

FACTORS ASSOCIATED WITH PRACTICE OF BINGE DRINKING AMONG STUDENTS OF HEALTH

Fatores associados à prática do binge drinking entre estudantes da área da saúde

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ABSTRACT

Purpose: identify the prevalence of alcohol consumption and the factors associated with binge drinking among academic health of an institution of higher education. **Methods:** this is a cross-sectional analytical study, the instrument of data collection was based on the *Alcohol Use Disorders Identification Test*. The association between binge drinking and other variables was assessed by bivariate and logistic regression analysis. **Results:** the prevalence of alcohol use was 135 (74.9%) and binge drinking was 44 (15.3%). The binge drinking was associated with male gender and the type of religion. As to harm to the academic life problematic drinking was associated with school absences, low performance on assessments, involvement in fights or events outside the law. **Conclusion:** there was a high prevalence of alcohol consumption and losses related to academic performance were associated with binge drinking.

KEYWORDS: Alcoholism; Students, Health Occupations; Binge Drinking; Population at Risk; Alcohol-Related Disorders

■ INTRODUCTION

Alcohol is considered a psychoactive substance that acts on the central nervous system affecting the behavior and is widely used for producing pleasurable sensations. It is widely consumed by young people and their consumption has increased reaching an estimated 10-12% of the world population; in the Brazilian population, 11% are dependent on alcohol. Is also responsible for 60% of traffic accidents and 70% of violent deaths, an estimated 1.8 million deaths worldwide (5% are youths between 15 and 29 years old)^{1,2}. Epidemiological studies have shown that the consumption of alcoholic beverages, particularly among young people, is an important

public health problem because it is the most common addiction; the abuse of alcohol is therefore recognized as a disease²⁻⁵.

University students egressing to the university start a critical period in which suffer several changes in their lives, among them, access to alcohol, and often make indiscriminate use of this substance^{1,6,7}.

Students of healthcare are a group that deserves special attention in relation to alcohol and other substances, as will the professionals who, in future, be able to work with this theme, and the second study³ are the ones that engage in alcohol abuse. These young people are commonly vulnerable to episodes of binge drinking, a term used to determine excessive alcohol use and episodic^{1,7,8}. The amount of alcohol that determines this practice is five or more shots of alcohol on a single occasion for men or four or more for women, disregarding the frequency of use⁹.

The alcohol abuse is associated with numerous negative consequences for physical and mental health of young people and society and, in any event, the costs of the practice of binge drinking are

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considerable in all aspects - economic, social, and emotional^{1,10}.

Despite the large number of publications that relate several problems with the misuse of alcohol consumption, there are still few studies that suggest the construction of measures aimed at early detection of harmful use of alcohol¹¹. In Brazil, there is a shortage of studies on alcohol consumption and binge drinking practice. There are gaps of studies on this topic, especially in private institutions of higher education, where supposedly concentrated seas more advantaged socioeconomic classes. Some researches suggest that alcohol use is greater in this strata of the population, but this behavior so far has not been fully described^{1,8,10}.

Whereas it is essential that health promotion activities on this theme are developed and based on data that reflect reality and assist in identifying effective interventions^{8,12} is that this study was proposed.

The present study aimed identifying the prevalence of alcohol consumption and associated to binge drinking among academic of health area of a higher education institution.

■ METHODS

This research was approved by the Ethics Committee in Research of the State University of Montes Claros (Unimontes), by Opinion No. 2100/2010 and all participants signed an informed consent.

This is an analytical cross-sectional study conducted in the city of Montes Claros, located in the north of Minas Gerais, which has a population of approximately 385 000 inhabitants¹³ and is the main urban and university center of the region.

The survey was conducted at an institution of higher education with the participation of academics enrolled in graduate courses of Biological Sciences, Biomedicine, Nursing, Pharmacy and Psychology.

In the period of data collection in 2011, the archives of this institution showed a total of 1,267 students in those courses. A stratified random sampling was performed. The number of subjects was determined by calculation of 295, assuming a 50% of prevalence of the event and admmiting an error of 5%.

