

# Alcohol Consumption among College Students Attending Healthcare Courses in an Institution in the South of Brazil

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## Abstract

**Objective:** To know the socioeconomic profile and compare the patterns of alcohol consumption among freshmen and juniors attending healthcare courses at the *Universidade Federal do Rio Grande* (FURG), in Rio Grande, RS, Brazil.

**Methods:** A cross-sectional quantitative descriptive study. The sample comprised 351 college students attending Biological Sciences (both teaching degree and bachelor's degree), Physical Education, Nursing, Medicine and Psychology. Data were collected by a socio-demographic questionnaire and by the AUDIT (Alcohol Use Disorders Identification Test) and underwent descriptive analysis, analysis of variance, G-test and contingency tables.

**Results:** Alcohol consumption was higher among women. Even though their drinking pattern was considered low-risk level, students engaged in binge drinking and had occasional blackouts after the intake of alcoholic beverages.

**Conclusion:** It is important to plan and implement educational programs with the students in order to clarify the National Alcohol Policy and warn them about the limits of low-risk drinking.

**Keywords:** Nursing; Alcohol consumption; Students; Public health

## Introduction

Alcohol is one of the most widely used drug substances in the world. Even though a lot of people drink alcoholic beverages, regardless of age, gender, schooling and income, their consumption pattern varies in the context they are involved in. In other words, the moment, the frequency, the kind of alcoholic beverage, as well as changes in behavior and health may vary [1,2].

In order to better identify drinking patterns in the population, health professionals may use standardized questionnaires which provide parameters to screen for problems associated with alcohol. One of them, the AUDIT [3], has got relevance in studies in the area not only because it is the only tool designed to be used internationally to determine a person's alcohol consumption, but also because it is simple to be applied and analyzed [2].

The AUDIT [3], which was published for the first time in 1989 and developed by the World Health Organization (WHO), is a ten-question test whose answers score between zero and four. The whole value attributed to each question generates a score that ranges from zero to forty. The following four categories indicate the levels of alcohol consumption: a score from zero to seven means low risk alcohol consumption; a score from eight to fifteen is suggestive of some risk; a score from sixteen to nineteen indicates harmful use of alcohol; and a score of twenty or more is suggestive of a strong likelihood of alcohol dependence [2].

This categorization is fundamental so that consumers who are prone to risks when consuming alcohol (a score of eight or more) can be identified. These risks comprise not only neoplastic and cardiovascular

diseases, but also dependence and the possibility of provoking accidents.

Alcohol abuse among youngsters was shown in a research carried out by the *Universidade Federal do Rio de Janeiro* (UFRJ), a university located in Rio de Janeiro, RJ, Brazil, in 2001. It pointed out that 13 thousand victims of traffic accidents, out of 38 thousand, were between 18 and 29 years old and had high blood alcohol concentration [4]. Therefore, it shows that alcohol has been used in early age and results in negative effects on youngster's physical and mental health. Another study corroborates these findings and reveals that students start drinking alcohol between 14.8 and 17.3 years old [5].

In Brazil despite being forbidden the sell of alcohol to people under the age of 18 the alcoholic beverages, are abusively and illegally sold in places where they meet, such as pubs, night clubs and sporting events [6]. Most youngsters believe that drinking alcohol and experimenting altered state of consciousness are not only part of maturity and autonomy rituals, but also alternatives to hide emotional and existential pains which are common in this phase of life [7].

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Besides, when they start college, youngsters go through changes in their life styles with more autonomy that leads to new experiences. However, excess of freedom and self-confidence may also lead to harmful use of alcoholic beverages and to negative effects [7].

College students who attend healthcare courses and are involved in theoretical and practical activities should become aware of the importance of self-care regarding alcohol consumption. Therefore, this study aimed at knowing the socioeconomic profile and comparing the patterns of alcohol consumption among freshmen and juniors attending healthcare courses at the FURG, in Rio Grande, RS, Brazil.

