THE USE OF ALCOHOL AND TOBACCO AMONG STUDENTS OF A UNIVERSITY IN SOUTHERN BRAZIL

O uso de álcool e tabaco entre acadêmicos de uma universidade do sul do Brasil

El uso del alcohol y tabaco en académicos de una universidad del Sur de Brasil

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ABSTRACT

Objective: To identify the prevalence of alcohol and tobacco consumption among undergraduate students of a university in Southern Brazil.  
Method: This is an exploratory-descriptive study, with a cross-sectional design, held from August 2012 to June 2013. The research was carried out by means of a structured questionnaire (with questions about alcohol and tobacco use), self-answered by 284 university students, and the results were analyzed through descriptive techniques, absolute and relative frequencies, and statistical tests, chi-square for dichotomous categorical variables and Kruskal-Wallis for continuous variables.  
Results: Of the undergraduates who participated in this study, 242 (85.2%) have already consumed alcohol and 53 students (18.7%) have already used tobacco at some point in their lives. Regarding the consumption of substances and the gender of the undergraduates, there was no difference in alcohol consumption (p=0.857). However, as for tobacco, men’s consumption was evidenced to be higher than women’s (p=0.001).  
Conclusion: The study reveals that the prevalence of alcohol consumption among the university population is high, thus demanding broader investigations about the aspects involved in alcohol and tobacco consumption among this population.

Descriptors: Tobacco Use; Alcoholic Beverages; Students; Prevalence.

RESUMO

Objetivo: Conhecer a prevalência do consumo de álcool e tabaco entre estudantes de uma universidade do sul do Brasil.  
Métodos: O estudo tem caráter exploratório-descritivo, com delineamento transversal, e ocorreu de agosto de 2012 a junho de 2013. A pesquisa foi realizada por meio de um questionário estruturado (com questões sobre o uso de álcool e tabaco) autopreenchido por 284 acadêmicos e os resultados foram analisados por técnicas descritivas, frequências absolutas e relativas, e estatísticas com teste qui-quadrado para variáveis categóricas dicotômicas e Kruskal-Wallis para variáveis contínuas.  
Resultados: Dos universitários participantes 242 (85,2%) já consumiram álcool e 53 (18,7%) já fizeram uso de tabaco em algum momento na vida. Em relação ao consumo das substâncias e o gênero dos universitários, não houve diferença em relação ao consumo de álcool (p=0,857). Contudo, em relação ao tabaco, evidencia-se que os homens consomem mais que as mulheres (p=0,001).  
Conclusão: O estudo revela que a prevalência do consumo de álcool nessa população universitária é alta, tornando-se necessárias investigações mais abrangentes sobre os aspectos envolvidos no consumo de álcool e tabaco por esse público.

Descritores: Uso de Tabaco; Bebidas Alcoólicas; Estudantes; Prevalência.

RESUMEN

Objetivo: Conocer la prevalencia del consumo de alcohol y tabaco en estudiantes de una universidad del Sur de Brasil.  
Métodos: El estudio tiene el carácter exploratorio-descriptivo con delineamiento transversal y se dio entre agosto de 2012 y junio de 2013. Se realizó la investigación a través de un cuestionario estructurado (con preguntas sobre el uso del alcohol y tabaco) de autorelleno en 284 académicos y los resultados fueron analizados a través de técnicas descritivas, frecuencias absolutas y relativas y estadística con la prueba de Chi-
cuadrado para las variables categóricas dicotómicas y la de Kruskal-Wallis para las variables continuas. **Resultados:** Entre los universitarios participantes 242 (85,2%) ya han consumido el alcohol y 53 (18,7%) ya usaron el tabaco en algún momento de su vida. No hubo diferencia respecto el consumo de alcohol y el género de los universitarios ($p=0.857$). Sin embargo, respecto al tabaco, se evidenció que los hombres los consumen más que las mujeres ($p=0.001$). **Conclusión:** El estudio revela que la prevalencia del consumo de alcohol en esa población universitaria es alta con la necesidad de investigaciones más amplias sobre los aspectos del consumo de alcohol y tabaco por ese público.