The instrument for data collection was formed closed with multiple choice questions in fixed and predetermined categories questions, based on the Alcohol Use Disorders Identification Test (AUDIT), a questionnaire developed by the World Health Organization with the tracing instrument for classifying alcohol¹⁴. There was made up also questions about sociodemographic profile and other that

addressed the damage that alcohol can bring to the academic and life in general. These issues include risk situations in traffic, involvement in fights and situations outside the law, beyond the absence and / or poor performance in activities of School¹⁵.

Although the AUDIT is a tool universally accepted and applied, it does not allow detailing on the quantity and quality (distilled or fermented) of alcoholic drinks consumed, and thus does not reach the desired accuracy when data collection is conducted by self-administered questionnaire the case study. From the information collected, those involved in the study were classified as users or not and as practitioners or not of binge drinking.

The dependent variable was determined using binge drinking by five or more alcoholic drinks shots (beer, wine and / or spirits) on a single occasion⁹, and this variable was dichotomized as yes or no. The independent variables were grouped into sociodemographic aspects and situations of risk or undesirable events after use of alcohol (contained in the two instruments for data collection), and analyzed for frequency and later categorized into yes and no.

Statistical analyzes were performed using the software SPSS[®] version 18.0 for Windows. After descriptive analysis, the association between binge drinking and the independent variables was investigated by bivariate analysis using Pearson's chi-square. At this stage, the variables with $p < 0,20$ were included in multivariate analysis that was performed by logistic regression. For the adjusted analysis we adopted a significance level of 95%, keeping the variables associated with $p < 0.05$ in the final model.

■ RESULTS

The sample was composed by 295 students distributed between the first and the tenth semester of existing courses within the institution. The response rate was 97,3% (287). The participation of several courses was given in proportion to the number of students properly enrolled in each, according to data presented in Table 1.

Regarding the profile of students, there were a higher prevalence of females 211 (73,5%); age group 18-25 years old 226 (79,0%); resided with family 189 (66,0%) and reported as Catholics 194 (67,6%).

Table 1 shows the prevalence of regular alcohol consumption among academics. As for the use on various days of the week, beer consumption was more common compared to spirits and wine. Regarding use about 1 and 3 times a week, also the highest frequency was for the consumption of beer.

Table 1 - Main types and frequency of beverages consumed by students of courses of health of a private institution of higher education in the north of the state of Minas Gerais – Brazil, 2011 (N=287).

Beverage	N	%
Beer		
More than 3 times a week	38	13,2
1-3 times per week	109	38,0
1 time per year or less	35	12,2
Don't drink	105	36,6
Wine		
Several days of the week	7	2,4
1-3 times per week	73	25,4
1 time per year or less	135	47,0
Don't drink	72	25,1
Distilled		
Several days of the week	9	3,1
1-3 times per week	83	28,9
1 time per year or less	66	23,0
Don't drink	129	44,9

The main risk situations and undesirable events in which students were involved after consuming alcohol, are in Table 2. It was observed that 54 of the students (18,9%) drove vehicle after drinking; 6 (2,0%) were involved in traffic accidents; 54 (18,8%) did not attend the activities of the educational institution; 24 (8,4%) had low academic performance ratings and 32 (11,2%) were involved in fights or events outside the law.

Table 3 shows the association between sociodemographic variables, variables related

to hazards and adverse events in the practice of binge drinking. According to the bivariate analysis it is observed that binge drinking was significantly associated with gender, type of religion, the fact of driving after drinking, did not attend the activities of the educational institution, the low performance in academic evaluations and involvement in fights or outlaw events. There was no significant association between the practice of binge drinking and the variables: age, origin, time of travel, place of residence and involvement in traffic accidents.

Table 2 - Risk situations or undesirable events after the consumption of alcohol among students of courses of health of a private institution of higher education in the north of the state of Minas Gerais – Brazil, 2011 (N=287).

