

# Alcohol consumption patterns in a group of students at the Medical University in Lublin

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## Abstract

**Introduction.** In recent years, an increase has been observed in the consumption of alcoholic beverages among students. This phenomenon is alarming, because inadequate patterns of alcohol consumption may lead to many unfavourable health and social changes. Students in medical educational facilities are a specific group considering the type of occupations which they will perform in the future, and by their behaviours they especially should present correct patterns of consumption of alcoholic beverages.

**Objective.** The objective of the presented study was determination of the preferred patterns of alcohol consumption in a group of students at the Medical University in Lublin.

**Materials and Method.** All students at the Medical University were invited to participate in the survey, i.e. 4,477 full-time course students, by passing information to the heads of the student groups. The survey was conducted from October-December 2009 and covered 700 students. A set of 2 questionnaires was used in the study: AUDIT and the Scale of University Adolescents Behaviours (SUAVB) by M. Makara-Studzińska.

**Results.** Analysis of the prevalence of the style of alcohol consumption showed that every second student preferred occasional alcohol consumption. The greatest majority of students in the survey who were qualified into the group of occasional drinkers (78.5%) were females. In addition, it was observed that every fourth student preferred to consume alcohol in a risky way, whereas every seventh student preferred to consume alcohol in a harmful way – 13.9% of males and 3.3% of females were qualified into this group.

## Key words

alcohol, university adolescents, style of consumption, AUDIT

## INTRODUCTION

Hazards associated with alcohol consumption by adolescents are among the most important health and social problems in Poland, Europe, and worldwide. The studies show that the highest rate of alcohol consumption is observed in the age group 18-28. According to various data sources, a statistical Pole consumes from 6-9 liters of alcohol annually. For many years, several institutions in Poland have been investigating the rate of alcohol consumption among students – the National Agency for Solving Alcohol Problems, the Polish Psychological Association, some universities and self-government agencies. The results of the studies are alarming and indicate that the problem is a serious one. Studies conducted by the Polish Psychological Association indicated that nearly a half of students get drunk every weekend, and every fourth student misses classes once a month due to alcohol abuse. Every tenth student reported that he/she gets drunk even five times a month, and 2% of students consume alcohol every second day. Researchers from the Higher School of Social Psychology in Warsaw asked over 9,500 students in the whole of Poland about their habits concerning alcohol and narcotics. It was found that about 8.5% of students get drunk even five times a month, and there are also some who get drunk every second day.

These data are very alarming. The consumption of alcohol in this social group is not limited only to the celebration of important events, but begins to become an inseparable element in the everyday life of students. For many students, alcohol becomes an inseparable element in the process of making and strengthening interpersonal relations, and becomes the way of recovering from stress.

Alcohol abuse leading to drunkenness and alcoholism is among the highly harmful and hazardous social phenomena. Drunkenness causes especially great devastation and brings about the most dangerous consequences when it spreads among adolescents [1].

The caregivers of the AA groups emphasize that the majority of alcoholics who possess university education fell into the habit during studies. Alcohol addiction is a disease which may concern everyone, irrespective of gender, age, intellectual level, education, and the occupation performed. The students, however, do not consider that they are threatened by alcoholic disease. The consumption of alcohol may exert an effect on various spheres of human health and social functioning. One does not have to be addicted to experience complaints which have their source in alcohol consumption. Before addiction develops, there may occur less intensified but serious problems, such as risky or harmful drinking. In the case of these phenomena the irreversible loss of control over alcohol consumption does not occur, but there appears the risk of serious damage, to health or social, and may lead to addiction to alcohol. Occasional drinking (conventional) is drinking in accordance with

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cultural standards, in amounts not leading to getting drunk. Within this wide area are contained many various models of drinking, starting from the consumption of small amounts of alcohol (e.g. beer several times a week), to sporadic 'greater' alcohol occasions, such as, e.g. name days or weddings. Risky alcohol consumption is consumption in circumstances exposing the drinking individual to health damage which, with respect to alcohol, have also been quantitatively defined. This means that drinking for at least 5 days during the week of 3-4 standard alcohol portions by males and 1-2 portions by females is risky. A standard portion is the amount of alcoholic beverage which contains approximately 10 g of alcohol (e.g. one 25 ml glass of vodka, one 100 ml glass of wine, a half of a 0.5-liter bottle of beer). Harmful drinking is defined with respect to the occurrence of health, psychological or social damage, while the addiction to alcohol does not yet occur.