**Descriptores:** Uso de Tabaco; Bebidas Alcohólicas; Estudiantes; Prevalencia.

### INTRODUCTION

Entering the academic world represents a new stage of life for young students. Being a college student means having freedom and control over their life for most of them. However, this period in life is regarded vulnerable to situations of social risk, frequently associated with excessive consumption of psychoactive substances, with emphasis on alcohol\(^1\).

The transition from adolescence to adulthood implies a movement of rupture, which can be understood by the youngsters as attitudes of transgression and new experiences. Among the new experiences, the use of psychoactive substances stands out. Commonly, the individual’s first contact with psychoactive substances occurs in youth, and this experimentation can become occasional, moderate, and even abusive\(^2\).

Among the psychoactive substances used by university students, according to the World Health Organization (WHO), from controlled to problematic use, alcohol is the most consumed substance. This is a public health problem, since alcohol use is one of the risk factors with major impact on morbidity and mortality, being related to 3.3 million deaths each year. Thus, approximately 6% of all deaths worldwide are attributed totally or partially to alcohol. It is possible to recognize numerous damages due to alcohol use, such as: interpersonal violence, traffic accidents, unprotected sex, neoplasias, pancreatitis, and hepatic cirrhosis, among others\(^3\).

Another substance whose consumption has been increasing among university students is tobacco, which is a causal factor for almost 50 different disabling and fatal diseases. It accounts for 45% of myocardial infarction deaths, 85% of deaths from chronic obstructive pulmonary disease (emphysema), 25% deaths from cerebrovascular disease (strokes) and 30% of deaths due to cancer. Furthermore, 90% of lung cancer cases occur in smokers, also with increased risk of developing tuberculosis. Each year, approximately five million people die from tobacco-related diseases and the prediction is that, if the current pattern of consumption continues, by 2030 there will be eight million deaths a year. This surpasses the sum of deaths from alcoholism, AIDS, traffic accident, homicide and suicide together\(^4\).

According to the National Cancer Institute (INCA), the combined use of alcohol and tobacco has been increasing globally, exposing people to developing serious and fatal diseases. Likewise, these substances have a high capacity to produce alterations in the central nervous system, modifying the individuals’ behavior. For having a pleasurable effect, they induce to repetition of their use and, thus, to dependence\(^5\).

The consumption of legal and illegal psychoactive substances is more frequent among university students than in the general population, and a large proportion of these students are exposed to the concomitant use of multiple psychoactive substances\(^6\).

Considering the relevance of the theme, this study was aimed at learning the prevalence of alcohol and tobacco consumption among students of a university in Southern Brazil, giving greater visibility to this problem, as well as bringing elements to push a reflection on the youth’s behavior before the psychoactive substances.

### METHODS

The proposed study is characterized as an exploratory-descriptive research, with a cross-sectional study design. The study population was composed of students of Medical College, Law and Civil Engineering programs, of the respective fields of knowledge: health, human and exact sciences, of a higher education institution (HEI) in the South Region of Brazil. All the students (100%) who were enrolled in the first, third and/or last year of those undergraduate programs were invited to take part in, totaling 284 participants from a universe of 303 students regularly enrolled during that period.

Therefore, as inclusion criterion, the undergraduates should be regularly enrolled in the program period addressed by the study. As for the exclusion criteria, undergraduates under the age of 18, absent from the classroom on the day of data collection and/or incorrect completion of the questionnaire. There was no refusal from any student present to answer the questionnaire, but twelve of them were not present on the day of data collection, and seven did not fill out the survey instrument satisfactorily and were excluded. Thus, a loss of 6.3% of the total sample was registered.
The research was carried out by means of a structured, self-completion questionnaire, and without identification of the student. The variables age, sex, marital status, work, year of graduation, undergraduate program, and frequency of alcohol and tobacco consumption (once or twice a year, monthly, weekly, daily or almost every day, and never) were obtained through the application of a questionnaire elaborated on the basis of three other instruments used in national studies (6-8). It is noteworthy that these instruments were previously tested in Brazil by the authors adopted as reference. Also, the questions were structured (closed) with numeric or multiple-choice completion.