## Materials and Methods

This is a cross-sectional quantitative descriptive study. The sample comprised freshmen and juniors attending Biological Sciences (both teaching degree and bachelor's degree), Physical Education, Nursing, Medicine and Psychology at the FURG, located in Rio Grande, RS, Brazil.

Data collection was carried out from August to September 2010, after having been approved by the Ethics Committee in Research and Health (no. 71/2010) in that institution. Firstly, the coordinators of those courses were contacted in order to schedule and choose the place for data collection. Then, students were informed of the objectives and methodology of the research before data collection. The ones who agreed to participate in the study signed a consent form which stated that individual information would be confidential and that they could refuse to answer the questions. Withdrawal from the research at any time would result in no penalty or harm.

To be able to take part in the study, students had to be freshmen or juniors in 2010, be in class when data were collected and sign the consent term. Data were collected by a socio-demographic questionnaire and by the AUDIT [3].

In order to better visualize the data, they underwent descriptive statistical analysis so that the variables could be evaluated. After that, an analysis of variance was carried out to compare average scores by group and by course. It called for the use of square root transformation (AUDIT + 1 score) so that the data could meet the application requirements of the method.

The G-test and contingency tables were also used because they verify whether two categorical variables are associated or not by comparing their frequencies of occurrence. This study adopted a level of significance of 5%. Bioestat 5.0 was the statistical model chosen to analyze the data.

## Results

### Population and sample

The study included three hundred fifty-one students (70%) of these 209 (59%) were freshmen and 142 (40%) juniors. Forty one participants (12%) attended Biological Sciences (bachelor's degree); 35 (10%) were in Biological Sciences (teaching degree); 42 (12%) studied Physical Education; 83 (24%) attended Nursing; 98 (28%) studied Medicine; and 52 (15%) were in Psychology.

### Demographic profile

Participants comprised 239 (68%) women and 112 (32%) men: 302 (86%) were single, 29 (8%) were married, 17 (5%) had a stable relationship and 3 (1%) were widows/widowers. Their minimum age was 17 years old and the maximum one was 50; the average was 23.1

years old (standard deviation was 5.3 and median deviation was 22 years old). A hundred sixty six students (47%) lived with their parents, 81 (23%) lived with friends or classmates, 58 (16%) lived alone and 46 (13%) lived with a spouse, in a consensual relationship. Besides, 324 (93%) did not have any children. Regarding alcohol consumption, 202 (57%) admitted that they drink alcoholic beverages.

### Patterns of alcohol consumption

The descriptive analysis of data that resulted from the AUDIT [3] led to the results in Table 1. It shows the distribution of the answers given to the first three questions. Regarding the frequency of alcohol consumption, 129 (36%) college students drink alcoholic beverages from two to four times a month whereas 38 (11%) drink twice or three times a week but only three (1%) drink almost every day.

Concerning the amount of alcohol drunk on a typical day, 187 students (53%) have one or two standard drinks, 80 (24%) have three or four drinks, 57 (16%) have five or six and 16 (4%) have from seven to nine. Just 11 (3%) mentioned that they have ten or more drinks a day. A hundred seventy (48%) participants said that they had five or more standard drinks on one occasion (binge drinking) Regarding the frequency of binge drinking episodes, 43 (12%) college students mentioned that they happened monthly whereas 16 (4%) had weekly episodes (Table 1).

The analysis of questions four, five and six of the AUDIT [3] (Table 2), which deal with alcohol dependence, revealed that only 16 (4%) college students had the perception of not being able to stop drinking once it had begun. In addition, 52 (14%) students had already failed to do what was expected from them because of alcohol. Only five (1%) students said they had needed a first drink in the morning to get themselves going after heavy drinking the night before.

