Beverage Alcohol Choice Among University Students: Perception, Consumption and Preferences

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ABSTRACT

This paper aims to analyze and compare the beverage alcohol choice among university students. The study was carried out on a total of 1069 students (men and women) from University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania. A general questionnaire assessed alcoholic beverage consumption, perception and preference. The main reasons associated with alcohol consumption (AC) were relaxation and socialization followed by taste and flavour. The most respondents are attracted by flavor and aroma of the favourite beverage. The participants in the study were not heavy social drinkers (only 1.7% of participants consume alcohol every day). Beer and wine, were the alcoholic beverages ranked in the top of preferences. Our findings can provide information for educators and policymakers in Romania to implement target-orientated interventions against alcohol abuse at universities. The results of this study may also add evidence to university administrators and public health educators elsewhere dealing with students from Romania.

Keywords: students preference, alcohol consumption, Romanian university students

INTRODUCTION

It is beyond doubt that alcohol is harmful and that its irresponsible and excessive consumption has severe consequences for health and serious social implications (Santos-Buelga and González-Manzano, 2011; Guillén et al., 2015). Europe is traditionally known for its high AC (Popova et al., 2007), alcohol abuse has been on the public agenda for many years since it carries risks of violent crime, traffic accidents, public disorder, and health damage (Brányik et al., 2012). Alcohol misuse by young people is an important public health issue, and has led to the development of a range of prevention interventions. Evidence concerning the most effective approaches to intervention design and implementation is limited (Rothwell and Segrott, 2011).

During university or college years, students can escalate their alcohol use to dangerous levels, and student AC levels are typically higher than their non-university peers (Kim et al., 2009; Junqing Chu et al., 2016). University students, often 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 (Cox et al., 2006).

In particular, „university students are at risk for substance abuse behaviours because of changes in lifestyle, reduced parental support and stress”. Alcohol use remains the number one substance abuse problem throughout university life (Davoren et al., 2016).

Heavy AC in the university students population is associated with numerous negative conse-
quences. Heavy AC amongst students impacts on individuals, educational institutions, and society: excessive drinking behaviour amongst students is linked with a range of alcohol related problems, including missing class, impaired academic achievement, injuries, unprotected sex, violence, car accidents, and health problems, resulting in a significant economic burden for health systems (Williams and Clark, 1998; Newbury-Birch et al., 2000; Gill, 2002; Karam et al., 2007; Bewick et al., 2008; Brandão et al., 2011; Moreira et al., 2012). While university authorities and public policymakers have attempted to tackle elevated levels of consumption, research signals a rise in alcohol use among students in the past decade (Davoren et al., 2015; Davoren et al., 2016).

Alcohol use is reported in university students with discrepancy between countries. This paper aims to analyze and compare the beverage alcohol choice among Romanian university students.

**MATERIALS AND METHODS**

Students from the University of Agricultural Sciences and Veterinary Medicine Cluj Napoca, Romania, were invited to take part to the study. The students were from the five faculties of our university: Faculty of Agriculture (14.4 %), Faculty of Horticulture (11.5 %), Faculty of Zootecny and Biotechnology (10 %), Faculty of Veterinary Medicine (15.7 %) and Faculty of Food Science and Technology (48.4 %).

The research method was survey made through questionnaires administered to a total of 1069 students. Twelve participants indicated not drinking any alcohol and were excluded from the analysis. The final sample (n=1057) consisted of 475 males and 581 females.

The students received an online questionnaire with demographic questions, health risks and an assessment of drinking behaviour. The Google form online system was used. The online questionnaire was used instead of written questionnaires for many reason, such as: is faster, cheaper, more accurate, quick to analyse, easy to use for participants, data is instantly available, more flexible, more honest (people are more likely to respond with honest answers), etc. A 30-item omnibus-type questionnaire was used to collect sociodemographic data, relevant information about participants’ families, and items related to health lifestyle/ risks and alcohol consumption.

The types of questions that were chosen: closed and open questions, filter questions, multiple choice (single answer), selection list questions and free text questions.

Eligible participants were undergraduate university students (18-24 years old; academic year 2016/17) from UASVM; recruited through university information systems (posters, email messages, bulletin boards) and through online social networking sites. The university students were from throughout Romania (Transylvania, Moldavia, Bucovina, Banat, Muntenia, Dobrogea).

The students were informed in writing that participation was voluntary and anonymous. Participants gave their informed consent to participate by completing the web-based questionnaire. The time required to complete the questionnaire was 25-30 minutes. The study was approved by the Ethical Committee of the Faculty of Food Science and Technology, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania. No incentives were provided for participation in the experiment.