Risk situations or undesirable events	N	%
Driving after drinking		
More than once in the past two months	20	7,0
Only once in the last two months	14	4,9
Happened but not recently	20	7,0
Never	233	81,1
Involvement in traffic accidents		
More than once in the past two months	1	0,3
More than once in the past two months	2	0,7
Happened but not recently	3	1,0
Never	281	98,0
Do not attend to the activities of the educational institution		
More than once in the past two months	12	4,2
More than once in the past two months	13	4,5
Happened but not recently	29	10,1
Never	233	81,2
Poor performance in academic assessments		
More than once in the past two months	2	0,8
More than once in the past two months	7	2,4
Happened but not recently	15	5,2
Never	263	91,6
Involvement in fights or events outside the law		
More than once in the past two months	1	0,4
More than once in the past two months	5	1,7
Happened but not recently	26	9,1
Never	255	88,8

Table 4 presents adjusted for factors associated with the practice of binge drinking among students in the health model. For this table is presented only variables that remained significantly associated ($p < 0,05$) in the multivariate analysis.

The practice of binge drinking remained statistically associated with variables - gender, type of religion, not attending activities at the institution and

involvement in fights or events outside the law. Also the practice of binge drinking was higher among men; among those with another religion; among those who often do not attend to academic activities; among those with low academic performance ratings and among those who reported involvement in fights or events outside the law.

Table 3 - Association between studied variables and practice of binge drinking among students of health courses of a private institution for higher education in the north of the state of Minas Gerais – Brazil, 2011 (N=287).

<i>Profile variables</i>	<i>Binge Drinking</i>				<i>P value*</i>
	<i>No</i>		<i>Yes</i>		
	<i>n</i>	<i>%</i>	<i>N</i>	<i>%</i>	
Gender					
Male	50	20,6	26	59,1	0,00
Female	193	79,4	18	40,9	
Age					
Younger than 25 years old	190	78,2	36	81,8	0,58
25 or older	53	21,8	8	18,2	
Origin					
Montes Claros	146	60,1	28	63,6	0,65
Other	97	39,9	16	36,4	
Semester					
>4 th	127	60,2	17	45,9	0,10
<4 th	84	39,8	20	54,1	
Residence					
Family	164	67,5	25	56,8	0,17
Other	79	32,5	19	43,2	
Religion					
Other	79	33,3	5	12,2	0,00
Catholic	158	66,7	36	87,8	
<i>Risk situations and Undesirable Events</i>					
Driving after drinking					
No	210	86,4	23	52,3	0,00
Yes	33	13,6	21	47,7	
Involvement in traffic accidents					
No	238	97,9	42	95,5	0,32
Yes	5	2,1	2	4,5	
Do not attend to the activities of the educational institution					
No	213	87,7	20	45,5	0,00
Yes	30	12,3	24	54,5	
Poor performance in academic assessments					
No	233	95,9	30	68,2	0,00
Yes	10	4,1	14	31,8	
Involvement in fights or events outside the law					
No	229	94,2	29	65,9	0,00
Yes	14	5,8	15	34,1	

*p value - derived from the Chi-square test.

Table 4 - Adjusted model of the factors associated with binge drinking among students of courses of health of a private institution of higher education in the north of the state of Minas Gerais – Brazil, 2011 (N=287).

Independent Variable	OR adjusted*	IC 95%**	P value ***
Gender			
Female	1		
Male	3,172	2,13-6,74	0,00
Religion			
Catholic	1		
Other	4,323	1,38-13,51	0,01
Do not attend to the activities of the educational institution			
No	1		
Yes	3,152	1,28-7,72	0,01
Poor performance in academic assessments			
No	1		
Yes	4,453	1,45-13,66	0,00
Involvement in fights or events outside the law			
No	1		
Yes	2,681	1,08-8,14	0,05

*OR-Odds Ratio** IC- Confidence interval *** p value - derived from the logistic regression with test Odds Ratio

■ DISCUSSION

This investigation has known prevalence of alcohol consumption among students in the health area of an institution for higher education and also shows the prevalence and factors associated with binge drinking, identifying the harm that this behavior may pose to academic life.

