

<sup>‡</sup>A score of 1 or more on question 2 or question 3 indicates a hazardous level of consumption

<sup>§</sup>A score above 0 on questions 4–6 (especially weekly or daily symptoms) imply the presence or incipience of alcohol dependence

<sup>¶</sup>Scores on questions 7–10 indicate already experienced alcohol-related harm

## Results

Among study participants a majority 90.9% (755/831) consumed alcohol to various extents while only 9.1% (76/831) reported complete abstinence during their life; 56.2% (424/755) of those who had consumed some sort of alcohol (AUDIT 1–7) used alcohol without thinking of

risk of developing any kind of alcohol-related problems. At the recommended cut-off score of 8, 39.8 % (331/831) of the study participants screened positive, with 69.2% (229/331) of them being male. At least one incident of binge drinking (having 6 or more drinks on a single occasion) was reported by 67.3% (559/831) study participants, out of which 42.2% (236/559) occurred on a mon-

**TABLE 2**  
UNIVERSITY STUDENTS FROM EASTERN CROATIA ACCORDING TO THE SPECIFIC LEVEL OF RISK, GENDER, YEAR OF STUDY, REPETITION OF YEAR OF STUDY AND THEIR FACULTY SUBJECT AREA

Specific level of risk	Gender		Year of study		Repetition of year of study		Faculty subject area			
	Male	Female	2nd	4th	No	Yes	I*	II <sup>†</sup>	III <sup>‡</sup>	IV <sup>§</sup>
0–7	190	310	220	280	372	128	114	181	136	69
8–15	149	84	106	127	135	98	41	106	67	19
16–19	36	12	32	16	30	18	4	22	15	7
20–40	44	6	23	27	19	31	8	17	20	5
Total	419	412	381	450	556	275	167	326	238	100

\*Mathematics, Biology, Medicine, Agriculture

<sup>†</sup>Economics, Law, Education

<sup>‡</sup>Electrical Engineering, Civil Engineering, Food Technology

<sup>§</sup>Philosophy, Art

**TABLE 3**  
UNIVERSITY STUDENTS FROM EASTERN CROATIA ACCORDING TO THE SPECIFIC LEVEL OF RISK, SOURCES OF FINANCING AND THEIR TYPE OF RESIDENCE

Specific level of risk	Sources of financing			Type of residence				
	One source*	Two sources†	Three sources‡	Domicile students		Non-domicile students		
				With parents	Rented flat	With relatives	Rented flat	Dormitory
0–7	250	218	32	191	65	36	105	103
8–15	108	107	18	70	44	15	56	48
16–19	25	20	3	14	8	2	10	14
20–40	25	19	6	15	10	7	11	7
Total	408	364	59	290	127	60	182	172

\*Parents or employment or scholarship

†Parents and scholarship or parents and employment or employment and scholarship

‡Parents, employment and scholarship

thly basis and 11.1% (62/559) on a weekly basis. There were 30.0% (249/831) study participants who reported not being able to stop drinking once they started during the previous year, with a frequency of 26.1% (65/249) on a monthly basis and 6.4% (16/249) on a weekly basis. Among study participants 36.7% (305/831) said that they had failed to fulfill responsibilities due to drinking while 20.3% (169/831) needed an »eye opener«, out of which the following information came to light: 38.5% (65/169) needed at least monthly interventions to assist in decreasing or diminishing alcohol abuse, 14.3% (119/831) study participants reported having blackouts at least monthly, 7.5% (62/831) felt guilty about drinking, 6.7% (56/831) had received advice to cut down or stop drinking and 7.7% (64/831) were involved in some type of injury during drinking.

Study participants according to the established specific risk level, gender, year of study, repetition of year of study, faculty subject area, sources of financing and their type of residence are shown in Tables 2 and 3.

The difference in general risk level between male and female study participants was statistically significant ( $\chi^2=6.232$ ;  $p=0.0000$ ).