The program SPSS Statistics 17.0 was used for the interpretation of the results, which is a comprehensive system for analyzing data.

**RESULTS AND DISCUSSION**

Our group of researchers has investigated a total of 615 students in a preliminary study and the data were presented in previous article (Salanta et al., 2016). In this study a total of 1069 students were subjected to investigation in order to establish alcohol consumption (AC), perception and preference. Only a small percentage (1.1 %) of participants reported that they did not consume alcoholic beverages. The finale sample of 1057 undergraduate students consisted of 45% of males and 55% of females.

Alcohol abuse is a serious, ongoing public-health problem (Fadardi and Cox, 2009). AC in Romania is among the highest in the world. Registered average AC per capita in Europe is 9.51 liters, in Romania this level is 11.3 liters. It is estimated that in Romania, unregistered consumption of pure alcohol per capita is 4.0 liters, making the total figure to reach 15.3 liters (Constantinescu and Constantinescu, 2012). Compared with other countries from Europe, only seven other countries (Russia, Ukraine, Andorra, Czech Republic, Moldova, Estonia and Hungary)
the average AC is slightly higher (World Health Organisation, 2011). It is difficult to estimate the actual AC in Romania, as large amounts of spirits and wine are produced and consumed in households (Hoof and Moll, 2012).

The findings of the present study showed that 73.1 % of the students consume alcohol only on special occasions (parties, evenings out), 12.6 % of participants in the study consume once a week, 4.5 % only on holidays or special moments (weddings, birthdays), 4.3 % once a month, 4 % twice a month, 1.7 % every day. The main reasons for AC were relaxation and socialization (38.2 %), taste and flavour (32.1 %), for feeling-euphoria (16 %), joy and entertainment (6.9 %), personal disappointment (1.7 %), others reasons (curiosity, etc., 3.1 %), followed by group ("to be cool", 2 %).

Women drink to relax, have fun, improve their mood, or to escape boredom, while male students noted AC important for image and reputation, they drink to be cool, brave, be accepted by the group friends. Results of our study contribute to previous research linking to Romanian young adults/university students (Nasui et al., 2016; Rada and Ispas, 2016; Salanta et al., 2016).

**Fig. 1.** The age influences the preferred type of alcoholic beverage

The present research advances the literature by providing a large sample in which Romanian university students beverage preferences are provided. The alcoholic beverage choice were analyzed by demographic and socio-demographically factors. As it can be seen below, the alcoholic beverage choice differs among demographic groups and is influenced by the socio demographics factors (age and residence) (figure 1).

**Hypothesis no. 1. Age influences the preferred type of alcoholic beverage**

The ANOVA test (table 1) indicates that the relationship between the two variables is significant (Sig. 0.007). Age influence the beverage choice, as we can see in table 2, the value of $\eta^2$ explain this in the proportion of 10 %. The average age of the students was $21.3\pm1.53$ years. It can be observed an increase in preference for wine and beer, over the years, and a decrease after 21 years old.

Identifying the types of alcoholic beverages that youth consume would contribute toward a better understanding of the motivating factors underlying underage drinking behavior (Siegel et al., 2011). All categories of ages ranked the beer...
and wine in the top of preferences. Wine was the strongly preferred alcoholic beverage of choice (42.1 %), followed by beer (27 %), low alcoholic beverages (8.7 %), vodka (6.3 %), whisky (5.8 %), liqueur (3.6 %), tequila (1.5 %), rom (1.3 %), gin (1 %) and cognac (1 %), with a very low preference for tăuica (0.5 %) or bitter and vermouth (0.7 %).

Alcohol preference, is related to lifestyle (dietary habits), depending on the living area, age, gender, physical activity and other habits (smoking, etc.) (Alcacera et al., 2007). Compared with women throughout the world, men are more likely to drink, consume more alcohol, and cause more problems by doing so (World Health Organisation, 2005).

Romania has an important market for red wines and dry wines. Each sensory or non-sensory attributes of the wine have an important role in wine consumer decision (Lădaru and Beciu, 2014).

Beer, a brewed beverage made principally from malt (germinated barley), hop, water, and yeast, is the oldest and one of the most used alcoholic beverages in the world. Its huge popularity is gained not only by low cost and easy access, but by its immense properties and possible health benefits. Researchers confirm that drinking beer in moderation has beneficial effects on numerous aspects of health such as: reducing the risk of cardiovascular disease, blood cholesterol levels, diabetes, osteoporosis, dementia, and it can be part of a healthy 'mass reduction' and valuable source of vitamins, minerals and antioxidants (Mudura and Coldea, 2015; Mudura et al., 2010; Leskosek-Cukalovic et al., 2010).

