

Types of Alcohol Associated to Binge Drinking Behaviour Among Students from Timis County

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The study aims were the research of the association between the consumption of different alcoholic drinks and binge drinking behavior among students from Timis county, Romania. We applied a transversal population study to the representative sample of 2076 students, 62.49% girls and 37.51% boys with a mean age of 21.09 years old. The prevalence of beer consumption is 57.9% for boys and 25.6% girls, with a significant and medium size difference between the genders; the wine consumption prevalence is 40.8% among boys and 41.0% among girls, with little difference; spirits is 15.8% for boys and 7.6% girls, with a significant and average size difference. The boys practice binge drinking significantly more often than girls, the difference is small to medium size. Among the boys who practice binge drinking, 80.3% consumed beer, 49.0% wine and 29.3% spirits. The girls who practice binge drinking, 50% drink beer, wine 56.3 and 29.8% spirits.

Keywords: students, binge drinking, beer, wine, spirits

Although often alcohol consumption among teenagers and young adults is usually regarded as a passenger habit, it represents a serious threat to the normal development and health. Factors influencing alcohol consumption include cognitive and biological changes, like sexual development and maturation differences of brain regions, but also psychological and social changes such as increased independence and risk-taking. Alcohol consumption is influenced by various social and cultural contexts. Genetic factors, psychological and social issues specific to each teenager had an important role alongside environmental factors that influence their willingness to consume alcohol.

The consumption habits of young people today are different from older generations. Recent trends suggest that they drink fewer times during the week, but that when they do they tend to charge excessive consumption, binge drinking. This created a culture group that excessive consumption is encouraged to facilitate membership in the younger group [1,2].

We aimed to investigate the consumption of beer, wine and spirits associated with binge drinking among students from Timiș county, Romania.

Experimental part

Material and method

The representative sample of students in the study totaled 2076 students from higher education institutions from Timis County, 62.49% (1296) girls and 37.51% (778) boys. The average age was 21.09 years with SD 1.48, ages ranging from 18-25 years old.

The method used was the transversal population study based on the use of CORT Questionnaire 2004 on health risk behaviors in adolescents and young people. The questionnaire was validated by the Ethics Committee of the University of Medicine and Pharmacy Victor Babes Timisoara.

The study was conducted with the written approval of the higher education establishments from Timis.

Inclusion of young people in the study carried out only after their expressed consent of each participant in the study, with respect for all the individual rights.

The processing and interpretation of data was done by using modern statistical methods and advanced medical PASW 18 software (SPSS 18) 2010. The value of statistical significance was set at $p < 0.05$, except in cases where the Bonferroni correction was applied, the acceptable threshold level was stated in the text. For ordinal data comparisons we used Mann-Whitney and Kruskal test-Wallis. Chi-square test was used for ordinal data / nominal.

Results and discussions

Type of alcohol

Among the group of boys, the prevalence of beer consumption is 57.9% (442), 40.8% (312) is the prevalence of wine consumption and the spirits consumption rate is 15.8% (121). Among girls, the prevalence of beer consumption is 25.6% (327), 41.0% (524) is the prevalence of wine and the spirits consumption rate is 7.6% (97). Prevalence of beer and spirits is significantly higher in males compared to female, $U = 334\ 126$, $z = -14.64$, $p < 0.001$, $r = 0.32$, respectively $U = 453\ 037$, $z = -5.88$, $r = 0.12$, the prevalence difference size between the sexes is average for beer and small for the spirits. Prevalence of wine did not differ between the 2 sexes, $p = 0.911$.

Binge drinking

By practicing binge-drinking, or increased consumption of more than 5 servings of alcohol on one occasion, we have found: for boys group 11.6% (89) have practiced binge drinking more than 3 times in the last month, 22.1% (170) have practiced 1-2 times, and 66.3% (510) did not practice binge drinking in the last month; 2.5% for the group of girls (32) have practiced binge drinking more than 3 times in the last month, 8.7% (112) have practiced 1-2 times, and 88.8% (1145) have not practiced binge drinking last month. The frequency of practicing binge drinking is significantly higher in boys than girls, $U = 381\ 799$, $z = -12.63$, $p < 0.001$,

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$r = 0.27$, the size difference is considered small to medium based on the Cohen's criteria.

