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Alcohol consumption pattern among workers and socioeconomic profile

Padrão de consumo de bebidas alcoólicas entre os trabalhadores e perfil socioeconômico

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Keywords

Alcoholism; Alcohol drinking; Workers; Occupational health; Occupational health nursing

Descritores

Alcoolismo; Consumo de bebidas alcoólicas; Trabalhadores; Saúde do trabalhador; Enfermagem do trabalho

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Abstract

Objective: Estimate the consumption pattern of alcoholic beverages and the socioeconomic profile of workers at a Public Service.

Methods: Cross-sectional study, involving 322 subjects who answered the *Alcohol Use Disorders Identification Test* (AUDIT) and questions related to the sociodemographic variables. The data were processed and analyzed using the Epi-Info software.

Results: It was observed that the consumption of 12.7% was classified as hazardous, harmful and suggestive of dependence. Binge drinking was found in 32.5% and 5.3% had already caused problems for themselves or others. The majority has not consumed alcohol in the previous 12 months, but those that did so consumed large quantities and frequently.

Conclusion: The results showed a high prevalence of hazardous, harmful consumption and probable dependence, associated with male workers and low education levels.

Resumo

Objetivo: Estimar o padrão de consumo de bebidas alcoólicas e o perfil socioeconômico dos trabalhadores de um Serviço Público.

Métodos: Estudo transversal realizado com 322 sujeitos que responderam ao *Alcohol Use Disorders Identification Test* (AUDIT) e às perguntas referentes às variáveis sociodemográficas. Os dados foram processados e analisados por meio do Epi-Info.

Resultados: Observou-se que 12,7% fizeram consumo de risco, nocivo e provável dependência. O consumo pesado episódico foi de 32,5%, e 5,3% já causaram problemas a si mesmos ou a outros. A maioria não consumiu álcool nos últimos 12 meses, porém aqueles que consumiram o fizeram em quantidade e frequência elevada.

Conclusão: Os resultados mostraram elevada prevalência do padrão de consumo de risco, nocivo e provável dependência associada aos trabalhadores do sexo masculino e ao baixo nível de escolaridade.

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Introduction

The World Health Organization considers alcohol consumption as a severe Public Health problem nowadays, ranking third among the main health risk factors around the world. It is estimated that about two billion people around the world consume alcohol and that 76.3 million who do so are diagnosed with a mental disorder (dependence), representing 4% of all years of useful life lost.⁽¹⁾

Ten years ago, harmful alcohol consumption was responsible for 3.8% of the global mortality rate and was considered one of the main risk factors for neuropsychiatric disorders and non-transmissible diseases, such as cardiovascular diseases, liver cirrhosis and some types of cancer.⁽¹⁾

Binge drinking affects 11.5% of alcohol consumers and is responsible for serious health problems in accordance with the 2010 global report on alcohol. Per capita alcohol consumption around the world ranges between 4.3 and 4.7 liters per year, against 9.5 in Europe. In the Americas, this rate stabilized at around 6.7 liters in recent years.⁽²⁾

In Brazil, the alcohol consumption pattern reveals preoccupying rates: on average, six liters of pure alcohol are consumed per capita per year. The hazardous pattern is one of the highest in the world. The prevalence rates of both acute consequences, such as violence and accidents, and chronic consequences are very high, considering that a significant part of the people drink too much or become dependent.⁽³⁾

In addition, there is disbelief in the possibility that patients with alcohol-related problems will get better. The prevention and promotion approach of harmful alcohol consumption and abuse is rarely put in practice at the health services, who mostly deal with patients who are already alcohol-dependent.⁽⁴⁾

In that sense, authors observe that high alcohol consumption reduces the workers' performance, resulting in increased unemployment and low income when compared to more limited and less frequent

use. This consumption entails problems in the organization of the work process.^(5,6)

This consumption is often an attempt to escape from mental suffering and an emotional burden, linked with or deriving from the job conditions and work organization the company imposes, turning the consumption into an exit, which induces to severe cases of alcohol dependence.⁽⁷⁾

This problem indicates the need to set up occupational health promotion and disease prevention strategies, within each service's reality, to mitigate the problems deriving from alcohol abuse for the workers, families and the company.

The Occupational Health Service could evaluate the workers' alcohol consumption patterns, serving as an important primary and secondary prevention opportunity.^(8,9)

In this context, the early detection of the alcohol consumption pattern among workers demands further investigation in order to better set up specific prevention and health promotion strategies in Occupational Health Services.