Answers to questions seven to 10 of the AUDIT [3], which consider alcohol-related problems, revealed that 75 (21%) college students have already had a feeling of guilt or remorse after drinking: seven (2%) of them felt it monthly, two (1%) felt it weekly and one (0%) felt it almost

1- How often do you have a drink containing alcohol?	Total	%
Never	83	24
Monthly or less	98	28
Two to four times a month	129	36
Two to three times a week	38	11
Four or more times a week	3	1
2 – How many drinks containing alcohol do you have on a typical day when you are drinking?		
One or two	187	53
Three or four	80	24
Five or six	57	16
Seven, eight or nine	16	4
Ten or more	11	3
3 – How often do you have 6 or more standard drinks on one occasion?		
Never	181	52
Less than monthly	111	32
Monthly	43	12
Weekly	16	4

**Table 1:** Profile of alcoholic beverage consumption among college students attending healthcare courses at FURG.Rio Grande, RS, Brazil, 2010.

4 – How often during the last year have you found that you were not able to stop drinking once you had started?	Total	%
Never	335	96
Less than monthly	15	4
Weekly	1	0
5 – How often during the last year have you failed to do what was normally expected from you because of alcohol?		
Never	299	85
Less than monthly	47	13
Two to four times a month	4	2
Two to three times a week	1	0
6 – How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?		
Never	346	99
Less than monthly	3	1
Two to four times a month	2	0

**Table 2:** Profile of alcoholic beverage consumption among college students attending healthcare courses. Rio Grande, RS, Brazil, 2010.

daily. Besides, 45 (12%) participants have already been injured or have hurt someone else after having drunk whereas 24 (7%) have already been advised to stop drinking (Table 3).

By analyzing the patterns of alcohol consumption of the participants and comparing the variable “gender”, this study showed that 202 (57%) women were characterized as low-risk drinkers, 34 (10%) were medium-risk drinkers and two (1%) were involved in harmful alcohol consumption. Among men, percentages were lower: 82 (23%), 25 (7%) and six (2%) respectively (Table 4).

In order to test the hypothesis of this study, the analysis of variance was applied to compare average scores of the AUDIT [3] by course and by group (Figure 1). The blue line refers to freshmen and the red line represents juniors. No significant difference was found for the AUDIT scores between freshmen and juniors who attend the courses under investigation ( $p=0.423$ ). Likewise, there was no significant difference for the AUDIT average scores among the courses under analysis ( $p=0.067$ ). Finally, no interaction was found among the groups and the courses ( $p=0.219$ ).

## Discussion

This study showed some discrepancy between its findings and bibliography consulted. While 202 (57%) college students attending healthcare courses at FURG drink alcoholic beverages whereas other authors who carried out similar studies got results above 80% [8]. There was similarity regarding medium-risk drinkers and the ones involved in harmful alcohol consumption.

In addition, 284 (81%) college students who took part in this study were classified as low-risk drinkers. When the variables “gender” and “pattern of alcohol consumption” were compared was found that 202 (57%) women and 82 (23%) men were classified as low-risk drinkers. Regarding the medium risk also if perceived that the indices female 34 (10%) exceeded the indices male. Even though these data agree with a study [9] which was carried out with adolescents, they do not agree with other researches which show that male students predominate as at-risk individuals [10,11].

There is more concern about women’s drinking because alcohol may cause more severe physical harm to the female body since women have more body fat than men [12]. Beverage advertisement has also

been a concern because they have aimed at women; they show slim female artists drinking alcoholic beverage to encourage consumption among women [13].

According to the National Alcohol Policy (NAP), in order to trigger changes regarding the negative influence of the media on people, accurate and appropriate information must be included in advertisement. Sensationalism must be avoided and psychosocial commitment must be promoted so that citizens of all ages can make healthier choices regarding the use of alcohol [14].

It is also worth mentioning that binge drinking is a common practice among participants in this study and students that were investigated by other researchers [15,16]. The World Health Organization has recommended, as a limit for low-risk drinking up to two standard drinks for men and one for women. Drinking more than 10-15 standard drinks per day increases the vulnerability to alcohol-related problems [17].