For data collection, the coordinators of the programs participating in the study were contacted to schedule the most appropriate day and time for the undergraduates to be approached. Identified to the classroom, the researchers presented themselves to the teacher responsible for the class, to whom they previously explained the research objectives and methodology, concerning the application of the research instrument (compulsorily carried out during the class time) and the length of time it would take from the class, approximately 30-45 minutes. Afterwards, the researchers presented themselves to the group of students and explained the objectives, the methodology, the importance of the study and invited them to participate in the research.

The completed questionnaires were properly typed in worksheets specifically built for this study in the Excel program. Subsequently, after reviewing the quality of completion of the forms and the spreadsheet, the information was transposed to a database built in the SPSS program version 20.0.

Data then underwent a descriptive analysis, with absolute and relative frequencies, and also statistical analysis, using the chi-square test ($\chi^2$) to verify the association between gender and consumption, as well as the frequency of consumption, of each substance. The frequency of consumption according to the undergraduate programs was compared by using Kruskal-Wallis tests, followed by multiple non-parametric Dunn comparisons (when necessary between the genders), with use of Mann-Whitney tests. The students’ ages were described according to the undergraduate programs, using mean and standard deviation, and were compared between the programs with use of ANOVA, followed by multiple Bonferroni comparisons. The tests were performed with significance level of 5%.

It should be noted that the project was approved by the Research Ethics Committee of the Community University of Chapecó Region under research protocol no. 21912. Additionally, the higher education institution participating in the research was asked to provide a statement of science and agreement with the execution of the study. The study participants were assured that, if published, the name of the higher education institution would not be disclosed.

RESULTS

Among the participants in this study, 34.9% (n=99) were students in the medical program, 27.8% (n=79) were Law and 37% (n=106) Civil Engineering undergraduates. According to the results, the average age of the students was 23.1 (±8) years. In the sample characterization, 54.6% (n=155) were female. As for the marital status, 84.6% (n=241) were single. Among the study participants, 39.3% (n=112) also worked, in addition to studying. The sample was composed of 32.3% (n=104) of third-year students, and 30.9% (n=88) of students in the last year of the undergraduate program.

Regarding alcohol consumption, 242 (85.2%) of the undergraduates have consumed alcohol at some point in their lives. Among medical students, only 6.1% (n=6) had never experienced alcohol. When questioned about the frequency of alcoholic beverage consumption, 38.7% (n=110) reported using alcohol weekly. Among the undergraduate programs, the same frequency is presented as follows: 34.2% (n=27) of the Law students, 34.9% (n=37) of Civil engineering, and 46.5% (n=46) of Medical College. With regard to daily alcohol consumption, the prevalence was 2.5% (n=7) among the students. There was no difference in frequency of consumption between the undergraduate programs (p=0.0335), according to Table I.

Table I - Frequency of alcohol consumption among students according to the undergraduate program of a university in the South Region of Brazil, 2012 - 2013.

<table>
<thead>
<tr>
<th>Frequency of alcohol consumption</th>
<th>Undergraduate program</th>
<th>Total</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medical College</td>
<td>Law</td>
<td>Civil engineering</td>
</tr>
<tr>
<td>Once or twice a year</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>24.2</td>
<td>18</td>
</tr>
<tr>
<td>Monthly</td>
<td>20</td>
<td>20.2</td>
<td>15</td>
</tr>
<tr>
<td>Weekly</td>
<td>46</td>
<td>46.5</td>
<td>27</td>
</tr>
<tr>
<td>Daily or almost every day</td>
<td>3</td>
<td>3.0</td>
<td>2</td>
</tr>
<tr>
<td>Never</td>
<td>6</td>
<td>6.1</td>
<td>17</td>
</tr>
</tbody>
</table>

*Chi-square test result.
In the relation between alcohol consumption and sex of the university students, there was no difference of statistical significance regarding the fact of having consumed it once in their lifetime, since 89.1% (n=116) of men and 81.8% (n=126) of women had already experienced alcohol at some point in their lives (p=0.857). However, weekly alcohol consumption is more frequent among males, and this difference is statistically significant (p=0.001), as observed in Table II.

Table II - Description of frequency of alcohol consumption among students according to the sex of the undergraduates of a university in the South Region of Brazil, 2012 - 2013.

