Original Article

Use of alcohol among elderly people attending Primary Health Care
O uso de álcool entre idosos atendidos na Atenção Primária à Saúde
Uso de alcohol entre ancianos atendidos en Atención Primaria de Salud

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Abstract

Objective: To verify the pattern of alcohol use among the elderly attending a primary health care service and to describe the relationship between the use of alcohol and sociodemographic variables.
Methods: Observational, cross-sectional, quantitative study with elderly patients from a primary health care service in a city in the interior of São Paulo/Brazil. Of 750 elderly subjects in total, 112 were included, 85 were interviewed, and the final sample was comprised of 25 subjects who self-reported alcohol use. Data of the study were obtained through interviews for application of the following instruments: sociodemographic questionnaire, Michigan Alcoholism Screening Test-Geriatric Version (MAST-G); and Alcohol Use Disorders Identification Test (AUDIT).
Results: There was predominance of the female gender (56%), retirees (56%), mean age was 69.8 years (60-83 years range), educational level of 7.4 years of study, on average, ranging from no education to complete higher education. Fifteen elderly (60%) scored between 8 and 14 points in the AUDIT, which is risk use; and 10 (40%) had a score of 7 points, considered low risk use. In MAST-G, the 25 patients (100%) suggest the presence of problems related to alcohol use.
Conclusion: The study contributes to the situation of alcohol use by the elderly. This is based on the existence of a greater number of women at risk in the population studied. These issues should be considered in health professionals' approach and investigations with a view to adopting strategies for the global and humanized treatment of elderly alcohol users.

Resumo

Objetivo: Verificar o padrão do uso de álcool entre idosos atendidos em um serviço de Atenção Primária à Saúde e descrever a relação do uso desta substância com as variáveis sociodemográficas.
Métodos: Estudo observacional, transversal, quantitativo, com idosos de um serviço de saúde de Atenção Primária de município do interior de São Paulo/Brasil. De um total de 750 idosos, foram incluídos 112; entrevistados 85 e a amostra final foi de 25 que auto relataram uso de álcool. Os dados do estudo foram obtidos através de entrevistas para aplicação de instrumentos: questionário sociodemográfico, *Michigan Alcoholism Screenig Test-Geriatric Version* (MAST-G); *Alcohol Use Disorders Identification Test* (AUDIT).
Resultados: Predominou o sexo feminino (56%), a condição de aposentados (56%), a idade média foi 69,8 anos (variação entre 60 e 83 anos), níveis de escolaridade, desde curso superior completo até não possuir grau de instrução, média de 7,4 anos estudados. No AUDIT, 15 idosos (60%) pontuaram entre 8 e 14, portanto uso de risco e 10 (40%) tiveram escore 7 incluídos no uso de baixo risco. No MAST-G, os 25 pacientes (100%) sugerem ter problema relacionado ao uso do álcool.
Conclusão: O estudo contribui no que diz respeito à situação do uso de álcool por idosos e isto está na constatação de que, na população estudada, existe maior número de mulheres em situação de risco. Estas questões devem ser consideradas na abordagem e investigações pelos profissionais de saúde, na perspectiva de realizarem estratégias para o tratamento global e humanizado do idoso usuário de álcool.

