

CONSUMPTION OF ALCOHOL AND RISK OF ALCOHOL ADDICTION AMONG STUDENTS IN POLAND

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SUMMARY

Background: Alcohol consumption in our society is a known, and a widely discussed problem, due to the proven negative impact of excessive usage of spirits on health. Aim of the study was to evaluate the rate of consumption, and risk of an alcoholic disease among Polish students.

Subjects and methods: Study was carried out using an authors' own questionnaire, made of a queries about amount and frequency of alcohol consumption, risky behaviors and knowledge about alcoholism. Research was conducted through community portals (f.e. facebook.com), and within 3 weeks time (from a 10th of January to 31st of January 2013) 1300 students from different Polish universities participated in it. Out of them, after removal of inadequate questionnaires, group of 1259 students (822 females, 437 males) was selected for further analysis. Average age equaled to 21.5, with the maximum of 27 and minimum of 18 years. For the statistical analysis StatSoft "Statistica" 10.0 software was used.

Results: The study shows that 95.5% of students use alcohol (mostly beer and vodka) and they tend to overuse it. 28.86% of respondents drank excessively more than 3 times during the month preceding research, 46% of subjects also had an alcoholic palimpsest more than once, 12.7% need an alcohol to enjoy a party and 0.83% of respondents can't control the amount of a one-time alcohol consumption. 3.32% of students may be in the group of a high alcoholism risk.

Conclusions: Alcohol consumption is a common problem among Polish students. Most of respondents, mostly males, drink excessively and potentially risky for their health. There is a remarkable group of students endangered with alcohol addiction.

Key words: alcohol problems – students - risk behaviors

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INTRODUCTION

Alcohol consumption is commonplace in our society. According to a report prepared for the European Commission only 15% of Europeans are abstainers (WHO 2010). Taking into consideration unregistered alcohol consumption, a European citizen consumes, on average, 15 litres of alcohol (Anderson & Baumberg 2006). In view of such a high consumption, what arouses a considerable interest is the intake of alcoholic beverages among students. According to research the majority of people are introduced to the use of alcohol between the ages of 18-20 years old. High alcohol intake in this demographic often leads to questionable behaviour, most frequently:

- Driving after drinking alcohol;
- Fights;
- Unwanted sexual activity;
- Acts of vandalism.

Due to the prevalence of excessive alcohol consumption among students, the problem and the kinds of behaviour that it could lead to are often ignored (Woronowicz 2009, NIAAA 1995). In addition to increasing the risk of law infringement, alcohol is a strongly addictive substance and also leads to the development of approximately 60 various diseases including several to the: circulatory system, digestive system,

neoplasm and urinary system (Anderson & Baumberg 2006). Obviously, not every abuse of alcohol leads to the development of addiction. According to research, only a portion of the people who consume alcohol in a risky manner in their youth develop alcoholism, the remaining group reduce their alcohol intake after the period in which it is abused (Marlatt & Quigley 2000). A study carried out in Belgium studied the frequency of alcoholism development, specifically targeting socially active students. Of the 3500 students who took part in the study, 10% of them met the DSM-IV criteria for alcohol abuse, 4% of those can be regarded as addicted (Chodkiewicz 2006). In the early 1990's, WHO suggested a new version of disease classification and coding – ICD-10. It included, in blocks F10 – F19, all mental and behavioural disorders due to psychoactive substance use, and in block F10.2 - alcoholism. As stated in its definition, ethanol dependence is a syndrome of mental and somatic disorders with alternately occurring periods of remissions and escalations (WHO 2010). It influences the functioning of a human being and can lead to disorganization of his family life and to violence (Anderson & Baumberg 2006). Thus, it is necessary to introduce different methods of alcohol addiction prevention. Article 2, part 11 of the Polish Act On Upbringing in Sobriety and Counteracting Alcoholism (1982) points out the following tasks aimed at alcohol addiction prevention:

- providing conditions adequate for meeting needs, satisfaction of which motivates refraining from alcohol consumption;
- educational and informative activities;
- setting the appropriate level and the right structure of alcoholic beverages production intended for national consumption;
- healing, therapy and reintegration of alcohol addicts;
- preventing negative consequences of alcohol abuse and their elimination;
- prevention of domestic violence;
- supporting social employment by financing social centres.

SUBJECTS AND METHODS

The purpose of this research is to evaluate the consumption of alcohol and the risk of developing an addiction to alcohol among the students at Polish colleges and universities. The research has been conducted by using a self-created questionnaire, including questions regarding the student's frequency and volume of alcohol consumption, whether they engage in risky behaviour, and their knowledge about alcoholism. The research has been completed confidentially using social networking websites. In order to select a group of students at risk for alcoholism, diagnostic criteria based on the WHO-created ICD-10 system were applied. During a 3-week period 1300 students from various universities in Poland participated in this study. After rejecting some incomplete questionnaires, 1259 students were qualified for further studies, including 822 women and 437 men. Their age ranged between 18 and 27, and the average age was 21.5 (SD=1.64).

