ALCOHOL CONSUMPTION AND ACADEMIC PERFORMANCE OF STUDENTS IN THE INITIAL YEARS OF NURSING GRADUATION

CONSUMO DE ÁLCOOL E DESEMPENHO ACADÊMICO DE ALUNOS DOS ANOS INICIAIS DA GRADUAÇÃO EM ENFERMAGEM

CONSUMO DE ALCOHOL Y DESEMPEÑO ACADÉMICO DE ESTUDIANTES DE LOS PRIMEROS AÑOS DE ENFERMERÍA

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ABSTRACT

Objective: to describe alcohol consumption in the students in the initial years of Nursing graduation and to analyze whether there is a relationship between such consumption and academic performance in this group. **Method:** cross-sectional, a quantitative study carried out with 121 students from a university. The test was used to identify problems related to alcohol use (AUDIT) and the student's self-report about his academic performance. **Results:** students who lived with friends drank more than those who lived with family members or alone. Academic performance was similar between abstainers and those who consumed alcohol. **Conclusion:** students in the initial years of graduation had specific characteristics, such as a high percentage of abstainers and/or low-risk consumers, consumption that did not affect academic performance, but was influenced by the people with whom they lived. Thus, prevention approaches sensitive to the specific characteristics of each subgroup are recommended.

Keywords: Alcoholic Beverages; Alcohol Drinking; Alcohol Drinking in College; Education, Nursing; Students, Nursing; Academic Performance; Universities.

RESUMO

Objetivo: *descrever o consumo de álcool entre os estudantes dos anos iniciais da graduação de Enfermagem e analisar se há relação entre tal consumo e o desempenho acadêmico nesse grupo.* ***Método:*** *estudo transversal, quantitativo realizado com 121 estudantes de uma universidade. Utilizaram-se o teste para identificação de problemas relacionados ao uso de álcool (AUDIT) e autorrelato do estudante sobre seu desempenho acadêmico.* ***Resultados:*** *os estudantes que moravam com os amigos bebiam mais do que aqueles que moravam com familiares ou sozinhos. O desempenho acadêmico foi semelhante entre os participantes abstêmios e os que consumiam álcool.* ***Conclusão:*** *os estudantes dos anos iniciais da graduação apresentaram características específicas, como: alto percentual de abstêmios e/ou consumidores de baixo risco, consumo que não afetava o desempenho acadêmico, porém influenciado pelas pessoas com quem moravam. Assim, recomendam-se abordagens de prevenção sensíveis às características específicas de cada subgrupo.*

Palavras-chave: *Bebidas Alcoólicas; Consumo de Bebidas Alcoólicas; Consumo de Álcool na Faculdade; Educação em Enfermagem; Estudantes de Enfermagem; Desempenho Acadêmico; Universidades.*

RESUMEN

Objetivo: *describir el consumo de alcohol entre estudiantes en los primeros años de graduación en enfermería y analizar si existe relación entre dicho consumo y el rendimiento académico en este grupo.* ***Método:*** *estudio transversal, cuantitativo, realizado con 121 estudiantes de una universidad. La prueba se utilizó para identificar problemas relacionados con el consumo de alcohol (AUDIT) y el autoinforme del estudiante sobre su desempeño académico.* ***Resultados:*** *los estudiantes que vivían con amigos bebían más que los que vivían con familiares o solos. El rendimiento académico fue similar entre los abstemios y los que consumían alcohol.* ***Conclusión:*** *los estudiantes en los primeros años de graduación tenían características específicas, tales como: alto porcentaje de abstenciones y / o consumidores de bajo riesgo, consumo que no afectaba el rendimiento académico, pero influenciado por las personas con las que convivían. Por tanto, se recomiendan enfoques de prevención sensibles a las características específicas de cada subgrupo.*

Palabras clave: *Bebidas Alcohólicas; Consumo de Bebidas Alcohólicas; Consumo de Alcohol en la Universidad; Educación en Enfermería; Estudiantes de Enfermería; Rendimiento Académico; Universidades.*