Resumen

Objetivo: Verificar el estándar de consumo alcohólico entre ancianos atendidos en servicio de Atención Primaria de Salud y describir la relación de dicho consumo con las variables sociodemográficas.
Métodos: Estudio observacional, transversal, cuantitativo, con ancianos de un servicio de Atención Primaria de municipio del interior de São Paulo/Brasil. Sobre un total de 750 ancianos, fueron incluidos 85, con muestra final de 25 que refirieron consumo de alcohol. Datos obtenidos mediante entrevistas para aplicación de los instrumentos: cuestionario sociodemográfico, *Michigan Alcoholism Screening Test-Geriatric Version* (MAST-G); *Alcohol Use Disorders Identification Test* (AUDIT).
Resultados: Predominio del sexo femenino (56%), la condición de jubilados (56%). La media etaria fue de 69,8 años (variando entre 60 y 83 años), niveles de escolarización desde curso superior completo hasta carecer de educación, promedio de 7,4 años de estudios. En el AUDIT, 15 ancianos (60%) obtuvieron puntajes entre 8 y 14, configurando consumo de riesgo, y 10 (40%) obtuvieron 7, correspondiéndoles bajo riesgo. En el MAST-G, los 25 pacientes (100%) sugieren tener problemas relacionados al consumo alcohólico.
Conclusión: El estudio contribuye respecto a la situación del consumo alcohólico en ancianos, y esto constata que en la población estudiada existe mayor número de mujeres en situación de riesgo. Estas cuestiones deben ser consideradas por los profesionales de salud en el abordaje y en investigaciones, con el fin de elaborar estrategias para el tratamiento global y humanizado del anciano consumidor de alcohol.

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Introduction

The phenomenon of aging affects the entire population and is a dynamic, progressive and diverse process arising from biological, social, psychic and technological changes that have occurred throughout the life course. Changes that constitute and influence aging are not linear, and directly affect the functioning and well-being of each elderly individual. Although the elderly present several health problems over time, old age does not imply dependence and use of health care.[1]

The increasing population aging shows a certain ambiguity. On the one hand, it denotes a better quality of life and a consequent increase in life expectancy. On the other hand, it increases the occurrence of noncommunicable chronic diseases (NCDs), a category that includes the abusive use of alcohol.[2,3]

Seniors have the lowest rate of alcohol use compared to young and adult individuals. However, this age group is more vulnerable to harmful actions resulting from alcohol use. This happens because of physiological changes, among which the increase of body fat, the reduction of muscle mass and water of the tissues, and the reduction of hepatic metabolism. These are all characteristic of the natural aging process and potentiate the alcohol effect on the body. As a consequence of these physiological changes, blood alcohol levels tend to remain high in elderly users, who begin to present adverse conditions resulting of their drinking, for example, the occurrence of eating problems and falls related to use of alcohol.[4-6]

Alcohol consumption is considered acceptable if not exceeding 15 doses per week for men and 10 doses per week for women. One serving is equivalent to approximately 350 ml of beer, 150 ml of wine or 40 ml of a distilled beverage. For the elderly, the recommendation is to not exceed one daily dose of alcohol, and the weekly dose should not exceed seven. Clinical and social complications related to alcohol use in the elderly can occur even without increasing the consumption one was accustomed to, because of the aforementioned physiological changes and the actual organ depletion.[4,7]

There is still a great difficulty in identifying the elderly alcohol user given the lack of research tools for health professionals, and the denial of the problem of alcohol use in this age group by friends, caregivers and family members. In addition, there are few recent studies on estimated trends in alcohol use among the elderly, especially regarding their use pattern and relationship with sociodemographic variables. This problem reinforces the need for studies in the community in order to know the elderly who use alcohol, and implement preventive and pertinent therapeutic actions in the context of public health.[1,7]

The purpose of this study was to verify the pattern of alcohol use among the elderly attending a Primary Health Care service and to describe the relationship between the use of this substance and sociodemographic variables.

Methods

This is an observational, cross-sectional study with a quantitative approach. It was conducted with elderly users of a Family Health Strategy (Portuguese acronym: ESF) community service called the Family Health Center (Portuguese acronym: NSF), and located in the western area of the city of Ribeirão Preto (state of São Paulo). According to information provided by Community Health Agents (Portuguese acronym: ACS), this NSF covers a population of approximately 2,924 inhabitants, of which 750 are elderly users of care services at the unit. In the study was used a convenience sample.[8]

The following inclusion criteria were adopted: subjects registered in the health system, aged 60 years or older, users of alcohol with an AUDIT score ≥ 7 and MAST-G score ≥ 5, and who have had contact with alcohol at least once in life. The exclusion criterion was showing visible difficulties with understanding and self-expression.