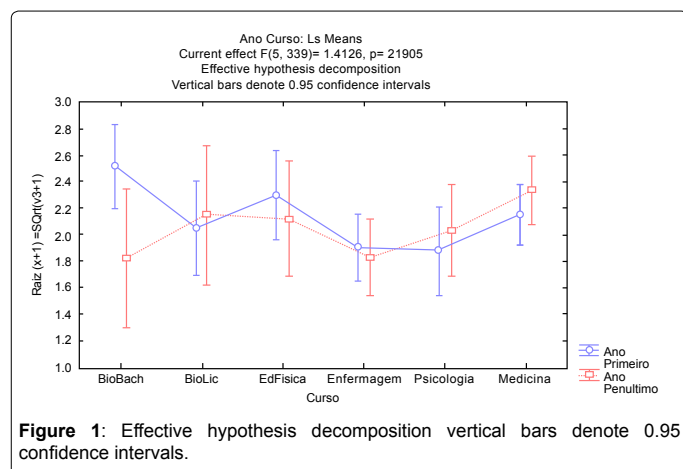
Studies with college students attending several courses in health mentioned the prevalence of 36% for one to two standard drinks on one occasion [17]. Occasional consumption of high amount in little time usually happens in gatherings, such as parties with friends, dances and dinners.

7 – How often during the last year have you had a feeling of guilt or remorse after drinking?	Total	%
Never	276	79
Less than monthly	65	18
Monthly	7	2
Weekly	2	1
Daily or almost daily	1	0
8 – How often during the last year have you been unable to remember what happened the night before because you had been drinking?		
Never	269	77
Less than monthly	69	20
Monthly	11	3
Weekly	1	0
Daily or almost daily	1	0
9 – Have you or someone else been injured as a result of your drinking?		
No	306	87
Yes, but not in the last year	33	9
Yes, during the last year	12	4
10 – Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?		
No	327	93
Yes, but not in the last year	13	4
Yes, during the last year	11	3
Total	351	100%

**Table 3:** Profile of alcoholic beverage consumption among college students attending healthcare courses at FURG. Rio Grande, RS, Brazil, 2010.

Pattern / Gender	MEN	WOMEN	TOTAL
Low risk	82 (23%)	202 (57%)	284 (81%)
Medium risk	25 (7%)	34 (10%)	59 (17%)
Harmful use	6 (2%)	2 (1%)	8 (2%)
Total	113 (32%)	238 (68%)	351 (100%)

**Table 4:** Profile of alcoholic beverage consumption among college students by gender. Rio Grande, RS, Brazil, 2010.



Some authors have pointed out that youngsters somehow know the effects of excessive drinking on the organism but, even so, may keep drinking dangerously [16]. This study has not found any association between college students acquired knowledge and the pattern of alcohol consumption. Likewise, no significance was found when the variables “extracurricular activities” and “alcohol consumption” were compared. Similar results were found in other studies which showed that the harmful use of alcohol is not related to any specific course, group of students or period of study [18].

## Conclusion

This study aimed at knowing the patterns of alcohol consumption among students attending healthcare courses at the FURG, in Rio Grande, RS, Brazil. Results show that this population has a low-risk pattern. However 11 (3%) mentioned that they have ten or more drinks a day, 52 (14%) students had already failed to do what was expected from them because of alcohol, five (1%) students said they had needed a first drink in the morning, 75 (21%) college students have already had a feeling of guilt or remorse after drinking, 45 (12%) participants have already been injured or have hurt someone else after having drunk. There wasn't significant difference between freshmen and juniors and of the courses analysis.

The alcohol consumption by college students attending courses in the health area is a fact and its harmful use must be prevented. It is concluded that the Knowledge of the pattern and of the characteristics of alcohol consumption among college students enables the identification of risk and the implementation of educational programs with the students in order to clarify the National Alcohol Policy and alert them about the risks of its ingestion.

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