The objective in this study is to estimate the alcohol consumption pattern among workers at a Health Service of a university and their socioeconomic profile.

Methods

A cross-sectional study with random sampling was undertaken at an Occupational Health Service of a public university in Rio de Janeiro, in the Brazilian Southeast.

The partial sample was based on the total number of patients attended at the service in 2011 (6,252). Based on this number, the sample size was assumed with a 3% percentage error: a proportion of 10% of the population the occupational health nurse attended in 2011, estimating a 95% confidence interval, which resulted in a sample of 362 workers attended at the Occupational Health Service between August 2011 and March 2012.

All active public servants of the university, male and female, who visited the service during the study

period and were attended by the researcher as part of the Occupational Health Service screening were included in the study.

Workers who had already answered the form during the first consultation; who were going through admission or resignation procedures; who had consumed alcohol at the moment of the interview; workers with mental disorders; workers from other institutions and retired workers were excluded. Thus, the final sample consisted of 322 subjects.

The instrument used was the *Alcohol Use Disorders Identification Test* (AUDIT), which consists of ten questions about the use of alcoholic beverage in the previous years, symptoms of dependence and alcohol-related problems. Workers who scored between zero and seven on the AUDIT were considered low-risk, while workers who scored more than eight were classified as hazardous, harmful consumption and probable dependence. Variables related to the workers' socioeconomic and occupational profile were added to this questionnaire.

The questionnaire template and the data were processed and analyzed using the software Epi-Info (version 3.5.1) for statistical treatment, besides univariate and bivariate analyses, based on descriptive statistics, and displayed as absolute and relative frequencies.

The workers classified as dependent consumers were forwarded and monitored at the university's specialized service.

The development of the study complied with Brazilian and international ethical standards for research involving human beings.

Results

Hazardous, harmful consumption and probable dependence were identified in 12.7% of the servants, while 87.3% informed low-risk consumption.

As presented in table 1, statistically significant differences were found for the gender and education variables, showing higher rates of hazardous, harmful consumption and probable dependence

among male individuals (65.9%) when compared to women (34.1%), with $p=0.01$.

Table 1 shows that the items of the servants' alcohol consumption pattern, who were attended at a university's Occupational Health Service, distributed according to the score category obtained on the AUDIT, revealed statistical significance for most items.

Table 1. Socioeconomic variables associated with alcohol consumption

Variables	Low-risk consumption (n=281) n(%)	Hazardous, harmful consumption and probable dependence (n=41) n(%)	p-value*
Gender			
Male	93 (33.1)	27 (65.9)	<0.01
Female	188 (66.9)	14 (34.1)	
Age range, years			
18-35	38 (13.5)	3 (7.3)	0.265
>36	243 (86.5)	38 (92.7)	
Marital situation			
Married	175 (62.3)	24 (58.5)	0.645
Not married	106 (37.7)	17 (41.5)	
Education			
Higher Education or more	116 (41.3)	26 (63.4)	<0.01
Up to Secondary	165 (58.7)	15 (36.6)	
Per capita income			
Up to 2 wages (R\$510,00)	69 (24.6)	14 (34.1)	0.189
More than 2 wages (R\$510,00)	212 (75.4)	27 (65.9)	

* Pearson's chi-square test

Table 2 shows that 53.7% of the low-risk consumers consumed alcohol between two and four times per month and that 29.3% did so twice or thrice per week, that is, most workers indicated they had not consumed alcohol in the previous 12 months, but those who did consumed alcohol more frequently.

As regards the number of drinks consumed per day, 56.1% of the hazardous consumption workers indicated they had consumed ten or more doses, followed by 24.4% who had consumed five to six standard doses.

The frequency of consuming five or more standard doses on a single occasion among the workers with low-risk consumption is noteworthy: 29.5% reported consuming this quantity sometimes.