Tab. 1. Anova table

<table>
<thead>
<tr>
<th>Age * Favourite beverage</th>
<th>Between Groups (Combined)</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>24,346</td>
<td>12</td>
<td>2,029</td>
<td>.864</td>
<td>.007</td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
<td>2451,148</td>
<td>1044</td>
<td>2,348</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2475,495</td>
<td>1056</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tab. 2. Measure of association

<table>
<thead>
<tr>
<th>The favourite alcoholic drink * Age</th>
<th>R</th>
<th>R Squared</th>
<th>Eta</th>
<th>Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-.050</td>
<td>.002</td>
<td>.099</td>
<td>.010</td>
</tr>
</tbody>
</table>

Hypothesis no. 2. Gender influences preferred alcoholic beverage (Figure 2)

In this case we are talking about two variables measured at nominal level. Anova test indicates the relationship between the two variables as significant (\(\lambda = 0.052\)).

A higher preference for wine was observed among female students (figure 2). It is well known that women prefer sweeter products as wine or flavoured beer, instead of classic beer. The taste preferences differ from one person to another, some people prefer sour tastes over sweet and vice versa. The most of female prefer a fruity kind of flavors and smell, while men are known for tolerating any kind of smells better than women.

Wines offer a complexity of flavours that can be savoured, while beer will rarely offer the same variety of flavours that can be found in a red wine, for example. The complexity in terms of the scent, the notes and the structure of the drink are not the same, so they are certainly distinctive. Moreover, women find wine more refined compared to beer. Also, women are concerned about their health, body weight and to maintain a healthy lifestyle (83 % of the surveyed claimed a positive answer). The possibility of explore wine by choosing between red, white and sparkling wines, also, wines from different countries and producers, can be another reason that women prefer wine.

Most of the men surveyed ranked beer as favourite, 46 % from the respondents are interested by their health, while the rest (54 %) are not worried about calories of a drink or the impact that could have on their body. One of the reason why...
men choose beer can be attributed on advertising, which depict men drinking on a bottle of beer while enjoying sports.

Our study has some limitations due to the higher percentage of females versus males implicated in research. The majority of the respondents were from Faculty of Food Science and Technology (48.4 %). In 2016-2017 there were more female, than male full time undergraduates enrolled at faculty - a trend which shows no sign of shrinking.

In general, the results of this study are consistent with other studies examining the drinking habits of college students. Males preferred more beer than females, and females preferred more wine than males.

Hypothesis No. 3. Place of residence influences the preferred type of alcoholic beverage

As it can be seen from the figure 3, most respondents from urban areas prefer wine and beer. As regards the rural areas, the table indicates that like those from rural areas, place on top of their preferences wine and beer. The others beverages: low alcoholic beverages, vodka, liqueur, bitter and vermouth were ranked different by the respondents. Anova test indicates the relationship between the two variables (residence and favourite beverage) as significant, $H_{\text{ic}}^2$ coefficient was 0.003. In Romania, AC tends to be higher in regions with grapes and fruit trees, so it is difficult to estimate the actual alcohol consumption, as large amounts of spirits and wine are produced and consumed in
households (Hoof and Moll, 2012). Certain factors associated with living in an urban or rural area may increase risk, while others may be protective (Young and Joe, 2009). Parents generally have a permissive attitude towards youth drinking, and sometimes even facilitate early initiation of alcohol (Rada and Ispas, 2016).

Hypothesis no. 4. Gender influences criteria that lead people to choose the favourite beverage. The oral consumption of alcohol is accompanied by chemosensory perception of flavor, which plays an important role in its acceptance and rejection. Many factors underlie the role that alcohol flavor plays in the development of alcohol preference and consumption patterns (Duffy et al., 2003). As it can be seen from figure 4, most respondents both male and female participants in the study, say that the flavor and aroma attracts them most to the favourite beverage. The HI² coefficient (0.0035) showed that is not any significant relation between the two variables, thereby the gender not influence the criteria that lead people to choose the favourite beverage. The main factors in the choices made by drinkers are the taste and flavour.

CONCLUSIONS

The main reasons associated with alcohol consumption were relaxation and socialization followed by taste and flavour. The most respondents are attracted by flavor and aroma of the favourite beverage. The participants in the study were not heavy social drinkers (1.7 % of participants in the study consume alcohol every day). Beer and wine, were the alcoholic beverages ranked in the top of preferences. Our study has some limitations. The population in our study cannot be taken as representative of all university students in Romania. However, our findings can provide information for educators and policymakers in Romania to implement target-orientated interventions against alcohol abuse at universities. The results of this study may also add evidence to university administrators and public health educators elsewhere dealing with students from Romania.

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