The difference in general risk level between university students from the second and fourth study year was not statistically significant ( $\chi^2=1.727$ ;  $p=0.1887$ ).

A general risk level pertaining to the group of study participants who did not repeat a year of study was significantly different comparing to the group of study participants who repeated year of study (Fisher exact test=31.828;  $p=0.0000$ ).

The difference in general risk levels between the groups of study participants according to their faculty subject area was statistically significant ( $\chi^2=11.667$ ;  $p=0.0086$ ) (Table 4).

The difference in general risk levels between the domicile and non-domicile group of study participants was not statistically significant ( $\chi^2=0.522$ ;  $p=0.4700$ ).

The difference in general risk levels between the groups of study participants according to the type of their residence was statistically significant ( $\chi^2=6.639$ ;  $p=0.0362$ ) (Table 5).

The difference in general risk levels between the groups of study participants according to the number of financing sources was not statistically significant ( $\chi^2=1.086$ ;  $p=0.5810$ ).

## Discussion and Conclusion

Results of our study showed that almost 40% of students were alcohol abusers, with 6% of all participants meeting criteria for alcohol dependence. These findings

**TABLE 4**  
GENERAL RISK LEVEL AMONG UNIVERSITY STUDENTS FROM EASTERN CROATIA ACCORDING TO THEIR FACULTY SUBJECT AREA

General risk level	Faculty subject area				Statistical analyses
	I*	II†	III‡	IV§	
0–7	114	181	136	69	$\chi^2=11.667$ ; $p=0.0086$
8 and above	53	145	102	31	
Total	167	326	238	100	

\*Mathematics, Biology, Medicine, Agriculture

†Economics, Law, Education

‡Electrical Engineering, Civil Engineering, Food Technology

§Philosophy, Art

TABLE 5

GENERAL RISK LEVEL AMONG UNIVERSITY STUDENTS FROM EASTERN CROATIA ACCORDING TO THE TYPE OF THEIR RESIDENCE

General risk level	Residence type			Statistical analyses
	Joint household*	Independent household <sup>†</sup>	Dormitory <sup>‡</sup>	
0–7	227	170	103	$\chi^2=6.639$ ; $p=0.0362$
8 and above	123	139	69	
Total	350	309	172	

\*Domicile students living with parents and non-domicile students living with relatives

<sup>†</sup>Domicile and non-domicile students living in rented flat<sup>‡</sup>Non-domicile students living in dormitory

are difficult to compare with other countries due to lack of comparative studies. In general, the European Union (EU) region is the heaviest drinking region of the world, with abstinence and consumption levels that move relatively independent from one another<sup>2</sup>. Our finding of 9% abstainers among study participants is lower compared to estimated 14% abstainers in adult population (16+ years) in the EU. On the other hand, 6% participants classified as alcohol dependants corresponds to the estimated level of high-risk adults in the EU<sup>2</sup>. Gender distribution of alcohol dependants study participants is very similar to that estimated in adults in the EU, i.e. 5% male alcohol dependants and 0.7% females (in the EU 1%)<sup>2</sup>. A number of studies from different parts of the world have shown that university students have a higher prevalence of alcohol drinking and alcohol-related problems compared to their non-university peers<sup>15,16</sup>. An extensive research on university students drinking has been done in North America in last few decades. The results of the majority of these studies, as well as of those from other countries (e.g. Sweden, Germany, Belgium, Turkey, Lebanon, Australia, New Zealand, Brazil) are limited in comparison due to a lack of uniformity<sup>3,17</sup>. A well-known gender difference in alcohol consumption was confirmed in our study. More than half of all male study participants were found to drink at an increased risk level (AUDIT 8 or above), compared to majority of female participants (75%) who did not drink alcohol at all or drank it at no-risk level (AUDIT 0–7). There are different patterns of alcohol drinking in regards to quantity and frequency of alcohol consumption, as well as to their eventual direct and indirect consequences. Commonly, three levels of excessive alcohol drinking are distinguished: hazardous drinking, harmful use of alcohol and alcohol dependence. Hazardous drinking is an important public health issue, despite risk-level, primarily due to the cumulative effect of subtle impacts in one society that can be measured on a larger scale in relation to both physical and mental health<sup>18</sup>. Alcohol dependence is characterized by persistent drinking despite harmful consequences, increased alcohol tolerance, and physical withdrawal symptoms when alcohol use is discontinued. There is growing evidence that suggests drinking patterns are better predictors of alcohol related problems, as opposed to average level of consumption, especially in regards to social consequences<sup>19–22</sup>. In our study, the majority (85%) of partici-