In this study 135 students (74,9%) reported use of alcohol, regardless of the frequency or type of drink, while 25,1% assured never having drunk. Study with academics of health studies in Montes Claros - MG⁸ showed that 71,5% of students ingest alcoholic beverages, namely, consumption was slightly lower than that observed in the present investigation. On the other hand, a study conducted in Campinas¹⁶ identified that 82,6% of a sample of college students from various areas had already consumed alcohol. Other research on the prevalence of alcohol consumption, involving scholars in the field of Biological Sciences of the Public University of São Paulo-USP showed that 84,7% of these had used alcohol in the past 12 months¹⁷. Also in a study among students of Psychology in Vitoria, Espírito Santo indicated that 85,07% of respondents had used alcohol throughout life¹⁸. In the last three studies presented are observed higher rates of consumption at identified in this investigation. It is noteworthy that, according to IBGE (2013), these

municipalities have the Human Development Index (HDI) high (Montes Claros-MG 0.770) and very high (Campinas-SP, São Paulo-SP 0.805) to the national averages.

For students of the areas of Biological and Health Sciences, the practice of binge drinking deserves emphasis, since these future professionals will be responsible for disseminating knowledge and providing care to the population. This issue is of concern, as they may become dependent in relation to the abuse of alcohol and drugs, causing interference in the ability to providing adequate care to their clients¹⁶.

The abuse of alcohol has been responsible for adverse consequences, such as heart and cerebrovascular diseases, fatal events and psychiatric disorders that are increasingly common among young⁴, especially among college students, as evidenced by the cited studies that showed high consumption of the substance in all higher education institutions investigated. The high rate of alcohol use among college students can be related to the permissive environment of universities. In addition, the University gives students the first opportunity to be part of a large group of peers without family supervision. This makes them more vulnerable to hitherto forbidden experiments and even illegal¹⁰.

Regarding the problem of drinking, ie the practice of binge drinking, it was identified from 44 students

(15,3%) in this study. In research conducted with students from various courses in southern Brazil, the problematic drinking was observed among 67,8% of students who reported having consumed six or more shots of alcohol on a single occasion, and episodes of binge drinking occurred monthly between 20% of university - a higher percentage than that found in the present investigation. In this study, the prevalence of heavy episodic drinking was also lower than that of the First National Survey on Alcohol Use among College, which identified that percentage ranged from 29,0% to 43,7%¹⁹.

As for heavy episodic consumption in relation to gender, this study revealed that binge drinking was higher among male students (OR = 3.172). This result is in agreement with what is culturally expected, being common and socially accepted that men drink more than women. In a national survey that sought to verify the consumption of alcohol and other drugs among college students in Brazil, it was found that men drink more and in greater quantities than women, but also showed an increasing trend in smoking among women¹⁹. Also, another research university with a public university of Montes Claros-MG showed that binge drinking was higher among men, corroborating the findings of this research¹⁰.

The vulnerability of students in the area of health by alcohol abuse, even with greater access to information, study²⁰ shows that despite its deductible knowledge about the effects of alcohol and other drugs, consume these drugs in proportions similar to those of young of the same age in the population in general. These students develop the belief that they will be able to control problems that may arise from the misuse of alcohol and other drugs²¹. This is a critical situation, because they can become dependent on or abuse of alcohol professionals, what can safely generate personal, professional and social issues.

It should argue that health professionals are often identified as models of behavior in relation to prevention and health promotion and can have negative impacts on the communities where they operate². By assuming a negligent conduct with their own health, the professional can stimulate, even if unintentionally, the population also take this kind of behavior as something suitable in relation to health.

Importantly, among the many harms of alcohol abuse highlights the association with other drugs⁵ that are also used in general, but are particularly common among students in the field of health; often the ease of prescribing and access, contributing to the involvement of these students in situations that offer health risk^{20,21}.