<table>
<thead>
<tr>
<th>Frequency of alcohol consumption</th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
<th>Total</th>
<th></th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Once or twice a year</td>
<td>21</td>
<td>16.3</td>
<td>42</td>
<td>27.3</td>
<td>63</td>
<td>22.3</td>
<td>0.001</td>
</tr>
<tr>
<td>Monthly</td>
<td>24</td>
<td>18.6</td>
<td>38</td>
<td>24.7</td>
<td>62</td>
<td>21.9</td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>65</td>
<td>49.6</td>
<td>45</td>
<td>29.2</td>
<td>110</td>
<td>38.5</td>
<td></td>
</tr>
<tr>
<td>Daily or almost every day</td>
<td>6</td>
<td>4.7</td>
<td>1</td>
<td>0.6</td>
<td>7</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>14</td>
<td>10.9</td>
<td>28</td>
<td>18.2</td>
<td>42</td>
<td>14.8</td>
<td></td>
</tr>
</tbody>
</table>

*p-Chi-square test result.

Regarding tobacco consumption, 18.7% (n=53) of the students reported that they had used tobacco at some point in their lives. Law students have the highest frequency of use, with a prevalence of 20.3% (n=16). Among the medical students, none reported consuming tobacco daily, as presented in Table III.

Table III - Frequency of tobacco consumption among students according to the undergraduate program of a university in the South Region of Brazil, 2012 - 2013.

<table>
<thead>
<tr>
<th>Frequency of tobacco consumption</th>
<th>Undergraduate program</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medical College</td>
<td>Law</td>
<td>Civil engineering</td>
<td>Total</td>
<td></td>
<td></td>
<td>p-value*</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Once or twice a year</td>
<td>10</td>
<td>10.1</td>
<td>7</td>
<td>8.9</td>
<td>12</td>
<td>11.3</td>
<td>29</td>
</tr>
<tr>
<td>Monthly</td>
<td>4</td>
<td>4.0</td>
<td>4</td>
<td>5.1</td>
<td>1</td>
<td>0.9</td>
<td>9</td>
</tr>
<tr>
<td>Weekly</td>
<td>3</td>
<td>3.0</td>
<td>3</td>
<td>3.8</td>
<td>3</td>
<td>2.8</td>
<td>9</td>
</tr>
<tr>
<td>Daily or almost every day</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.5</td>
<td>4</td>
<td>3.8</td>
<td>6</td>
</tr>
<tr>
<td>Never</td>
<td>82</td>
<td>82.8</td>
<td>63</td>
<td>79.7</td>
<td>86</td>
<td>81.1</td>
<td>231</td>
</tr>
</tbody>
</table>

*p-Chi-square test result.

Tobacco consumption between the sexes presents a statistically significant difference (p=0.008), evidencing that men consume more tobacco than women, as shown in Table IV.

Tabela IV - Frequency of tobacco consumption among students according to the sex of the undergraduates of a university in the South Region of Brazil, 2012 - 2013.

<table>
<thead>
<tr>
<th>Frequency of tobacco consumption</th>
<th>Sex</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Once or twice a year</td>
<td>19</td>
<td>14.7</td>
<td>10</td>
<td>6.5</td>
<td>29</td>
<td>10.2</td>
<td>0.008</td>
</tr>
<tr>
<td>Monthly</td>
<td>4</td>
<td>3.1</td>
<td>5</td>
<td>3.2</td>
<td>9</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>6</td>
<td>4.7</td>
<td>3</td>
<td>1.9</td>
<td>9</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>Daily or almost every day</td>
<td>4</td>
<td>3.1</td>
<td>2</td>
<td>1.3</td>
<td>6</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>96</td>
<td>74.4</td>
<td>135</td>
<td>87.0</td>
<td>231</td>
<td>81.3</td>
<td></td>
</tr>
</tbody>
</table>

*p-Chi-square test result.

DISCUSSION

Among the undergraduates interviewed in this research, 85.2% have already consumed alcohol at some point in their lives. Studies carried out with undergraduates from Southern Brazil(9,10) and another study with university students from the Northeast region(11) corroborate the prevalence found: 90.1%; 90.4%; 94%, respectively.
In the first national survey conducted to gather information regarding the consumption of alcohol, tobacco and other drugs among university students in the 27 Brazilian capitals, it was possible to identify that about 49% of the students have already tried some type of drug at least once in their lives. Compared to the general population, university students consume more drugs than the remaining population.