INTRODUCTION

Entering the university brings countless insecurities that make experimentation or the recurrent consumption of alcoholic beverages among students feasible. Previous studies have identified the graduation period as an important determinant for the beginning and/or continuities of this entire process.[1,2] The main predictors of alcohol use in this context are acceptance of consumption, availability of this substance, and susceptibility to stress in the university environment, factors that contribute to the high prevalence of substance use in this population.[3-5]

The abusive use of alcohol in university students has been associated with risky sexual behavior, car accidents, violence, distractions and academic losses, stress, decreased cognition, health problems, and, above all, interference in academic life.[6-8]

Several previous studies have highlighted unsatisfactory academic performance with greater consumption of alcoholic beverages.[9-12] Such results have been evidenced among university students in the area of Humanities and Biological Sciences.[11,13-16] Regarding Nursing students, studies reveal a negative relationship between alcohol consumption and academic performance.[11,12,14] However, such evidence did not focus on students in the initial years of the graduation course. The year of entry into the university is highlighted by new experiences that favor experimentation or increased consumption of this substance.

Given the above, alcohol consumption in students in the initial years of graduation may have specific characteristics. Therefore, it is necessary to identify whether such consumption also has repercussions on the academic performance of this group.

Thus, this study aims to describe alcohol consumption among students in the initial years of the Nursing graduation course and to analyze whether there is a relationship between such consumption and academic performance in this group.

METHOD

Study type and location

This is quantitative cross-sectional research carried out on the campus of a public university in the interior of the state of *São Paulo*. The campus promotes Nursing Undergraduate and Graduate courses with an average of four and five years respectively, and the annual vacancies correspond to 80 full-time and 50 in the evening/afternoon shifts.

Population and sample

The participants were students from the first and second years of the Nursing courses at that university. During the study, the total number of students studying Nursing was 591.

The type of sample adopted was convenience sampling. The eligibility criteria were students enrolled in the initial years of the graduate Nursing courses (first and second years = 240 students), over 18 years old (92%). We invited all eligible individuals (N = 221) to participate in the study, with 121 students in the final sample. The invitation to participate in the study was made either in person or by written invitation delivered to the aforementioned students in the classrooms, with prior authorization from the professor, or at other school areas during break times.

Data collection

Data collection was carried out from April 24, 2019, to June 6, 2019. The authors prepared a socio-demographic questionnaire considering the minimum indicators described by the IBGE,[17]: age, income, composition family, color, and gender.

Academic performance was measured based on the student's self-report on academic performance based on a numerical scale from zero to 10. We chose this collection technique based on the positive results of studies that explored emotional intelligence using self-report scales as a subjective measure of academic performance.[18,19] Also, authors who assessed academic performance by reporting the grades of the subjects suggested that future research should also include the student's perception of their academic performance.[14,20] Therefore, we used self-report for encompassing students' self-knowledge and insight into the scope of their skills.

To obtain information on alcohol consumption, we used the Alcohol Use Disorder Identification Test (AUDIT). It is an instrument developed by the World Health Organization (WHO).[21] It consists of 10 questions and its main objective is to identify possible cases of alcohol addiction. The translation and validation of the instrument have already been carried out in Brazil.[22] The questions refer to the last 12 months, with the first three focusing on the quantity and frequency

of regular or occasional use of alcohol, the next three questions investigate symptoms dependence and the last four refer to current problems related to alcohol consumption. The variation in the score is from zero to 40 and its score can be performed in many ways. However, four scores are currently proposed for the AUDIT, which may or may not suggest a brief intervention, inserted in primary health care and aimed at health professionals. Therefore, the score classification would be: 0 to 7 points - low risk of consumption or abstainers; 8 to 15 points: risky consumption; 16 to 19 points: harmful use or high-risk consumption; 20 points or more (maximum 40 points): probable dependence.[23]

Three Nursing students monitored data collection (two graduate students and a doctoral student) previously trained to answer questions regarding the use of self-administered instruments. Students who chose to participate in the research were given the Informed Consent Form (ICF) and the instruments (sociodemographic questionnaire, self-report of academic performance, and the AUDIT). The participants filled out the instruments in the classroom at times that did not interfere with academic activities, in agreement with the participants and professors. After filling in, the instruments were delivered to the researchers in an envelope without identification to ensure the anonymity of the participants.