The AUDIT instrument was developed by the World Health Organization in 1982 for tracking the harmful use of alcohol. It has ten questions that identify four different patterns of alcohol consumption according to the score, namely: low risk use (0

to 7 points), risk use (8 to 15 points), harmful use (15 to 19 points) and probable dependence (more than 20 points). In Brazil, the AUDIT had two validated versions in 1999, and an adaptation in 2005, which was used in this study. This version identified the same cutoff point as the previous version, with 91.8% sensitivity and 62.3% specificity.[9]

The MAST-G instrument was developed in 1971. In 1992, it was adapted for the elderly with the objective of evaluating the use and dependence of alcohol in the elderly. As a gold standard of validation, was used the Diagnostic and Statistical Manual of Mental Disorders (DSM-III). The MAST-G is an instrument containing 24 questions with dichotomous responses, where each positive response equals 1 point. When the score is equal to or greater than 5, it indicates a problem related to the use of alcohol. In this study, was used the translated and cross-cultural validated version, which evaluated the instrument reliability by calculating the Cronbach's alpha. For the general population, alpha was 0.787, and for the population of users, alpha was 0.753, both considered good indices.[10]

The choice of the two instruments is justified because the AUDIT demonstrated greater precision for identifying problems related to use of alcohol at early stages (risk and harmful) for males and females. The MAST-G showed better performance in the detection of alcohol abuse and dependence among the elderly.[9,10]

A third instrument was developed by researchers of the area by requesting sociodemographic data such as gender, age, professional occupation, years of study, family income and health problems related to self-reported diseases.

According to individual registration forms filled out by community health agents, 112 elderly people reported having used alcohol at least once in their lives. These elderly individuals were contacted by telephone and 85 accepted to receive the researcher's visit at home, when was given an explanation about the project and the request for their participation. After their acceptance, was presented the informed consent form (IC) and their signature was requested. The AUDIT and MAST-G were applied during home visits. After obtaining the tests results,

the final sample resulted in 25 elderly individuals who self-reported alcohol use.

Data collection was performed between August and November 2016 through the application of instruments. Data were double-typed in a database spreadsheet in Microsoft Excel 2016, and descriptive statistical analysis was performed. The Statistical Package for the Social Sciences (SPSS), version 23.0 was used for statistical analysis.

The non-parametric Mann-Whitney test was used to test the difference in AUDIT and MAST-G mean scores with respect to gender. The non-parametric Kruskal-Wallis test was used to test the difference in relation to age group and professional occupation. To test the correlation between the AUDIT and MAST-G scores with income and educational level (years of study), was used the Spearman correlation coefficient. In all tests was adopted the significance level of 5% ($α = 0.05$).

This study followed the ethical precepts of Resolution 466/12 of the National Health Council and is part of a project to identify demands of mental health, alcohol and other drugs in Primary Health Care. This study was sent to the Ethics and Research Committee of the School of Nursing of Ribeirão Preto - University of São Paulo, which issued the opinion number 1.524.858 on May 2nd 2016, and approved it under number CAAE 51699615.1.0000.5393.

Results

The sociodemographic characteristics related to the pattern of alcohol use of the interviewed elderly are shown in table 1 and table 2 by taking into account the use of AUDIT and MAST-G instruments, respectively. There was gender similarity among the 25 elderly people who reported using alcohol, but women predominated (56%). Age range was 60-86 years, mean age of 69.8 years, and there was predominance of the age group of 60-69 years (56%).

Different educational levels were identified, ranging from no educational level to complete higher education, with a mean of 7.4 years of study. Regarding professional occupation, 56% of respon-

dents were retired, 80% lived with a relative, and 60% had family income of one to three minimum wages. There was no significant correlation between AUDIT and MAST-G scores with variables of gender, occupation and age.