pants who screened positive ranked at the low to medium risk level, with different drinking patterns. Kreitman's preventive paradox of alcohol consumption suggests that alcohol-related problems are more frequently found in low-risk drinkers, purely because they are more numerous in regard to heavy drinkers<sup>8</sup>. Therefore, alcohol-related social harm is primarily a consequence of the behavior of low-volume, non-binge-drinking, subpopulation. Additional studies have shown that moderate drinkers, in terms of consumption volume, reported more problems than hazardous drinkers; likewise, binge drinkers reported more problems than non-binge drinkers<sup>23</sup>. Moreover, binge drinkers were found to be more numerous in the moderate drinking group, which constituted the majority of drinkers, with no difference as to either severity or number of problems between binge drinkers from moderate or hazardous drinking groups<sup>24</sup>. According to a large body of literature in past decades, bingeing (also being referred as »episodic heavy drinking« by some authors) is a better predictor of alcohol-related social harm than average consumption<sup>20,23</sup>. In our study more than two-thirds of study participants reported at least one binge-drinking episode in the year prior, with 28% having binged on monthly basis and 7% on weekly basis.

A number of studies found that university students' distinctive pattern of binge drinking is related to a host of negative consequences<sup>25–27</sup>. In assessing possible risk factors an environmental approach was partly applied in our study, since factors such as type of residence and funding sources were taken into account.

Non-domicile students, living away from home for the first time, likely begin to learn that drinking alcohol reduces the negative effect arising from their new living situation<sup>13</sup>. However, in our study there was no significant difference in the alcohol drinking tendencies in domicile and non-domicile students. But when we classified participants, regardless if they were domicile or non-domicile, into categories based on whether they lived together with older adults (parents or relatives) or alone independently, we found latter group to be at increased risk of developing alcohol-related problems, which is consistent with results from other studies<sup>28,29</sup>. Thus, the presence of older adults is a significant factor that should be further investigated.

Contrary to general assumption that students' financial hardship, due to greater levels of stress and negative emotion, may precipitate maladaptive coping behaviors such as excessive alcohol drinking, some studies reported no evidence of alcohol consumption directly influencing students' physical or mental health<sup>30</sup>. In line with that, when investigating how different student financial resources might have had an influence on alcohol drinking, we also found no connection. However, some studies reported wealthy students to be at an increased risk of alcohol abuse and dependence<sup>31</sup>. The majority of studies that had explored possible connections between alcohol drinking and academic performance found alcohol abuse not to be a significant predictor<sup>32</sup>. However, our findings showed that more than half of study participants who failed a year of study and had to repeat it, scored positive on AUDIT, while two-thirds of students who did not repeat a year of study were abstainers or no-risk alcohol drinkers. Aertgerts et al. found a 25% excess risk of failing among students who met alcohol dependence criteria<sup>17</sup>. Results of our study have shown that the alcohol consumption has at least equally important influence on academic performance of students as other possible factors such as previous academic achievement, participation in deviant behaviors, evidence of psychopathology and parental education achievement that are pointed out by other researches to have slightly stronger influence<sup>32–34</sup>. Finally, we compared alcohol consumption in relation to the faculty in which participants were enrolled. The results revealed that students engaged in social sciences as well as in applied sciences and technology were at an increased risk for alcohol abuse and dependence comparing to those studying natural and humanistic sciences. However, such findings should be interpreted with caution and calls for additional research.