Type of alcohol and binge drinking

From the group of boys who practiced binge drinking more than 3 times during the last month, 84.3% (75) consumed beer, and of those who practiced binge drinking within 1-2 occasions 78.2% (133) are consumers of beer. Of those who last month did not have this behavior, 46.2% (234) are consumers of beer. Boys who consume beer practice binge drinking significantly more frequently than non-consumers, $U = 48\,722$, $z = -9.05$, $p < 0.001$, $r = 0.32$, the size difference is average (fig. 1).

Among the girls who practiced binge drinking over 3 times during the last month, 56.3% (18) consumed beer, and of those who have engaged in binge drinking 1-2 times 48.2% (54) are consuming beer. From the group of girls who did not have this behavior last month 22.4% (255) are consuming beer. Girls who consume beer practice significantly more frequently this behaviour (binge drinking) than non-consumers, $U = 133\,263$, $z = 7.18$, $p < 0.001$, $r = 0.20$, the difference is small in size (fig. 2).

Among boys who practiced binge drinking over 3 times during the last month, 49.4% (44) consumed wine, and of those who practiced binge drinking within 1-2 occasions 48.8% (83) are consumers of wine. Of those who did not have this behavior last month 36.5% (185) are consumers of wine. Boys consumers of wine practice significantly more frequently this behaviour than non-consumers, $U = 62540.5$, $z = -3.29$, $p = 0.001$, $r = 0.12$ the difference was small in size (fig. 3).

The girls who practiced binge drinking over 3 times during the last month, 62.5% (20) consumed wine, and of those who practiced binge drinking within 1-2 occasions 54.5% (61) are consuming wine. Of girls who did not have this behavior last month 39% (443) are consuming wine. The girls, who are consuming wine, practice significantly more frequently this behavior than non-consumers, $U = 183\,816$, $z = -4.00$, $p < 0.001$, $r = 0.11$ the difference was small in size (fig. 4).

Among boys who practiced binge drinking over 3 times during the last month 33.7% (30) consumed spirits and of those who practiced binge drinking within 1-2 occasions 27.1% (46) are consumers of spirits. Of those who last

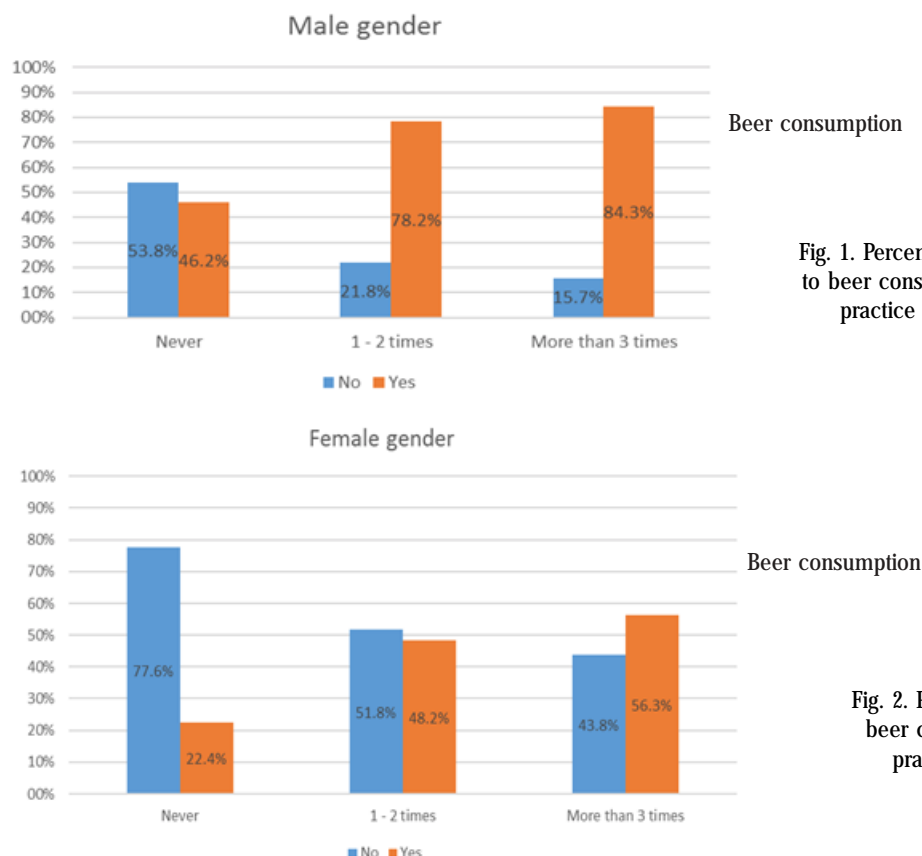


Fig. 1. Percentage distribution of students according to beer consumption and binge-drinking frequency practice during the last month, among boys

