

Alcohol consumption by medical students

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SUMMARY

OBJECTIVE: Excessive alcohol consumption is a global health issue. This article aims to evaluate the consumption of alcohol by medical students in relation to their personal and social aspects.

METHODS: This study was conducted with students in the first, third, and sixth year of medical school at the Federal University of Minas Gerais in 2019. Students were invited to participate anonymously by responding to a questionnaire with 15 questions regarding student characteristics (gender, age, family income, physical activity, origin, housing condition, and academic performance) and alcohol consumption (onset, reason, occasions of use, type of drink, amount consumed). Data were compared with significance corresponding to $p < 0.05$.

RESULTS: A sample of 382 students of both sexes responded to the questionnaire. Alcohol consumption was reported by 85% of students. About 70% of first and third-year students and 47% of those of the sixth year were motivated by socializing with peers. Alcohol consumption was prevalent among those who practice physical activities (93%) and live with their families (89%). Around 80% had consumed alcohol before starting medical school, and consumption was more frequent in males.

CONCLUSIONS: Alcohol consumption begins during high school, stimulated by socialization. Men who practice physical activities and live with their families are the largest consumers.

KEYWORDS: Alcoholism. Students, medical. Family. Socialization. Academic performance. Physical activity.

INTRODUCTION

The growing use of psychotropic substances is a serious public health problem¹. These substances that are present in the life of most social groups include natural or synthetic products, which act on the central nervous system and alter its function, causing variations in consciousness and behavior². Among them, alcoholic beverages are noteworthy, since due to being licit and socially accepted drugs, they are widespread. In Brazil, alcohol is the drug most consumed by young people, followed by tobacco, marijuana, and mental stimulants³.

With respect to students of medicine, despite their extensive knowledge about the harmful effects of alcohol⁴, there is high consumption of alcoholic beverages among them, with a likely negative impact on their intellectual performance and, possibly, future professional practice⁴⁻⁶. Such consumption may have negative social, economic, and cognitive impacts, leading to the use of other drugs and hindering educational activities⁷. Evaluating alcoholism among medical students is essential to analyze the quality of student's life based on their physical

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health, emotional state, personal conduct, and social relationships⁸.

The goal of this study was to evaluate the consumption of alcoholic beverages by medical students and assess its associated factors.

METHODS

This study was approved by the Human Research Ethics Committee of the Federal University of Minas Gerais (UFMG), under case CAAE - 01912118.3.0000.5149; Opinion No. 3,113,455 and carried out at the Faculty of Medicine of UFMG in 2019.

Medical students of 1st, 3rd, and 6th years were informed publicly about the purpose of the study and invited to voluntarily participate, anonymously and with secrecy concerning the identification of those who accepted to be part of it. After signing the informed consent, 400 students of the 1st, 3rd, and 6th years received a self-administered questionnaire consisting of 15 questions relating to their personal characteristics (gender, age, family income, practice of physical activities, origin, housing conditions, and student performance) and consumption of alcoholic beverages (beginning, motivation, occasions in which it is consumed and quantity consumed).

Statistical analysis was performed using the Epi Info *software* version 7.2.2.6 and PASW Statistics 18. The comparison of the means was done by Student's t-test, and the proportions were evaluated using the chi-square test. Differences were considered significant for values of $p < 0.05$.

RESULTS

Of the 400 questionnaires distributed to the medical students of the UFMG, 382 (96%) were considered valid, and the respondents were 51% female and 49% male (Table 1). The most frequent age was in the range between 21 and 24 years (51%), followed by 17 to 20 years (31%), and 25 to 30 years (17%). At the time of the survey, 167 (44%) were in the 1st year, 109 (29%) in the 3rd year, and 106 (28%) in the 6th year (Table 1).

The motivation for alcoholism for 70% of the students of the 1st and 3rd years was socializing with friends and colleagues, while only 47% of the 6th year students had the same motivation. The consumption of alcoholic beverages prior to admission in college

was reported by 80% of the students of both sexes, of which 46% were influenced by friends outside of college (Table 2).

The practice of physical activity was reported by 87% of the students, of which 27% exercised at least three times a week, which showed a significant association with alcohol consumption (OR=4.33; CI=1.58-11.83; $p=0.024$). Alcohol consumption was declared by 76% of the students who reported not practicing regular physical activity, by 81.9% of those who reported practicing it only once a week, by 83.1% of those who practiced it two or three times per week, and by 93.2% of those who reported practicing it more than three times a week.

TABLE 1. CHARACTERIZATION OF THE SAMPLE ACCORDING TO THE CHARACTERISTICS ADDRESSED BY THE QUESTIONNAIRE (N=382).