The above-mentioned study reports became the inspiration for the presented research project.

## OBJECTIVE

The objective of the presented study was determination of the preferred patterns of alcohol consumption in a group of students at the Medical University in Lublin.

## MATERIALS AND METHOD

All students at the Medical University were invited to participate in the survey, i.e. 4,477 full-time course students, by passing information to the leaders of the student groups. The survey was conducted from October-December 2009 and covered 700 students; 680 returned questionnaire forms were collected, of which 635 were correctly completed and subjected to quantitative and qualitative analysis. The response rate was 97%. 45 questionnaire forms were incorrectly completed by the respondents, they were therefore excluded from the study.

**Socio-demographic characteristics of the population examined.** The great majority of students in the survey who consumed alcohol in an occasional way (78.5%) – Group 1, were females, while the remaining 38.6% – males. Into Group 2, i.e. those who consumed alcohol in a risky style, were qualified 33% of males and 18.2% of females. Group 3, which presented a harmful model of alcohol consumption, covered 13.9% of males and 3.3% of females. The difference according to distribution by gender was statistically significant ( $p < 0.001$ ). Males dominated in the groups of students drinking in a risky or harmful way (Tab. 1).

The greatest number of first-year students, as many as 60.2%, were qualified into the group of occasional drinkers, 22.1% into the group of those drinking in a risky way, and 17.7% among those who drank in a harmful way. As many as 64.8% of the second-year students belonged to the group of occasional drinkers, 23.6% drank in a risky way, and 11.5% were qualified into the group of those who drank harmfully. Among third-year students, 54.9% were occasional drinkers, 26.5% – risky drinkers, and 18.6% – harmful drinkers. Among the fourth-year students in the survey, 65% presented the model of occasional alcohol consumption, 29.9% – the model of risky drinking, while the remaining 9.3% were qualified into the group of those who drank in a harmful way.

**Table 1.** Respondents by gender in the groups examined

	Gender	Group			Total	
		1	2	3		
Gender	Females	N	289	67	12	368
		%	78.5%	18.2%	3.3%	100.0%
	males	N	103	88	76	267
		%	38.6%	33.0%	28.5%	100.0%
Total	N	392	155	88	635	
	%	61.7%	24.4%	13.9%	100.0%	

Group 1 – respondents consuming alcohol in an occasional way.

Group 2 – respondents consuming alcohol in a risky way.

Group 3 – respondents consuming alcohol in a harmful way.

As many as 61.7% of the final year students were qualified into Group 1 (occasional drinking), 24.4% into Group 2 (risky drinking), and 13.9% into Group 3 (harmful drinking). The differences in distribution within Groups 1-3 in individual years of university studies were statistically insignificant ( $p=0.357$ ).

It is a surprising fact that in the group of first-year students there was a considerable group of those who had problems with alcohol – Group 2 (22.1%), and Group 3 (17.7%). It is also interesting that among third-year students the greatest number was noted of those who drank in a risky and harmful way (26.5% vs. 18.6%). (Tab. 2).

**Table 2.** Year of study and model of alcohol consumption in the group of students examined

Year of study		Group			Total
		1	2	3	
First	N	68	25	20	113
	%	60.2%	22.1%	17.7%	100.0%
Second	N	107	39	19	165
	%	64.8%	23.6%	11.5%	100.0%
Third	N	62	30	21	113
	%	54.9%	26.5%	18.6%	100.0%
Fourth	N	96	32	19	147
	%	65.3%	21.8%	12.9%	100.0%
Fifth	N	59	29	9	97
	%	60.8%	29.9%	9.3%	100.0%
Total	N	392	155	88	635
	%	61.7%	24.4%	13.9%	100.0%

Group 1 – respondents consuming alcohol in an occasional way.

Group 2 – respondents consuming alcohol in a risky way.

Group 3 – respondents consuming alcohol in a harmful way.

The data in the Table show that 51% of the students in the survey who were qualified into the group of occasional drinkers reported own earnings as the source of maintenance, whereas this percentage was 23.5% among risky drinkers, and 25.5% in the group of harmful drinkers.