Alcohol consumption may be more strongly associated with morbidity and/or disability than with mortality<sup>4</sup>. This may be explained partly by long-term disabilities acquired at a young age from alcohol-related involvement in accidents and violent behavior and, therefore, related more to binges than to volume of drinking<sup>35</sup>. The leading cause of injury and death among college students and young adults in the USA is reported to be binge drinking<sup>4</sup>. Excessive drinking increases the risk of social isolation and unemployment. Moreover, chronic abuse is often connected to psychiatric disorders, i.e. depression, that not only indicates weak social integration, but is also well-known risk factor for suicide<sup>36</sup>. Alcohol abuse often seems to both precede and worsen the course of mental illness<sup>37</sup>. Furthermore, if a person is already having suicidal thoughts, a state of intoxication may trigger suicidal impulses that would have otherwise been controlled in a sober state. However, considering significant cultural variations in the pattern of alcohol use, it seems likely that the link between alcohol and suicide is not uniform across countries. The dryness or wetness of a drinking culture is not only determined by drinking levels but also by drinking patterns, social control of drinking and the composition of alcohol-related problems in

the society<sup>38</sup>. Due to the different selection criteria for alcohol abuse, greater overlap between alcohol abusers and people with an elevated suicide risk is to be expected in dry drinking cultures pared to wet<sup>36</sup>. Alcohol seems to involve an elevated suicide risk particularly in younger age groups in northern and central European countries, where a less intoxication-orientated drinking pattern is particularly resistant towards an elevated suicide risk in younger age groups<sup>36,39,40</sup>. In young populations, excessive alcohol consumption is an issue of particular importance because it is related to other at-risk behaviors<sup>4,35</sup>. Mortality due to road traffic accidents is the leading cause of death in younger populations and is commonly related to drinking and driving. Moreover, alcohol tends to induce violent and aggressive behavior, which can lead to fighting resulting in severe disabling injuries or even fatal outcomes. Furthermore, alcohol consumption is related to unintended and unprotected sexual activity, with the increased risk of unwanted pregnancies and/or sexually transmitted diseases<sup>5</sup>. Finally, although some studies disagree, general opinion is that the majority of those addicted to psychoactive substances start off with the abuse of alcohol (commonly together with tobacco, although its abuse was not within the scope of our study)<sup>21,41</sup>.

Acknowledgement of risk and protective factors, as well as their inter-relations, enables the identification of risk groups, understanding and predicting the behavior of persons having drinking problem, and, consequently, development of effective prevention programs. Depending on the identified level of risk of alcohol-related issues, different types of intervention are needed<sup>2</sup>. Alcohol non-risk drinkers (AUDIT 1–7) should be exposed to alcohol education, low-risk alcohol consumers (AUDIT 8–15) should be given simple advice, while those with moderate risk (AUDIT 16–19) should undergo brief counseling and continued monitoring. Alcohol consumers with AUDIT score 20 or above are high-risk drinkers who meet criteria for alcohol dependence should be referred to a specialist for further diagnostic evaluation and treatment<sup>2</sup>.

There are some limitations to our study. By administering a self-reporting questionnaire, obtained data relied on the participants' honesty. As not to compromise subjects' honesty in answering AUDIT questions and thus minimizing the possibility of untrue answers, examinees were given assurance their responses would remain confidential and used for research purposes only. Secondly, the prevalence of heavier drinkers due to their self-selection (by underreporting or refusing to participate in our study) could be underestimated in our survey. Finally, since it was cross-sectional study, no definitive assumptions about cause-effect relationships could be made.

In conclusion, the results of our survey emphasize the need for additional studies of the prevalence of alcohol-related problems in student population and their »non-university peers« with special attention given to cross-national generalization of such findings. A prospective cohort study would be most suitable in identifying the possible cause-effect pattern. Although our results from a single survey should be treated cautiously with-

out other supporting data, they indicate more targeted and diverse strategies, specific preventive programs and

interventions tailored according to the determined general and specific alcohol risk levels are required.