With regard to health problems, 64% of the elderly interviewed reported having baseline diseases. The most cited were systemic arterial hypertension (SAH) (36% or 9 elderly), followed by diabetes mellitus (DM) (20% or 5 elderly), dyslipidemia and high cholesterol in 4% (1 elderly).

Table 1. Description of sociodemographic characteristics of the elderly (n=25) and their relationship with the AUDIT

Variable	n	Min.	Max.	Mean	Median	Standard deviation	p-value
Gender							
Female	14	7	14	8.71	7.5	2.55	0.624
Male	11	7	13	8.45	8.0	1.75	
Occupation							
Yes	11	7	14	9.18	8.0	2.71	0.420
Retiree	14	7	13	8.14	8.0	1.65	
Age							
60-69 years	14	7	14	8.86	8.0	2.50	0.695
70-79 years	6	7	10	7.83	7.5	1.16	
80-86 years	5	7	13	8.80	8.0	2.38	

Table 2. Description of sociodemographic characteristics of the elderly (n=25) and their relationship with the MAST-G

Instrument	Variable	n	Min.	Max.	Mean	Median	Standard deviation	p-value
MAST-G	Female	14	5	15	8.71	8.0	2.97	0.659
	Male	11	5	13	8.09	8.0	2.30	
	Occupation							
MAST-G	Yes	11	5	15	8.18	8.0	3.02	0.581
	Retiree	14	6	13	8.64	8.0	2.43	
	Age							
MAST-G	60-69 years	14	5	15	8.07	7.5	2.84	0.435
	70-79 years	6	7	13	9.33	9.0	2.06	
	80-86 years	5	6	13	8.40	7.0	3.05	

Table 3 shows elderly's scores in both instruments. Regarding the AUDIT classification, 40% of the elderly achieved score 7, which is considered use of low risk. The scores of 15 patients were distributed between 8 and 14 points, which characterizes risk use (60%) according to the AUDIT instrument cutoff point, and mean score of 8.6. Regarding the MAST-G instrument and its cut-off score of 5 points or more, all 25 patients (100%) may have an alcohol-related problem, as their scores ranged from 5 to 15 points, an average of 8.44 points.

Table 3. Distribution of the elderly (n=25) for the classification of instruments

AUDIT		MAST-G	
p-value	f(%)	p-value	f(%)
7	10(40)	5	3(12)
8	8(32)	6	3(12)
9	1(4)	7	5(20)
10	2(8)	8	4(16)
11	1(4)	9	2(8)
13	1(4)	10	3(12)
14	2(8)	11	2(8)
-	-(-)	13	2(8)
-	-(-)	15	1(4)
Total	25(100)	Total	25(100)

In the present study, there was a significant correlation between AUDIT and MAST-G (r=0.65; p=0.0003). However, there was no correlation between the AUDIT and family income (r=0.116; p=0.581) and years of study (R = -0.31, p = 0.883), and neither there was a positive correlation between the MAST-G and family income (r=-0.003, p=0.988) and years of study (r=0.012, p=0.953).

Discussion

An international systematic review study has shown that research on alcohol use among the elderly is relatively scarce in many countries. However, it has brought evidence of significantly different patterns of use from one country to another.[11]

Among all elderly individuals contacted in the present study, 85 service users (70.6%) did not report use or use of risk, and 25 elderly people (29.4% of the interviewees) reached scores above the cutoff point in the AUDIT classification. Of these, 10 (40.0%) scored an alcohol consumption equal to 7 points, which characterized them as low risk consumers (7 doses per week). However, the fact that 15 (60.0%) elderly individuals were classified as risk use (8 to 15 doses per week) was concerning. The application of MAST-G demonstrated that everyone could fit into this drinking pattern.