As many as 68.6% of the students examined who maintained themselves on a scholarship, consumed alcohol occasionally (Group 1), 20.5% of them drank in a risky way, whereas 10.8% drank harmfully. Students maintaining themselves on a disability allowance most often drank in a harmful way – 61.5%. Social benefit as the main source of maintenance was reported by 38.5% of occasional drinkers, 30.8% of risky

drinkers, and 30.8% of harmful drinkers. 60% of students who received social welfare were qualified into the group of occasional alcohol consumers, 20% into risky drinkers, and similarly, 20% into those who presented a harmful model of alcohol consumption. In the group of students whose main source of maintenance were resources from their parents (family), the percentage of those who drank occasionally was 63%, 27.8% were risky drinkers, and 9.2% consumed alcohol in a harmful way. A statistically significant difference was observed in the qualification of students with various sources of income into the individual risk groups ( $p < 0.001$ ). An especially high percentage of students who received disability allowance and who preferred a harmful model of alcohol consumption is noteworthy, and the lowest percentage in this group of students who maintained themselves on other resources from their family and fellowship (Tab. 3).

**Table 3.** Source of maintenance and style of alcohol consumption in the group of students examined

Source of maintenance		Group			Total	
		1	2	3		
Source of maintenance	own earnings	N	50	23	25	98
		%	51.0%	23.5%	25.5%	100.0%
	scholarship	N	127	38	20	185
		%	68.6%	20.5%	10.8%	100.0%
	disability allowance	N	5	0	8	13
		%	38.5%	.0%	61.5%	100.0%
	social allowance	N	5	4	4	13
		%	38.5%	30.8%	30.8%	100.0%
	social welfare	N	6	2	2	10
		%	60.0%	20.0%	20.0%	100.0%
	parents, family	N	199	88	29	316
		%	63.0%	27.8%	9.2%	100.0%
	<b>Total</b>	N	392	155	88	635
		%	61.7%	24.4%	13.9%	100.0%

Group 1 – respondents consuming alcohol in an occasional way.  
Group 2 – respondents consuming alcohol in a risky way.  
Group 3 – respondents consuming alcohol in a harmful way.

Considering the place of residence, 68.8% of respondents who consumed alcohol occasionally, 18.4% of those who were risky drinkers, and 12.8% of harmful drinkers, lived in rural areas.

Among inhabitants of provincial towns, 56.7% of respondents drank occasionally, 29.8% risky, and 13.5% harmfully. 60.5% of the students who lived in capitals of the region and consumed alcohol occasionally constituted 60.5% of respondents, 22.6% were qualified into the group of risky drinkers, and 16% into harmful drinkers. A statistically significant difference was observed ( $p = 0.026$ ) in the qualification of students into the study groups according to the place of permanent residence. The highest percentage of students who consumed alcohol in a harmful way were inhabitants of a capital of the region (Tab. 4).

Considering the financial situation, 64.1% of respondents from the group of occasional drinkers considered that income from their family satisfied all their needs, whereas this percentage was 24.2% in the group of risky drinkers, and 11.7% in the group of harmful drinkers. As many as 58.3% of respondents who consumed alcohol in an occasional

**Table 4.** Place of permanent residence and style of alcohol consumption in the group of students examined

Place of permanent residence		Group			Total	
		1	2	3		
Place of permanent residence	rural area	N	161	43	30	234
		%	68.8%	18.4%	12.8%	100.0%
	provincial town	N	156	82	37	275
		%	56.7%	29.8%	13.5%	100.0%
	capital of a region	N	75	28	21	124
		%	60.5%	22.6%	16.9%	100.0%
<b>Total</b>	N	392	153	88	633	
	%	61.9%	24.2%	13.9%	100.0%	

Group 1 – respondents consuming alcohol in an occasional way.  
Group 2 – respondents consuming alcohol in a risky way.  
Group 3 – respondents consuming alcohol in a harmful way.

way reported that their income was sufficient to satisfy their basic needs, 25.2% in the group presenting the model of risky drinking, and 16.5% among those drinking in a harmful way. 35.7% of respondents in the group of occasional drinkers reported that their family income was insufficient to satisfy basic needs, while in the group of risky drinker this percentage was 25%, and among harmful drinkers – 39.3%. A statistically significant difference in the qualification to individual risk groups was observed with respect to the degree of satisfaction of their needs resulting from the income of their families ( $p = 0.001$ ). The highest percentage of students who consumed alcohol in a harmful way mentioned that their family's income was insufficient for the satisfaction of basic needs (Tab. 5).