Data analysis

The data obtained were tabulated in an Excel for Windows spreadsheet and entered twice by the researchers involved to validate the data entered and obtain other reliable ones, free of errors. After this first step, the data were transported to a definitive database in the IBM® SPSS software, version 23.0, in which the analyzes were carried out.

At first, we characterized the profile of the participants, with the description of the sociodemographic data of the study population using descriptive statistics, such as simple frequency, measures of central tendency (mean and median), and measures of variability or dispersion (deviation standard, minimum and maximum).

Subsequently, the normality test was performed to know the distribution of the scores of the instruments used. Since the distribution of the analyzed variables was not normal, non-parametric tests were used.

Regarding alcohol consumption, the variables were alcohol use in the last 12 months (yes/no), three or more doses when drinking (yes/no), drinking twice or more a month (yes/no), use in a binge (yes/no), injuries resulting from alcohol use (yes/no) and family concern (yes/no).

To investigate the consumption specificities among students, we used the Mann-Whitney test considering: AUDIT score (dependent variable), gender (female/male), and color (white or yellow/black or brown). The same test was undertaken considering age and income as dependent variables and use in the last 12 months (yes/no) and risk of consumption (yes/no) as independent variables. The Kruskal-Wallis test was used to analyze the difference in the AUDIT scores according to who the student reported living with (family/friends/alone).

To identify the relationship between alcohol use and academic performance, we used Spearman's correlation test between the AUDIT score and academic performance. We also used a new Mann-Whitney test considering the academic performance as a dependent variable and as independent variables the alcohol use in the last 12 months (yes/no), several doses (three or more doses when drinking/, frequency of use), use in a binge (yes/no), injuries resulting from alcohol use (yes/no), family concern (yes/no) and risky consumption (yes/no). In all tests, an alpha of 0.05 was adopted.

The research project was submitted and approved by the Research Ethics Committee of the participating institution, based on Resolution 466/2012, which deals with research involving human beings. All participants signed the Informed Consent Form (ICF).

RESULTS

Of the total of 240 students enrolled in the first and second years of the Nursing course, 19 (7.9%) were excluded for being under 18 and 100 (45.2%) were excluded for refusing the invitation. Most students who refused to participate did not explain the reason and the rest reported a lack of time or participation in other surveys. The average time for self-administered questionnaires was 15 to 20 minutes.

The average age of the participants was 20.1 (SD=2.2), most were female, aged between 18-20 years, old self-declared white/yellow, and lived with friends (Table 1).

Table 1 - Distribution of participants according to sociodemographic characteristics. *Ribeirão Preto*, SP, Brazil, 2019 (n=121)

Characteristics	n (%)
Gender	
Female	103 (85.1)
Male	18 (14.9)
Age group	
18-20 years old	79 (65.8)
21-28 years old	41 (34.2)
Skin color	
White/Yellow	93 (76.9)
Black/Brown	28 (23.1)
Living with	
Family	38 (31.4)
Friends	62 (51.2)
Alone	19 (15.7)
Median	*(Mín-Máx)*
Income (R$)	4.400.0 (1.100-7.000)
Performance	7.0 (3-10)