StatSoft „STATISTICA” version 10 was used for statistics analysis. In data analysis t-Student tests were used, and for this purpose some of the answers were modified into middle values.

RESULTS

Among the participants, only 4.5% (57 people) answered that they do not drink alcohol under any circumstances. Ranges for the rest of the answers, including specific types of alcohol consumed, is presented in table 1.

An aspect worth mentioning is that the timeframe we are interested in fell in between January and mid-February, which at most universities in Poland is the finals period.

Among the participants, the majority, 82.03%, admits to drinking beer in the month preceding the completion of the questionnaire. The T-student test shows that 50% of men and 26.04% of women drank beer more than 5 times, a statistically higher frequency of beer consumption in men than in women. Similar results were noticed in case of vodka consumption.

Table 1. Frequency of an alcohol consumption during last 30 days (% values)

	General	Male	Female
Beer			
0 times	17.97	9.57	23.14
1-5 times	47.50	40.43	50.82
5-10 times	18.72	25.36	14.97
>10 times	15.81	24.64	11.07
Wine			
0 times	34.28	44.98	28.97
1-5 times	54.83	45.69	59.45
5-10 times	8.32	7.42	8.69
>10 times	2.58	1.91	2.90
Vodka			
0 times	27.87	19.14	33.25
1-5 times	55.49	55.98	54.66
5-10 times	11.23	15.79	8.69
>10 times	5.41	9.09	3.40
Others*			
0 times	59.32	57.89	60.40
1-5 times	34.86	34.21	34.93
5-10 times	3.99	5.26	3.28
>10 times	1.83	2.63	1.39

*For example home-made alcohol

Unimportant differences were observed in the cases of wine and other alcoholic beverages (for $p < 0.001$).

Also taken into consideration was testing how often within the past month the participating students drank more than 125 ml pure alcohol. The results are presented in table 2.

Table 2. Frequency of consumption amount of pure alcohol above 125 ml during one evening (% values)

	General	Male	Female
0 times	31.69717	17.63285	39.08630
1-3 times	39.43428	38.40580	38.97462
3-5 times	19.30116	27.29469	15.10152
>5 times	9.56739	16.66667	5.83756

As shown in table 2, the majority (68.3%) of those interviewed exceeded 125ml of pure alcohol consumption within the past month. This is a quantity that may lead to the occurrence of the psychomotor disorders and problems with objective evaluation of the situation, and in consequence it can lead to risky behaviour, as well as the first signs of physical changes, such as: blood pressure increase, heart rate increase, visual disorders (Okruhlica & Slezakova 2013). Apart from consumption profile, we were interested in the risk factors for alcoholism, such as: memory loss or blackouts from excessive alcohol intake, problems with controlling or stopping alcohol consumption for long periods of time, and with the ability to party without the need to drink alcohol. The results acquired from questions regarding this are presented in table 3 and 4.

Table 4. Risk factors of alcohol disease (% values)

	General	Male	Female
Would it be a problem for you to completely stop drinking an alcohol for a month?			
It wouldn't be a problem	76.62230	69.80676	80.96447
I could do it however it would be problematic for me.	21.13145	27.05314	18.02030
It would be a problem, and I don't think I could do it.	2.24626	3.14010	1.77665

Table 3. Risk factors of alcohol disease (% values)

	General	Male	Female
Have you ever had an alcoholic palimpsest?			
Yes	46.92180	53.38164	43.52792
No	53.07820	46.61836	56.47208
Can you enjoy a party without drinking an alcohol?			
Yes	87.27121	21.01449	7.61421
No	12.72879	78.98551	92.38579
Are you able to control the amount of alcohol that you drink during f.e. a party?			
Always	33.44426	28.50242	36.04061
Usually	56.73877	57.24638	56.47208
Rarely	8.98502	13.04348	6.85279
Never	0.83195	1.20773	0.63452

As shown with the results in table 3, 46.92% of students experienced memory lapses, of which about 16% had experienced it more than once. After completion of the T-student test no significant statistical changes were recorded between men and women (for $p < 0.001$). 12% of those tested admitted to inability to party without the use of alcohol. Regarding the ability to control the amount of alcohol consumed, it is shocking that almost 10% questioned feel that they cannot control the amount of alcohol they drink. Another interesting fact is that only about 33.5% are able to control their consumption of hard liquor. When asked how many would be able to stop drinking, 23% answered that they would have a problem stopping the consumption of alcohol, 27 of these people (2.25%) do not believe that they could do it at all without help. Interestingly enough when asked for their subjective opinion about the use of alcohol, 10% tested answered that it is too high.