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M. Miškulin

Institute of Public Health for the Osijek-Baranya County, Franje Krežme 1, 31 000 Osijek, Croatia  
e-mail: maja.miskulin@inet.hr

## UČESTALOST I RIZIČNI ČIMBENICI ZLOUPORABE ALKOHOLA MEĐU STUDENTIMA S PODRUČJA ISTOČNE HRVATSKE: ANKETNO ISTRAŽIVANJE

### SAŽETAK

Cilj istraživanja bio je utvrditi učestalost zlouporabe alkohola među studentima Sveučilišta Josipa Jurja Strossmayera u Osijeku, te njezinu povezanost sa spolom studenata, godinom studiranja, ponavljanjem godine, predmetnim područjem fakulteta na kojem studenti studiraju, izvorima prihoda, te vrstom smještaja studenata tijekom studiranja. Tijekom lipnja 2006. godine, na reprezentativnom uzorku studenata osječkog sveučilišta sastavljenog od studenata sa svih fakulteta provedeno je anketiranje anonimnim validiranim upitnikom. Upitnikom su dobiveni opći demografski podaci te podaci o akademskom i socioekonomskom statusu ispitanika. Test identifikacije poremećaja vezanih uz uporabu alkohola (eng. Alcohol Use Disorders Identification Test-AUDIT) upotrijebljen je za procjenu količine konzumiranog alkohola, pri čemu je vrijednost AUDIT-a od 8 i više upućivala na moguće probleme vezane uz konzumaciju alkohola. Većina studenata, 90,9% (755/831) njih je barem jedanput u životu kušalo alkohol. Među njima bilo je 43,8% (331/755) njih koji su imali AUDIT vrijednost 8 ili više: 69,2% (229/331) od njih su bili muškog, a 30,8% (102/331) ženskog spola. Među ispitanicima koji su prema vrijednostima AUDIT-spadali u skupinu onih kod kojih su mogući problemi vezani uz konzumaciju alkohola bilo je 70,4% (233/331) čiju je razinu pijenja alkohola moglo smanjiti jednostavno savjetovanje o štetnosti pretjerane konzumacije alkoholnih pića (AUDIT vrijednost 8–15), 14,5% (48/331) ispitanika koji su zahtijevali savjetovanje te kontinuirano praćenje njihova stanja (AUDIT vrijednost 16–19) te 15,1% (50/331) ispitanika čija je razina konzumacije alkohola zahtijevala daljnju dijagnostičku evaluaciju uslijed prisutne ovisnosti o alkoholu (AUDIT vrijednost 20 i više). Vrijednosti AUDIT-a bile su statistički značajno više kod studenata u odnosu na studentice ( $\chi^2=76,232$ ,  $p=0,0000$ ), kod skupine studenata koji su ponavljali studijsku godinu u odnosu na one koji nisu (Fisherov egzaktni test=31,828,  $p=0,0000$ ), kod studenata koji su studirali na fakultetima društvenog usmjerenja, te tehničkim fakultetima u odnosu na studente koji su studirali na fakultetima prirodnih znanosti, na medicini, poljoprivredi, te fakultetima humanističkog usmjerenja ( $\chi^2=11,667$ ,  $p=0,0086$ ), te kod studenata koji su tijekom studiranja

živjeli sami u iznajmljenom stanu u odnosu na studente smještene u studentskom domu ili one koji su živjeli u istom kućanstvu s roditeljima, starateljima ili rodbinom ( $\chi^2=6,639$ ,  $p=0,0362$ ). Konzumacija alkohola koja rezultira nekim oblikom rizičnog ponašanja je česta među studentima Sveučilišta Josipa Jurja Strossmayera u Osijeku. Ovi rezultati naglašavaju potrebu poduzimanja sveobuhvatnih i učinkovitih preventivnih strategija usmjerenih na studentsku populaciju.