The indicators of hazardous consumption (AUDIT \geq 8) in the audit questionnaire showed that 37.1% were unable to stop drinking, 26.8% failed to do what was normally expected because of drink-

Table 2. Alcohol consumption in the previous year

Variables	Low-risk consumption n(%)	Hazardous, harmful consumption and probable dependence n(%)	p-value*
Consumption frequency			
Never	159(56.6)	0(0)	
Monthly or less	69(24.6)	0(0)	
2 to 4 times per month	49(17.4)	22(53.7)	
2 to 3 more times per week	4(1.4)	12(29.3)	
4 or more times per week	0(0)	7(17.1)	
Number of standard doses ^{***} on a typical day			
1-2	58(47.5)	0(0)	
3-4	46(37.7)	6(14.6)	
5-6	15(12.3)	10(24.4)	
7-9	2(1.6)	2(4.9)	
10 or more	1(0.8)	23(56.1)	
Frequency of five or more standard doses			<0.01
Never	86(70.5)	0(0)	
Sometimes	36(29.5)	41(100)	
Frequency of not being able to stop drinking			<0.01
Never	33(91.7)	28(68.3)	
Sometimes	3(8.3)	13(31.7)	
Failed to do what was normally expected because of drinking			<0.01
Never	35 (97.2)	30 (73.2)	
Sometimes	1(2.8)	11(26.8)	
Need for alcoholic drink in the morning			<0.01
Never	36(100)	37(90.2)	
Less than monthly	0(0)	4(9.8)	
Feeling of guilt after drinking			<0.01
Never	32(88.9)	20(48.8)	
Sometimes	4(11.1)	10(51.2)	
Inability to remember what happened the night before because of drinking			<0.01
Never	35(97.2)	25(61)	
Com alguma frequência	1(2.8)	16(39)	
Caused loss or injury to oneself or another person because of drinking			<0.01
Never	8(2.8)	9(22)	
Sometimes	273(97.2)	32(78)	
Has anyone suggested you should stop drinking			<0.01
Yes	14(5)	21(51.2)	
No	267(95)	20(48.8)	

*Pearson's chi-square test

ing, 51.2% felt guilt or remorse after drinking and 39% were unable to remember what had happened after drinking.

Among the workers with hazardous, harmful risk consumption and probable dependence, 22% caused some loss or injury to themselves or other

people due to drinking and 51.2% had received the suggestion to stop drinking in the last 12 months.

Discussion

Among the study limitations, we can include the fact that the workers were afraid that the results would interfere in the decisions about leaves and medical examinations, not revealing the actual alcohol consumption in the last 12 months before the interviews, although the research participants' anonymity was preserved. Nevertheless, we acknowledge the limitations of cross-sectional studies, which do not permit the establishment of cause and effects relations.

Our results contribute for the occupational health nurses to reflect on their care practice at occupational health services from the perspective of diagnosing and intervening in the alcohol consumption pattern, in the sense of health promotion and prevention of the damage alcohol causes, despite the lack of Brazilian studies on the screening of the alcohol consumption pattern among workers, mainly regarding occupational health nurses' activities in that context.^(8,9)

The results demonstrated the high prevalence of hazardous, harmful consumption and probable dependence among male workers with low education levels. The sample revealed hazardous alcohol consumption rates (12.7%) similar to other Brazilian studies, mainly among men, with greater proportions of hazardous consumption and statistical significance for this association, based on various studies.⁽¹⁰⁻¹³⁾

An association was found between workers with higher education levels and hazardous alcohol consumption. This association was also found in workers from large companies, but the rates of hazardous consumption were higher in the inferior education group.⁽⁶⁾

As regards the occupational profile associated with the hazardous consumption pattern, despite the lack of statistical significance, workers with more than ten years of experience at the university and less than five years in their current sector were

associated with the hazardous consumption pattern. The more experience in the company, the greater the emotional exhaustion, the less control on life and the greater the alcohol consumption.

The literature reveals that professional satisfaction is related with professional experience, institutional involvement and stability gained, whose characteristics determine the worker's continuation at an institution. In other words, it was observed that the interviewed workers had been working at the institution for a long time, but only a short time in the sector, supposing limited involvement with the work.⁽¹⁴⁾

As regards the association between the function at the university and the hazardous alcohol consumption pattern, the results showed that this pattern was more frequent among administrative and intermediary support technicians. In these technical functions, the alcohol consumption frequency is higher, as they are characterized as downgraded by society or determinants of rejection, with restricted possibilities of ascent by professional qualification, which can generate mental suffering.^(7,14)

In this study, 49.4% were abstemious. Similar results were found among public servants at a university in the South of Brazil, with 49.8%, and in the general population, with 48%.⁽¹⁴⁾ Despite the high rate of abstemious people, however, this situation cannot be forgotten or ignored. Surveillance should be constant and a target of intersectoral and health policies, as alcoholic drink commercials are both qualitatively and creatively outstanding. Nevertheless, the percentage of workers who consumed alcohol was higher than at the national level.⁽¹⁰⁻¹⁴⁾

In this context, the percentage of abstemious people could be underestimated with regard to the interviewed workers at the occupational health service as, although the study preserved their anonymity, they were afraid to answer the questions about alcohol consumption, as they were at a medical expertise service.