DISCUSSION

With regards to results obtained with the help of the questionnaire only 23 men and 33 women (4.5% of those questioned) admitted they do not use any form of alcohol at all. It is a result that is much lower than the data used from the WHO testing from 2007 (Anderson & Baumberg 2006). Over 95% of those tested used alcohol, of which about 15% do it in a risky way. Undoubtedly, among students, beer is the most popular drink. 82% questioned reached for a beer in the month preceding the questionnaire and 34.5% drank it more than once a week. This agrees with the reports that have suggested a rise in alcohol consumption in society (Anderson & Baumberg 2006). Such a high consumption of alcohol is problematic considering the variety of

alcohol levels in beer, anywhere from non-alcoholic to well over 5% alcohol by volume. Over 70% of students within the 30 days prior to our testing also had drunk vodka. 16% had done it more often than once a week. In the case of both kinds of alcohol mentioned above, men consume a larger volume than women. The situation changes when it comes to wine consumption in which there is minimal difference between male and female students, it is also the 3rd most consumed kind of alcohol. It could be interesting as well to compare the consumption of alcohol in the tested age group between students and those who are not enrolled in school, as well as between students and people 30 years old or older, however no such comparison data exists. Based on acquired data results, we can notice that most questioned consume high amounts of beer and other alcohol. According to the specialists, using more than 20 grams of alcohol for women and 40 grams for men (ICAP 2003) is risky. 125 ml of pure alcohol is about 90 grams. This is about 2.25 times the recommended daily allowance for men and over 4 times the allowance for women. In the last month 70% went over the daily recommended amount, 28.8% of those drank in a risky way more than 3 times, and in the men's group 16% used such a high amount more than 5 times. These examples of alcohol use can lead to numerous immediate consequences such as alcoholic cirrhosis, polyneuropathy, cardiomyopathy; as well as chronic consequences such as neoplasms, epilepsy, cardiac arrhythmia or oesophageal varicoses, and acute incidents such as car accidents, and suicide attempts (Meyerhoff et al. 2005). The interesting question is whether the students realize the consequences that could occur with excessive drinking, and whether they consciously engage in such risky behaviour?

The second part of the study was to determine how many of those questioned were at risk of alcoholism. In selecting the people in this group ICD-10 was used, it includes four criteria of which 3 or more have to apply, they were:

- Few or more episodes of alcoholic palimpsest during college;
- Few or more uses of alcohol during a 30 day period, preceding our testing (more than once a Week);
- Incidents of using a large amount of alcohol at one time;
- Trouble with controlling large consumptions of alcohol at once.

Results of the analysis, apart from those who have declared themselves abstinent at the very beginning of the study, is presented in table 5.

Table 5. Participants belonging to the risk groups, divided into subgroups (marked by the colors from pale blue to the dark blue) based on the amount of fulfilled terms (from 2-4)

	Inability or severe problems with controlling the amount of a one-time alcohol intake		Incidents of a high, one-time alcohol consumption		Inability or severe problems with controlling the alcohol intake and incidents of a high, one-time consumption	
	Male	Female	Male	Female	Male	Female
High frequency of an alcohol consumption during last 30 days	0.96% (4)	0.12% (1)	7.24% (30)	2.66% (21)	7.48% (31)	2.28% (18)
	0.41% (5)		4.24% (51)		4.07% (49)	
Occurrence of more than one incident of an alcoholic palimpsest	0.72% (3)	0.12% (1)	20.28% (84)	7.99% (63)	0.96% (4)	0.12% (1)
	0.33% (4)		12.22% (147)		0.41% (5)	
High frequency of an alcohol consumption and more than one incident of alcoholic palimpsest	0.48% (2)	0.76% (6)	10.38% (43)	3.17% (25)	5.79% (24)	2.03% (16)
	0.66% (8)		5.65% (68)		3.32% (40)	

Each group presents a percentage value in whole and specific sexes, additionally they have been split into sub-groups according to level of risk based on the amount of the completed criteria. The largest group of students (147 people) experienced episodes of palimpsests in college and have drunk alcohol in excessive amounts on several occasions. The number of people in the highest risk group (40 people) already presenting early signs of alcoholism is problematic. On rare occasions students have presented a combination of the palimpsest incidents and a lack of control during a single consumption which can be caused by the natural tendency to abuse alcohol. In the introduction it was already mentioned that the Act On Upbringing in Sobriety and Counteracting Alcoholism (1982) raises the problem of prevention. The above results confirm that efforts should be focused of necessity on prevention programs at schools, colleges and other facilities for young people (Borucka et al. 2008, Conrod 2013). It is also important to develop tools improving the estimation of the risk of the development of alcohol dependence among students (Sławińska et al. 1989).

CONCLUSIONS

Alcohol consumption is commonplace among students from Polish schools, only 4.5% declared total abstinence.

Most respondents, in particular men, consume alcohol in quantities which are potentially health-threatening.

About 3% of the participants are probably in an early stage of alcoholism, and more than 10% are in a group at high risk. These are people who are worth reaching out to and offering them treatment or knowledge to make them aware of the consequences of alcoholism in order to prevent its further development.

For students the most preferred alcoholic beverage is beer (82% of the interviewed), the second most popular is vodka, followed by wine, and lastly other alcoholic beverages, including “homemade” beverages.

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