Among the situations of risk and harm related to alcohol use involving students is emphasized that this behavior can impair academic and social life of these young people. The use of alcohol can promote awkward postures, such as the adoption of unprotected sexual behavior with increased risk of contracting sexually transmitted diseases (STDs) and unwanted pregnancy⁷, and greater involvement in fights and trouble with the law. In this study, students showed a chance of 2.86 engaging in fights or trouble with the law in regard to the chances of those who do not practice binge drinking. A similar situation was also observed in a study conducted in Montes Claros-MG among healthcare students at a public university. In research identified a greater chance of student binge drinking practices to engage in fights and trouble with the law when compared to those who did not adopt this practice⁸.

Regarding the relationship of alcohol abuse and car accidents, studies indicate that abuse is the main factor associated with traffic accidents, because it hinders the quick decisions to cause numbness of psychomotor skills^{10,22,23}. In this study it was not possible to demonstrate a statistically significant association between binge drinking and increased accident involvement ($p = 0.32$). This could perhaps be explained by the low number of students who have their own car, but this variable was not investigated in this study.

It was observed also in this investigation, that among those youths who practiced binge drinking showed greater impairment in academic activities (OR = 3.152) and more absences in the activities of the educational institution (OR = 4.453), demonstrating that episodic and heavy drinking can interfere with commitment and academic achievement, and contribute to the training of professionals ready to provide less health care. In a previous study among students of health such association had been detected, ie, it was found that students who engaged in binge drinking were more likely to have low performance and is absent in most academic activity⁸.

On the other hand, there are some factors that act as protective as the use of alcohol, and one of them is to integrate religious groups. The literature has shown that practitioners of any religion use less alcohol and generally do not practice binge drinking and therefore do not develop substance dependence^{10,17,24}. A similar situation was observed in this investigation to verify that the chance to practice binge drinking was 4.3 times higher than that among students who had no religion or did not manifest as Catholics.

■ CONCLUSION

The study showed high prevalence of alcohol consumption among students of the health area, highlighting the psychology students, with the highest consumption. The practice of binge drinking was associated with male sex and non-Catholic religion. As the costs to academic life problematic drinking was associated with failure to attend school activity, low performance ratings involvement in fights or events outside the law. This situation highlights the negative impact of alcohol use among students in the area of health.

Studies with different designs must be conducted in order to enable more specific analyzes of binge drinking. Researches with this approach, beyond

finding high rates of alcohol use and occurrence of alcoholism, makes possible to identify similarities and differences between students of various courses of health in relation to alcohol intake.

It is hoped that the results of this study allow the formulation of public policies for the promotion and prevention of alcohol abuse (and other drugs) in the academic field; strengthen existing programs to support users of alcoholic beverages; stimulate the creation of spaces at the university where they can discuss relevant to the habit of consuming alcohol issues. Furthermore, it is expected to encourage the development of similar research in other courses, ever deeper, university community in order to expand the knowledge about the behavior of students who pose a threat to individual and collective health to make use of alcoholic beverages.

RESUMO

Objetivo: identificar a prevalência do consumo de álcool e a de fatores associados ao *binge drinking* entre acadêmicos da saúde de uma instituição de ensino superior. **Métodos:** trata-se de uma pesquisa transversal e analítica, cujo instrumento de coleta foi baseado no *Alcohol Use Disorders Identification Test*. A associação entre o *binge drinking* e demais variáveis foi investigada pela análise bivariada e Regressão Logística. **Resultados:** a prevalência de uso de álcool foi de 135 estudantes (74,9%) e do *binge drinking* foi de 44 (15,3%). O *binge drinking* foi associado ao sexo masculino e ao tipo de religião. Quanto aos prejuízos para a vida acadêmica, o beber problemático esteve associado às faltas escolares, ao baixo desempenho em avaliações, ao envolvimento em brigas ou eventos fora da lei. **Conclusão:** houve alta prevalência de consumo de álcool e prejuízos relativos ao desempenho acadêmico estiveram associados ao *binge drinking*.

DESCRIPTORIOS: Alcoolismo; Estudantes de Ciências da Saúde; Bebedeira; População em Risco; Transtornos Relacionados ao Uso de Álcool

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