Alcohol is the most prevalent licit drug among university students, being consumed recreationally, that is, the drug use is defined as sporadic consumption, although regular, for the purpose of fun and entertainment. The students consume alcoholic beverages mainly at parties and bars, in the company of friends and peers.

A study on alcohol consumption and interferences with the academic life shows that 22.65% of the students use alcohol during term time. The frequency of alcohol consumption in the academic programs addressed in the current research is generally more prevalent in the Medical College. Approximately 34.5% of Law and Civil Engineering students consume alcohol weekly, while this prevalence rises to 46.5% in the medical program. The medical undergraduates’ stressful routine has been the main factor responsible for their dependence on any drug, with alcohol being the most used among them, which alters their perception of cases of alcohol abuse, since these students tend to be more tolerant and consider themselves less vulnerable to alcohol. The alcohol consumption among students in this field is worrisome, as they are expected to have a better knowledge of the implications of such substances on the health of each individual.

In relation to the university environment, since, in this setting, young people attend parties in which alcoholic beverages are generally available, rendering them exposed to the consumption of other psychoactive substances as well. Among the factors related to the university environment, since, in this setting, young people attend parties in which alcoholic beverages are generally available, rendering them exposed to the consumption of other psychoactive substances as well.

A study on tobacco consumption, there was a prevalence of 18.9%. Other study carried out among university students from the south of Brazil, with a sample divided into two major groups, the health field and other undergraduate programs, the prevalence of smoking among the students was 8.9%, with 4.7% active smokers and 4.2% occasional smokers; and 2.6% declared themselves ex-smokers. In another study, in order to verify the prevalence of smoking among medical undergraduates, 16.5% of the students were active smokers, 5.4% daily, and 11.1% occasional smokers.

As for sex, our survey also evidenced that male students have a higher prevalence of smoking, and the weekly consumption of tobacco predominates among them. Other studies indicate that the frequency and quantity among female undergraduates is lower than among boys. Although the prevalence of use is lower among women, in 2010, the WHO elected the theme “Gender and tobacco with an emphasis on women-oriented advertising” for the “World No Tobacco Day”, with the aim of promoting policies to combat the tobacco epidemic among women, because of the peculiarities of their effects on women’s health.

The study pointed to a high prevalence of alcohol consumption among college students. This high consumption may be related to the university environment, since, in this setting, young people attend parties in which alcoholic beverages are usually available, rendering them exposed to the consumption of other psychoactive substances as well. Among the factors that influence and even promote the use of drugs, whether illicit or not, is the access to the university, where the youth moves away/is set free from the family - often going to centers far from their origin - and experiences parties in which drugs can sometimes be used to favor integration and interpersonal relationships. In addition to the university festivities, there are also factors that contribute to the consumption of these substances, namely, post-test celebrations and also as a reward for ending a tiring and stressful day of studies, besides the advertisements in the media, which stimulate the consumption of alcohol and tobacco, since these are legal drugs.

The consumption of drugs among university students is a cause of worry, as it leads to economic and social impacts, increasing the rates of violence and abandonment of studies, increasingly demanding that the actions and policies directed at this problem be thought over. In this way, the university environment should be optimized to promote discussions, since there is freedom to debate the most varied topics, including the creation of permanent spaces and environments for this discussion.

Considering the limitations of this quantitative study, which sought to identify the pattern of alcohol and tobacco consumption, more extensive investigations and qualitative approaches are necessary, with a view to understanding the representations and meanings of the consumption of these drugs among the undergraduate students.

**CONCLUSION**

The present study concludes that the prevalence of alcohol consumption among college students is high, since a third of the students consume it weekly. The frequency of consumption is higher among male students. As for tobacco consumption, a higher frequency of use was also observed among male undergraduates. The findings point to parties in parities in alcohol and tobacco...
consumption among the assessed programs. These results, referring to the reality of the consumption of alcohol and tobacco among university students of the medical, law and civil engineering programs of a university in Southern Brazil, do not differ from the other Brazilian regions.

REFERENCES


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