Most participants reported having consumed alcohol once in their lives (Figure 1). The average AUDIT score in the sample was 5.54 (SD=4.54).
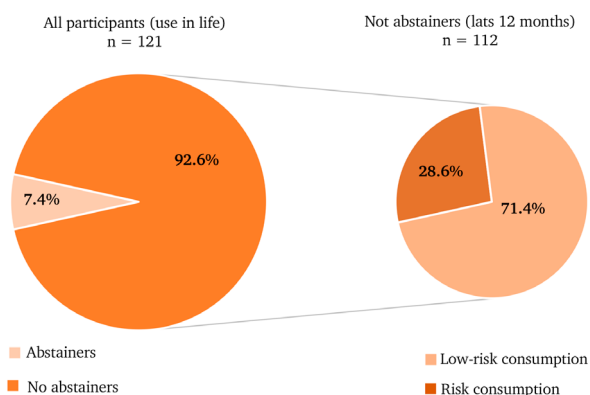

Figure 1 - Distribution of participants according to alcohol consumption. *Ribeirão Preto*, 2019 (n=121)

Most non-abstain students reported taking three doses or more (69.4%) and binge use (57.9%). Despite this, few mentioned injuries (13.2%) or concerns from family members (15.7%) related to such consumption.

Table 2 - Difference in the median of the AUDIT score according to the sociodemographic characteristics of the participants. *Ribeirão Preto*, 2019 (n=121)

Characteristics	n (%)	Rank average	p-value
Gender			0.866
Female	103 (85.1)	61.2	
Male	18 (14.9)	59.7	
Skin color			0.903
White/Yellow	93 (76.9)	59.7	
Black/Brown	28 (23.1)	58.8	
Living with			0.001*
Family	38 (31.4)	45.7	
Friends	62 (51.2)	71.1	
Alone	19 (15.7)	53.4	

* Kruskal-Wallis test.

Table 2 shows the students who reported living with friends with a higher score than those who reported living with family or alone.

According to Table 3, there was no difference in age and income between abstainer students or not in the last 12 months and between risk levels of consumption.

There was a negative and weak correlation (correlation coefficient = -0.162; p = 0.076) between alcohol consumption in the last 12 months and academic performance in the sample studied. Although it was not statistically significant, in practical terms it is characterized as an indicative value.

As can be seen in Table 4, there was no difference in the median of academic performance among students who presented the different consumption characteristics considered in this study.

DISCUSSION

This study aimed to describe the consumption of alcohol among students in the initial years of Nursing graduation and analyze whether there is a relationship between such consumption and academic performance in this group.

The results showed the profile of alcohol consumption of the participants: 84.3% had consumed in the last 12 months. This is a prevalence that corroborates previous studies among university students.[13,15,24]

Binge drinking corresponds to the consumption of five or more doses of alcohol on a single occasion, regardless of whether the individual meets the criteria for dependence.[15] In this study, 57.9% of participants reported this pattern of consumption, a percentage

Table 3 - Difference in age and income between students who reported alcohol consumption in the past 12 months and those who did or did not show risky consumption scores. *Ribeirão Preto*, 2019 (n=121)

	Age			Income		
	n (%)	Rank average	p-value	n (%)	Rank average	p-value
Use in the last 12 months			0.392			0.155
Yes	102 (84.3)	59.7		75 (62.0)	42.1	
No	19 (15.7)	69.9		6 (5.0)	27.9	
Risk consumption			0.439			0.098
Yes	32 (26.4)	56.5		19 (15.7)	48.8	
No	89 (73.6)	62.0		62 (51.2)	38.6	

Table 4 - Difference in the median of academic performance of participants according to the characteristics of alcohol consumption (n=121)

Consumption characteristics	n (%)	Rank average	p-value
Use in the last 12 months			0.475
Yes	102 (84.3)	60.1	
No	19 (15.7)	66.1	
Three or more doses when drinking			0.289
Yes	84 (69.4)	58.8	
No	37 (30.8)	65.9	
Use in binge			0.296
Yes	70 (57.9)	58.3	
No	51 (42.1)	64.8	
Risk consumption			0.158
Yes	32 (26.4)	53.8	
No	89 (73.6)	63.6	
Injuries			0.091
Yes	16 (13.2)	47.3	
No	104 (85.9)	62.5	
Family concern			0.251
Yes	19 (15.7)	52.8	
No	102 (84.3)	62.5	

that converges with the findings of research conducted with university students in the health area.[14,15] Studies report that this pattern of consumption is more prevalent among men.[15,25] The sample of this study was composed mainly of women (85.1%), which possibly influenced the non-significant result when comparing the means between genders and alcohol consumption.