Characteristics	Sample	
	n	%
Sex		
Male	188	49.2
Female	194	50.8
Total	382	
Age (years)		
17-20	117	30.6
21-24	196	51.3
Over 25	69	18.1
Study Cycle		
Basic	167	43.7
Clinical	109	28.5
Practical	106	27.7
Income		
Up to 3 minimum wages	46	12.0
Between 3 and 10 minimum wages	167	43.7
Over 10 minimum wages	168	44.0
Practice of physical activities		
Never	50	13.1
Rarely (once a week)	105	27.5
Frequently (2-3 times/week)	124	32.5
Always (over 3 times/week)	103	27.0
Housing		
With family	197	51.6
Without family	185	48.4
Origin		
Belo Horizonte	176	46.1
Interior of the state of Minas Gerais	129	33.8
Other states	77	20.2
Academic performance		
Between 40% and 60%	4	1.0
Between 60% and 80%	171	44.8
Above 80%	207	54.2

With regard to sex, 86.2% of men and 83% of women reported consuming alcohol ($p=0.39$). Alcoholism was more present among men, with 68% consuming more than 700 ml of beer (Figure 1), compared with 49% of women (OR=2.26; CI=1.38-3.69; $p=0.001$). The weekly consumption for 34% of men was over two times, compared with 24% of women (OR=1.62; CI=1.03-2.53; $p=0.044$).

Regarding the presence of family members in the daily life of students, 80.2% of those who claimed to live with family members and 89.2% of those who do not live with them consume alcohol (OR=0.49; CI=0.28-0.88; $p=0.022$).

There was no significant association between the origin ($p=0.064$), income ($p=0.13$), and students'

performance ($p=0.13$) with the consumption of alcoholic beverages.

DISCUSSION

College students are a particular group in terms of the consumption of alcoholic beverages. Factors such as increased independence, reduction of parental supervision, greater social contact with people of the same age, and social acceptance of alcoholism contributed to its increased consumption in this study, with a tendency of abuse^{9,10}. Is possible to observe that, unlike one would imagine, the independence of students while away from family life brings greater responsibility, thus reducing the consumption of alcoholic beverages in comparison with students who live with their families.

According to the First National Survey on the Patterns of Alcohol Consumption in the Brazilian Population, published by the National Anti-Drug Secretariat in 2007, men consume alcoholic beverages in greater volume and with more frequency, as was observed in this study¹¹. However, it is worth noting that, even though their consumption is lower, women are more vulnerable to diseases caused or triggered by alcoholism, particularly since the consumption of alcoholic beverages is increasing among females^{12,13}.

Surprisingly, most alcoholics practiced routine physical activities (Figure 2), in contrast with what is found in the literature, which associates alcoholism with other behaviors that are harmful to health and multiple diseases¹⁴⁻¹⁶. It is also considered that the practice of sports prevents alcoholism¹⁷. However, there are studies that indicate greater alcohol consumption among athlete students, due to the pressure

TABLE 2. CHARACTERIZATION OF THE SAMPLE ACCORDING TO THE CONSUMPTION OF ALCOHOL (N=382).

Characteristics	Sample	
	n	%
Alcohol consumption		
No consumption	59	15.4
Up to once a week	214	56.0
Between 1 and 3 times/week	98	25.7
Over 3 times/week	11	2.9
Beginning of consumption		
Before the start of the program	261	80.3
During the first year of the program	53	16.3
On the other years of the program	11	3.4
Reason for consumption		
Fun	221	68.0
Socialization	205	63.1
Relax	155	47.7
Taste	126	38.8
Escape	40	12.3
Occasions in which consumption occurs		
Social events	285	87.7
Meals	79	24.3
At home with relatives	108	33.2
At home alone	54	16.6
Amount consumed per occasion		
1 can of beer (350mL) or equivalent	33	10.2
2 cans of beer (700mL) or equivalent	68	21.0
Over 2 cans of beer (700mL) ^a	222	68.7
Who stimulated consumption initially		
Friends	147	45.5
Program peers	66	20.4
Family	41	12.7
Partner	11	3.4
Idol	5	1.5

^a or equivalent

FIGURE 1. AMOUNT OF ALCOHOLIC BEVERAGES (ML) CONSUMED ON EACH OCCASION BY 382 STUDENTS OF THE FACULTY OF MEDICINE OF UFMG, ACCORDING TO GENDER, MALE (M) AND FEMALES (F). (N = 382).