Fig. 2. Percentage distribution of students based on beer consumption and binge-drinking frequency practice during the last month, among girls

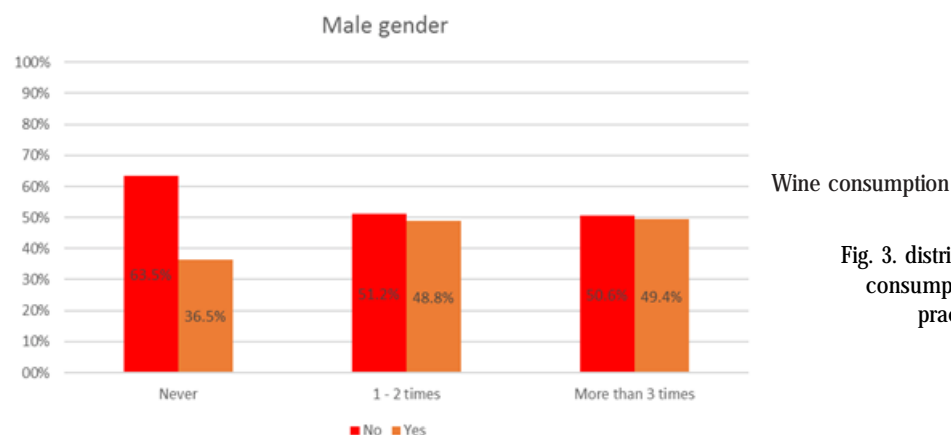


Fig. 3. distribution of students according to wine consumption and binge-drinking frequency practice last month, among boys

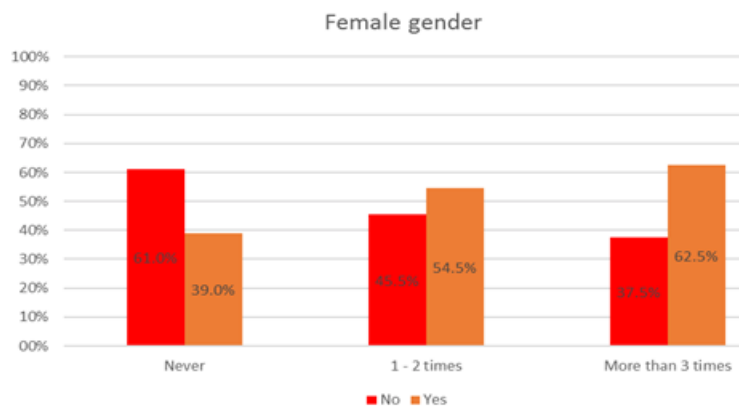


Fig. 4. Percentage distribution of students according to wine consumption and binge-drinking frequency practice last month, among girls drinking frequency practice during last month, among girls

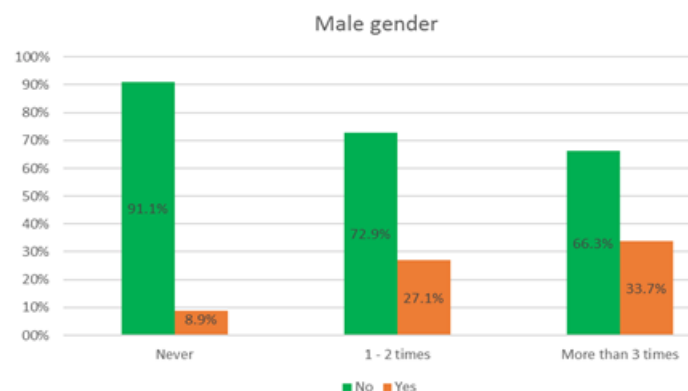
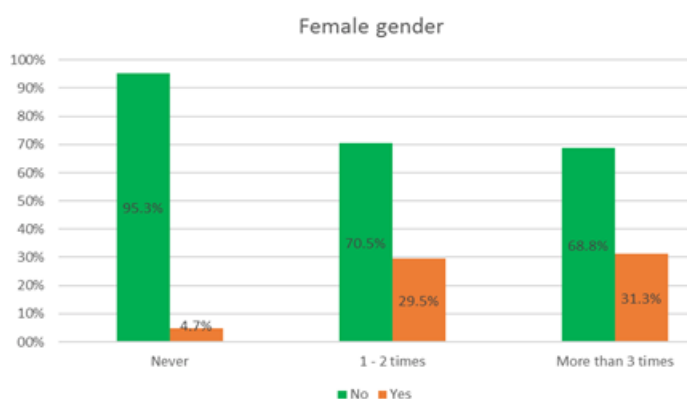