Binge drinking is an important indicator because, even if occasionally, it has the potential to lead the individual into risky situations that may involve health and/or safety. Also, the research found that participants with consumption patterns in binge were 640% more likely to not fulfill academic tasks.[15]

In this sense, we observed in the results that there was a negative correlation between academic performance and alcohol consumption among students. Although it was not statistically significant, in practical terms, the greater the consumption of alcohol, the lower the academic performance.

This relationship between academic performance and alcohol consumption has been a point of discussion that causes a divergence between the different studies. On the one hand, high rates of alcohol consumption have been associated with low academic performance among university students.[10,14] On the other hand, some authors indicate the use of mari-

juana as a predictor of unsatisfactory academic performance.[11-13]

The differences between the results of the research can be due to the metrics used to evaluate them, as well as to some specificities of the studied population. In the case of this study, the characteristic of the students from the initial years of the course possibly influenced the results, since academic performance may not yet have been affected by alcohol consumption. These results could certainly be better evidenced if the sample was larger.

We understand that the use of alcohol can negatively interfere in the indirect factors that contemplate academic performance, such as absences, delays, and drowsiness during class, which do not necessarily reflect in the grades or are considered in the self-report.[10-12,14] Furthermore, the literature mentioned that cognitive damages resulting from alcohol use are identified years after the beginning of continuous abusive consumption during graduation, causing work and social losses after university training.[13-15]

The fact that the use of alcohol among students is common in the university environment, which can have harmful consequences for them and their families, implies the need to investigate the specificities of this consumption to develop specific and, consequently, more effective preventive strategies.

With these specificities, the results indicated that the highest consumption of alcohol occurred among students who lived with friends, suggesting this characteristic as an important risk factor, which converges with previous studies.[8,14,24,25]

Thus, awareness-raising actions must address the dissemination of guidelines related to the importance of moderate use, the risks of escalating consumption, harm reduction strategies, and the containment of other contextual factors that may contribute to the use as a single leisure option or as the main strategy for coping with stress. These strategies need to involve informal leadership in republics, athletic leagues, and social events for the reception of freshmen.

Despite this possible predictor of higher consumption, most participants were low-risk consumers (73.6%). This result reinforces the discussion that a risk factor alone, such as living with friends, does not necessarily imply a worse outcome in alcohol consumption. Thus, the risk factors already evidenced in the literature must be considered together with the complexity of behaviors and their motivations in planning actions, both to promote mental health and to

prevent drug use.[3,4] This reflection corroborates, for example, the aspects considered by AUDIT for the classification of the consumption pattern of the participants, considering the possible social losses from consumption.[21]

The important limitations of this study were the collection of data in a single institution and the convenience sample. The use of self-report as a way of measuring academic performance, although it values the individual's perception stands out as the main limit since the use of other more objective measures such as the weighted average from students' grades, could provide better refinement in the analyzes undertaken.

CONCLUSION

The consumption of alcohol by students of the first years of Nursing graduation, in practical terms, was negatively correlated with academic performance. Also, in specificities, most students lived with friends, being an important risk factor for the increase in alcohol consumption than in those who lived with relatives or alone.

Thus, this study enabled to advance of knowledge towards possible specificities of students in the initial years of the course about alcohol consumption. Considering that this consumption is a multidimensional phenomenon and is directly and indirectly influenced by different factors, we suggest future studies to investigate other possible specificities of students from different years, aiming at adapting prevention approaches so that they are more sensitive to characteristics of each subgroup and, therefore, potentially more resolving.

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