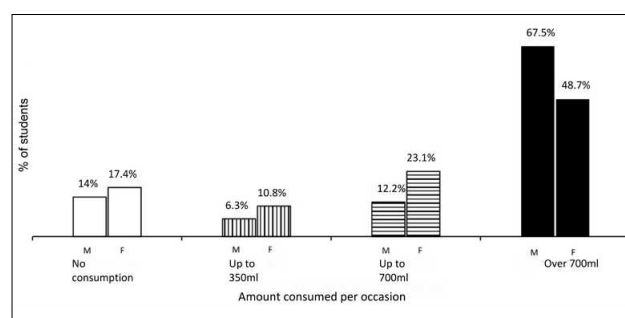
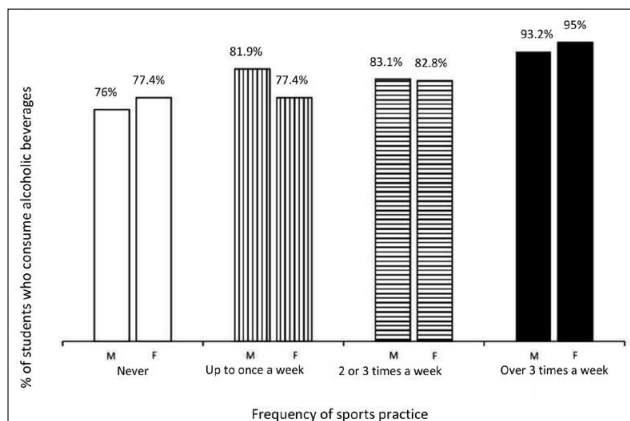


FIGURE 2. CONSUMPTION OF ALCOHOLIC BEVERAGES, BASED ON THE FREQUENCY OF SPORTS PRACTICE, BY 382 STUDENTS OF THE FACULTY OF MEDICINE OF UFMG, MALE (M), FEMALE (F).

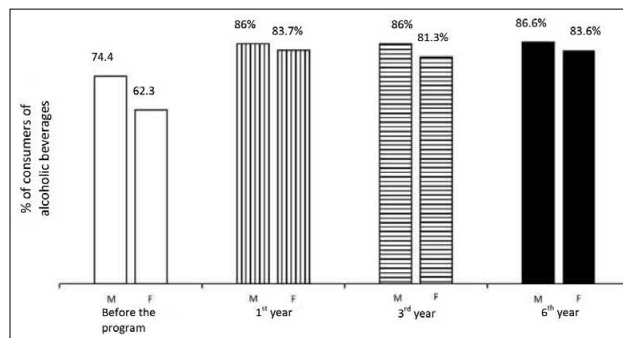


suffered regarding their academic and sports performance¹⁸. There is still the false belief that alcohol relieves stress. In university parties, with emphasis on those that are sports-related, there is, in general, wide availability of free alcoholic beverages, facilitating the onset or maintenance of this addiction¹⁹.

Alcohol is the most consumed drug worldwide among the adult population, who, for considering it of low risk, do not abstain from consuming it, which makes its use excessive in countries where alcoholism is cultural^{20,21}. In our environment, the beginning of alcoholic drink consumption has been observed in increasingly younger ages, which was confirmed in this study, and a large proportion of students started alcoholism before entering university²².

In this study, no variation in alcohol consumption was found between students' years (Figure 3), in contrast with other studies from the health area, in which the consumption decreased near graduation²³. In

FIGURE 3. PERCENTAGE OF 382 STUDENTS FROM THE FACULTY OF MEDICINE OF UFMG, MALE (M) AND FEMALES (F) WHO CONSUMED ALCOHOLIC BEVERAGES BEFORE AND DURING THE PROGRAM.



addition, there was no significant variation in alcohol consumption regarding the origin, family income, and the academic performance of students, differing from the results of other studies involving students^{24,25}.

CONCLUSIONS

The consumption of alcoholic beverages by medical students is motivated by the need to socialize, especially in the first years of study. Men who practice physical activities routinely and live with their families are the most alcoholic.

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RESUMO

OBJETIVO: O consumo excessivo de álcool é um problema de saúde presente no mundo inteiro. Este artigo avalia o consumo de bebidas alcoólicas por estudantes de Medicina e sua relação com características pessoais e aspectos sociais.

MÉTODOS: Estudo realizado com estudantes dos 1^o, 3^o e 6^o anos do curso de medicina da Universidade Federal de Minas Gerais no ano de 2019. Os alunos foram convidados a participar anonimamente, respondendo a um questionário com 15 perguntas relativas a características do estudante (sexo, idade, renda familiar, prática de atividades físicas, origem, condição de moradia e desempenho discente) e ao consumo de bebidas alcoólicas (início, motivo, ocasiões de uso, tipo de bebida, quantidade consumida). Os dados foram comparados com significância correspondente a $p < 0,05$.

RESULTADOS: Um total de 382 estudantes de ambos os sexos respondeu ao questionário. O consumo de bebidas alcoólicas foi relatado por 85% dos entrevistados. Cerca de 70% dos alunos de 1^o e 3^o anos e 47% dos alunos do 6^o ano foram motivados pela socialização com colegas. O consumo de bebida alcoólica foi prevalente entre os que praticavam atividades físicas (93%) e moravam com a família (89%). Ao redor de 80% consumiram bebidas alcoólicas antes do ingresso na faculdade, com maior frequência no sexo masculino.

CONCLUSÕES: O consumo de álcool começa durante o ensino médio, estimulado pela socialização. Os homens que praticam atividades físicas e moram com a família são os maiores consumidores.

PALAVRAS-CHAVE: Alcoolismo. Estudantes de medicina. Família. Socialização. Desempenho acadêmico. Atividade física.

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