**Table 5.** Respondents' financial situation and model of alcohol consumption in the group of students examined

Financial situation		Group			Total	
		1	2	3		
family income	satisfies all needs	N	307	116	56	479
		%	64.1%	24.2%	11.7%	100.0%
	satisfies only basic needs	N	74	32	21	127
		%	58.3%	25.2%	16.5%	100.0%
	insufficient to satisfy basic needs	N	10	7	11	28
		%	35.7%	25.0%	39.3%	100.0%
<b>Total</b>	N	391	155	88	634	
	%	61.7%	24.4%	13.9%	100.0%	

Group 1 – respondents consuming alcohol in an occasional way.  
Group 2 – respondents consuming alcohol in a risky way.  
Group 3 – respondents consuming alcohol in a harmful way.

Each participant of the survey was informed concerning the confidentiality of the data collected. The questionnaire forms were completed voluntarily, and the respondents could at any time refuse to participate further in the study.

Two sets of questionnaires were used in the study. The set of methods contained the following: Alcohol Use Disorders Identification Test (AUDIT) and the Scale of Health Behaviours of University Adolescents (SHBUA) by M. Makara-Studzińska. The following sub-scales were selected: Personal data and family situation, Physical activity, Way of spending free time, Tobacco smoking, Alcohol consumption.

**AUDIT:** The procedure for this test was developed by the WHO experts in order to identify individuals who drink in a way risky or in a way harmful for their health. The items are valid and possess a capability for differentiating moderate drinkers from those who drink in a harmful way [2].

**SHBUA:** the internal consistency of the SHBUA was established based on the Cronbach's alpha coefficient of 0.85 for the entire questionnaire, while for its 2 subscales it remains within the range 0.60-0.65. The standard measurement error for the total result was 0.63.

In the presented project, based on the replies in the AUDIT questionnaire, 3 models of alcohol consumption were distinguished: Groups 1, 2, 3.

Group 1 were respondents who were qualified by the mean of the AUDIT test as drinking in an occasional way. Into Group 2 were qualified respondents who were qualified by the mean of the AUDIT test as those drinking in a risky style, while Group 3 constituted those who consumed alcohol in a way harmful for health. In the presented study the following tests were applied:

- $\chi^2$  test for evaluation of qualitative variables. In certain cases, it was necessary to reduce the number of categories of the characteristics examined due to an insufficient number of replies;
- for quantitative variables, after rejecting the hypothesis concerning normality of distribution, the Kruskal-Wallis test was applied which allowed evaluation of the significance of differences for more than 2 independent groups simultaneously.

5% risk of inference error was adopted in the study; values  $p < 0.05$  were considered statistically significant. The calculations were performed by means of statistical package SPSS 17.0.

## RESULTS

### Characteristics of students who consumed alcohol occasionally (Group 1).

Analysis of the prevalence of this style of drinking among the respondents shows that every second student preferred occasional consumption of alcohol. The greatest majority of the examined students who were qualified into occasional drinkers were females (78.5%).

The respondents represented primarily the specialty of dentistry – 68.7%, and pharmacy – 65.8%. The highest percentage of occasional drinkers was noted in the fourth year of study (65%). The greatest number of respondents came from complete families (65.6%).

The main source of maintenance in this group was a scholarship (68.6%). The majority of respondents came from rural areas (68.8%), and during the study most of them lived in the university houses of residence (65.3% of respondents). Respondents in this group considered their family income as satisfying all needs (64.1%).

### Characteristics of students consuming alcohol in a risky way (Group 2).

Analysis of the prevalence of this style of drinking among the respondents showed that every fourth student preferred the consumption of alcohol which may be described as risky. This means that every third male and every fifth female consumes alcohol.