The results found in this study have some similarities with a study performed in Bosnia and Herzegovina with elderly people over 60 years of age attending primary health care, in which 78% of the sample did not consume alcohol and 22% were

current drinkers, of which 59% reported risk use of alcohol. Of the elderly drinkers, 27% were women in the age group between 60 and 69 years. They following data corroborate with the present study: similar percentage of non-users, increased alcohol use among women, and agreement about data on the group of risk users in relation to the low risk group.[12]

A national study on demographic trends conducted in the United States covered the period 2005-2014 and used the data/year grouped in pairs from a total sample of approximately 60,000 people aged over 50 years. It measured the prevalence in usage patterns in the last year, last month, binge drinking in the last month, and alcohol-related disorders (abuse or dependence according to DSM-IV). This assessment revealed an increase in the prevalence of alcohol use in the period of study. In turn, this fact demonstrated the elderly continue with potentially unhealthy drinking patterns, and there was an alarming increase among the female elderly, with reports of binge drinking pattern or diagnoses of alcohol-related disorders.[13]

The similarities with the present study are focused on the predominance of women (53.5%) in relation to men (46.6%), and the fact that female elderly report alcohol use patterns of high risk or low risk. This is an alert to monitor consumption among this group of women in order that it does not become an emerging public health problem, as the American authors of the aforementioned study have mentioned in relation to their country.[13]

In Brazil, data from the study conducted in the city of Porto Alegre by the Geriatrics and Gerontology Institute corroborate the presented results in relation to the predominance of women (although with a higher percentage than the current study) and age group. That study had 832 elderly participants, of which 592 (71.2%) were women and 240 (28.8%) were men. The most prevalent age group was 60 to 69 years old, with a total of 373 (44.8%) elderly individuals (38.3% were aged between 70 and 79 years, and 16.8% were 80 years or older). Data are not comparable regarding the use of alcohol, since another instrument (Self-Reporting Questionnaire - SRQ-A) and a scale con-

structed by the authors were used for measurement in that study. However, there were more 'alcoholic' men (11.7%) than women (0.7%).[14]

In order to measure the prevalence of alcohol abuse, a survey was conducted with use of a scale developed by the authors in residents of the city of Pelotas (state of Rio Grande do Sul). The sample included 1,968 individuals, of which 229 were aged between 60 and 69 years old, of both sexes, and 19.6% of these elderly individuals were alcohol abusers, that is, above seven doses per week.[15]

In spite of samples, different methodologies and gender-related specificities, the studies indicate the elderly are consuming alcohol in unhealthy patterns in Brazil too, and suggest more focused actions in this group.[14,15]

The difference of consumption pattern between genders seems to be an important area of study given the influence of sociocultural factors. The use of alcohol among women is increasing in line with the economic development and changes in gender roles.[16]

Regardless of the presence of possible negative sociocultural factors related to female drinking that were not the subject of research evaluation, women seemed to be greater users in the present study. Perhaps because they predominated in number or by the possible influence of an alcohol-user partner with whom they shared consumption. The conclusion was that such peculiarities may have influenced women's consumption pattern.

In general, few women who use alcohol seek help treatment at health services, probably because of the stigma and health professionals' difficulties with recognizing the risk pattern of alcohol use in this population.[16]

Regarding educational level, there was a mixed distribution among participants in the present study, with a wide variation in years of study as follows: six (24%) elderly with no education, six (24%) elderly with incomplete primary education, and six (24%) elderly with complete higher education (16 years of study). Thus, there was no direct association between educational level (years of study) and alcohol consumption. The American study showed the greater prevalence of alcohol-re-

lated disorders among those with higher educational levels. However, this data is not corroborated by another study conducted in the state of Rio Grande do Sul (Brazil), in which educational level was related to alcohol use, and 4.7% of interviewees with only 1st grade were alcoholics.[13,15]

In relation to monthly family income, most respondents (60%) in the present study had an income of one to three salaries (R$ 880/month was the minimum salary in the study period, 2016), followed by 40% of respondents with income equal to or greater than four minimum wages. Thus, no significant differentiation in consumption was identified according to the elderly's family income. On the other hand, the previously reported study states a close relationship between poverty and several behaviors that affect health, since it observed 4.9% of the elderly with a monthly family income of up to two wages (R$ 545, current value in 2011) were 'alcoholics'. These data are in line with another population study conducted in the city of Pelotas/RS between 1999 and 2000.[15]