Regarding the consumption of alcohol in number of drinks on a typical day, it was verified that 32.5% of the sample consumed five or more doses on a typical day. The frequency of binge drinking on a typical day among these workers is noteworthy.

In the lowest risk group (AUDIT <8), signs of binge drinking were found in 29.5% of the workers who reported low-risk consumption. Studies have indicated that binge drinking is associated with more and greater physical, social and mental problems than consumption patterns approaching dependence.^(14,15)

This showed that these workers consumed great quantities of alcohol on a single occasion in the last 12 months, thus consolidating the need for the Occupational Health Service to adopt more effective interventions with these workers, through a health promotion and prevention policy of the problems related to alcohol use and abuse.

When analyzing the total number of workers who manifested binge drinking sometimes (monthly, weekly and daily), the gravity of the situation is revealed: 47.2% of the workers consumed six or more doses on a single occasion.

The harm caused by high consumption levels of alcoholic beverages is commonly associated with productivity declines and with family violence.⁽¹⁵⁾ In the work organization sphere, increased absenteeism, early retirement and frequent medical leaves, decreased productivity, employee turnover, relationship difficulties among peers and reduced motivation in the company are highlighted.⁽²⁻⁵⁾

One important sign of the problems alcohol consumption causes in this sample was the frequency of binge drinking. These workers admitted they were advised to stop drinking by a friend, relative or health professional: 10.9% of the sample had already been advised to stop drinking. It was observed that, even if the consumers do not perceive their alcohol consumption, they reflect concern with the possibility that this habit will cause harm to themselves or other people.

One of the main factors in family violence is alcohol abuse, due to the boldness it produces and the reduction of the ability to judge, facilitating the occurrence of aggressive behaviors, mainly against women and children. The consequences of this violence result in loss of control, denial, minimization and a cycle of progressive increase, followed by contrition and promises of change, affecting the aggressor's family and professional life.⁽¹⁶⁾

There is no doubt as to the need to apply more effective prevention measures in the companies, including investments in better conditions in the work environment. Unfortunately, however, the sociocultural aspects stimulate the addiction and make it difficult for the workers to adhere to the treatment programs.⁽¹⁰⁻¹³⁾

Based on the study results, this would be facilitated by this group's education level, with 55.9% of higher education, which can determine a further understanding, comprehension and impact of the prevention programs on the effects of alcohol abuse. This fact would favor health promotion and disease prevention in the work context, indirectly reducing absenteeism levels.⁽¹⁰⁻¹³⁾

The multiprofessional team at the service plays a relevant role in the identification and approach of these workers, whose drinking pattern entails risks or damage to their health.⁽⁶⁾ Mainly, as team members, occupational health nurses should be trained to attend to these workers. Therefore, training will be needed for this activity, offering preparation to the other occupational health team members so that everyone is skilled to conduct these workers with a view to reducing the alcohol consumption pattern, using the short intervention based on a screening instrument, in accordance with different authors.^(2,4,7-9)

The screening of the workers' consumption pattern has been used at some occupational health services to identify the alcohol consumption pattern, using the AUDIT questionnaire. This tool was used in this study as one of the steps of the short intervention process, mainly in primary care services, highlighting the occupational health services in that context.

The use of this strategy facilitates the initial contact and permits objective feedback to the individual, allowing the introduction of short intervention procedures at the service and motivation to change the workers' behavior, whose consumption pattern is abusive.^(2,4,7-9)

The role of nurses in the occupational health service is highlighted, in the private and public spheres, with a view to using the AUDIT questionnaire as a short intervention tool, supporting the systematics of nursing care, mainly in the health promotion and alcohol abuse strategies.

Conclusion

The results showed the high prevalence of hazardous, harmful consumption and probable dependence associated with male workers and low education levels.

Collaborations

Brites RMR and Abreu AMM contributed to the conception and planning of the project, the data collection, interpretation of the data, writing of the article, relevant critical review of the content and final approval of the version for publication.

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