As many as 33% of males and 18.2% of females were qualified into the group of university adolescents who preferred the risky style of alcohol consumption. Considering the study specialty, in this group there were 22.9% of students of dentistry, 23.6% students of pharmacy, 24.1% of students of health sciences, and 25.6% students of medicine.

The majority of those drinking in a risky style were fourth-year students – 29.9%, 22.1% – first-year students, 23.6% – second-year students, 26.5% third-year students, and 24.4% of final-year students.

The most characteristic family structure in this group was an incomplete family – divorced parents (44.4%) and respondents reared by a single mother (34.8%).

The largest number of respondents reported social allowance as the main source of maintenance – 30.8%, followed by resources from the family – 27.8%.

With respect to the place of residence, the highest percentage of students preferring a risky life style lived permanently in a provincial town – 29.8%, in a capital of the region – 22.6%. During the studies, the largest number of respondents lived with their family – 27.3% or in house of residence – 24.7%. According to the respondents' opinions, their family income was insufficient to satisfy basic needs – 25%.

### Characteristics of students consuming alcohol in a harmful way (Group 3).

Analysis of the prevalence of this style indicated that every seventh student preferred the consumption of alcohol in the way which may be described as harmful.

Into this group were qualified 13.9% of males and 3.3% of females. Considering the study specialty, the largest group were students of health sciences – 21.0%, followed by students of medicine – 14.0%, students of pharmacy – 10.6%, and dentistry – 8.4%. These were primarily third-year students – 18.6%, followed by first-year students – 17.7%, and final year students – 13.9%. Into this group were qualified 25% of respondents who were married and 13.3% who were single. They usually came from temporarily separated families – 38.5%, or from incomplete families (single mother) 34.8%.

The main source of maintenance reported was disability benefit – 61.5%, or social allowance – 30.8%. With respect to the place of residence, the respondents were most frequently inhabitants of a capital of the region – 16.9%, or a provincial town – 13.5%.

Students who lived independently in a flat – 28.3% of respondents, in a rented room – 15.8%, while approximately 10% of respondents lived in houses of residence.

With respect to family income, the respondents in this group most often mentioned that their family income was insufficient to satisfy basic needs – 39.3%.

## DISCUSSION

The objective of the presented study was evaluation of the prevalence of alcohol consumption in a group of students at the Medical University in Lublin, according to the preferred style of consumption. The study showed that among the students in the study there was a problem with alcohol abuse. Every third male student and every fifth female student abused alcohol in a style which could be described as risky. Every seventh student consumed alcohol in a style which could be described as harmful. Excessive alcohol

consumption still remains one of the most difficult problems in the student environment. This result is in accordance with other studies reported in the literature.

The studies conducted in 2000 covered a representative group of 9,446 students from the largest academic centres in Poland. It was confirmed that the alarming phenomena related to alcohol abuse by students – harmful alcohol abuse within the last month, concerned 42% of male students and 37% of female students [3].

The remaining respondents, after a period of abuse, reduced the amount of alcohol consumed, or abused it sporadically [4]. A positive correlation was detected between the intensity of drinking among the young population and their expectations with respect to the relaxing and stress-reducing effect of alcohol [5]. Similar results were obtained by Gerstenkorn: a risky style of alcohol consumption was observed in 46.5% of fourth-year students of medicine.

The results of the presented study are in accordance with international literature reports. Many publications draw attention to the prevalence of the phenomenon of alcohol abuse among university adolescents [6]. The studies conducted by Harvard University indicate that 44% of American students get drunk, and 19% of them get drunk frequently [7].

The studies conducted, if confirmed in a larger population sample of over 5,000, may also be the impetus for a precise analysis of university adolescents beliefs and expectations with respect to the effect of alcohol, and knowledge of the symptoms of harmful drinking and addiction, especially in the countries where there is a lack of unequivocal standards related to alcohol consumption, to which Poland may be classified [8].

On many American campuses there function prophylactic programmes based, among other things, on contesting false expectations associated with alcohol and improvement of knowledge pertaining to its effect [9].

## CONCLUSIONS

1. The consumption of alcohol in the group of students at the Medical University is a commonly observed phenomenon.
2. A considerable percentage of students, especially males, consume alcohol in a style which may be defined as risky.
3. The students also preferred the consumption of alcohol in a way which may be defined as harmful for health.

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