In relation to professional occupation, most respondents were retirees (56% of the elderly), followed by 16% of elderly women who reported being house workers. The rest of the sample reported having an active life and exercising professional activities in different areas. In this regard, retirement is a factor that makes the elderly vulnerable and more likely to intensify less healthy habits such as abusive alcohol consumption, possibly given the available time and lack of healthy activities.[4]

Regarding the presence of diseases, the majority of alcohol users had some pathology, and it is noteworthy that this data was self-reported, and not verified in medical records. The most commonly reported diseases were DM and SAH. In old age, pharmacokinetic and pharmacodynamic aspects of alcohol differ from those of younger subjects because of the decrease in metabolism, body mass and water levels. Therefore, the elderly are more prone to effects of intoxication, since alcohol remains in the circulation for a longer time, which can exacerbate pre-existing chronic conditions, such as DM and SAH.[17]

Excessive alcohol consumption, besides increasing systolic blood pressure (SBP) by 2.9 mmHg, is one of the causes of resistance to antihypertensive therapy and greater cardiovascular morbidity and mortality. It has been estimated that an alcohol consumption higher than 30g/day may increase the risk of hypertension. Moreover, individuals who consume alcohol daily are three times more likely to be hypertensive than individuals who do not consume alcohol.[18-21]

In relation to DM, alcohol consumption above three doses/day can increase its incidence by 43%, besides accentuating nutritional problems, convulsions, hypoglycemia, neuropathy and other chronic complications.[22,23]

These data suggest the sample of the present study is highly vulnerable to hypertension and DM, since 60% of the elderly had an AUDIT score ≥ 8, i.e., alcohol consumption classified as at risk. At the same time, there are arguments that chronic conditions such as DM and SAH may affect usage behavior by influencing changes in smoking or alcohol consumption. This fact may have happened among the study participants, as they self-reported the use of alcohol and had some chronic illness.[24]

In summary, in this study was found the risk pattern of alcohol consumption, as demonstrated by the MAST-G instrument, and the risk and low risk pattern according to the AUDIT. These data are in line with a study in which the risk pattern of drinking was placed as the most prevalent among the elderly. It must be considered that such a pattern brings damages to these individuals' health and predisposes them to vulnerabilities.[17]

As studies with the elderly and use of alcohol lack standardization with regard to the screening and measurement instruments used and origin services of the sample population, it is difficult to compare the results. Nevertheless, the present study has some similarities in terms of alcohol use with national and international studies.

The following aspects are some limitations of the study: the sample is from a single health service, of convenience, consumption is self-reported, and there were no inquires about binge drinking, since the most recent literature warns of the increase in this consumption pattern among the elderly. Another limitation is that the sample comes from

a service with a large predominance of women, and this may also have influenced such a result.

Conclusion

This study contributes to stimulate new and more in-depth research on the elderly group in the community context in Primary Care. There was an important contingent of elderly alcohol users, highlighting the existence of more women in situations of risk. Even more concerning was the fact that not only the sample reported the use of alcohol, but also mentioned the presence of other clinical pathologies. This poses as an alert to nurses and other health professionals in care to the elderly in community services.

The use of alcohol among elderly users of health services in follow-up treatment in the community must be tracked, with a view to planning and implementing strategies for a global and humanized treatment. This shows the concern of the service and professionals in relation to users by investigating their needs, and meets the proposal of prevention and promotion of Primary Care.

Health professionals, especially nurses, must investigate the use of psychoactive substances, especially alcohol, in a systematic and non-judgmental way. This way, they will provide individualized and quality assistance to the elderly, and help to reduce prejudice in society regarding the use of these substances.

Collaborations

Luis MAV, Garcia MVL, Barbosa SP and Lima DWC contributed with the project design, data interpretation, article writing, critical review of the article content, and approval of the final version to be published.

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