Fig. 5. Percentage distribution of students according to spirits consumption and binge-drinking frequency practice during last month, among boys



Spirits consumption

Fig. 6. Percentage distribution of students according to spirits consumption and binge-drinking frequency practice during last month, among girls

month did not have this behavior 8.9% (45) are consumers of spirits. Boys practice this behaviour significantly more often than non-consumers, $U = 25081$, $z = -7.47$, $p < 0.001$, $r = 0.26$ the difference is small to medium size (fig. 5).

Of the girls who practiced binge drinking more than 3 occasions during the last month, 31.3% (10) consumed spirits and of those who practiced binge drinking within 1-2 occasions 29.5% (54) are consumers of spirits. Of girls who did not have this behaviour last month 4.7% (54) are consumers of spirits. Girls practice this behavior more often than non-consumers, $U = 36834.5$, $z = -10.73$, $p < 0.001$, $r = 0.299$ the difference is small to medium size (fig. 6).

Keller and colleagues [3] published similar results of our study in an article who has been investigating binge drinking membership of German medical students. They found that boys practice this behavior more frequently than girls. Those who practiced binge drinking had increased chances to smoke, to use drugs, to have a sedentary life and do not eat fruits and vegetables.

Miller [4] and his colleagues used logistic regression to examine associations between patterns of alcohol consume and other risk behaviors and found that those who practiced binge drinking, compared with those who did not practice, had high chances to report low school performance, and other health risk behaviors such as travel

by car with a drunk driver, active smoking, suicide attempts and use of illicit substances.

The results of a recent dissertation [5] argue that the risk factors for binge drinking, in a group of 80,000 students in a cross-sectional study, are membership in a fraternity, considering that alcohol use is a social norm, a relationship emotional abuse, smoking and use of other drugs.

In a cross sectional study in Brazil [6], the predictors of behavior of binge drinking were, in older males, exits almost daily with friends, and inversely associated factors with binge drinking were reduced monthly allowance, living with people who do not abuse alcohol.

Unlike our findings regarding the predilection of kinds of alcohol consumed, American longitudinal studies [7-9] have shown increasing prevalence of spirits at the expense of reducing the prevalence of beer. For the group of young Americans, reported prevalence of wine consumption remains low compared with other types of drinks.

Johnston et al [7] found that by the tenth grade, the differences between the number of boys and girls who consume alcohol are not significant. Over 18 years, they found that boys exceed the girls, not only in terms of frequency of use, but also the frequency of binge drinking and the number of poisoning during last month, as demonstrated in our study.

Conclusions

Prevalence of beer consumption is 57.9% for boys and 25.6% girls, the gender difference is significant and of medium size. Prevalence of wine consume is 40.8% for boys and 41.0% for girls, the difference is not significant. Prevalence of spirits consume is 15.8% for boys and 7.6% girls, the gender difference is significant and of medium size.

The prevalence of binge drinking practicing 1-2 times during the last month is 22.1% for boys and 8.7% girls; and more than 3 times during the last month is 11.6% for boys and 2.5% girls. The boys practice binge drinking significantly more often than girls, the difference is small to medium size.

Among the boys practicing binge drinking, 80.3% consumed beer, 49.0% wine and 29.3% spirits. Among the girls practicing binge drinking, 50% drink beer, 56.3% wine and 29.8% spirits.

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Manuscript received: 14.04.2016